A Small-scale Internet Portal For Online Electronic Commerce e-Mika.net

Mika Kamiya

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A Small-scale Internet Portal
For Online Electronic Commerce

e-Mika.net

Dakota State University
Master of Science in Information Systems
Graduate Project

Mika Kamiya

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Committee: Dr. Haomin Wang

June 29, 2001
Welcome to e-Mika.net!
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ACKNOWLEDGEMENT

The project development was greatly meaningful to me, and I believe that the portal was completed adequately in a limited time. Even though the scale of the web portal was fairly small, I was able to learn the concept of a web application development. Developing the web portal was a good opportunity to cultivate my programming skill while applying the knowledge gained from the masters program. In addition, using JSP increased my understanding of Java technology.

At the same time, reviewing e-commerce issues I have learned from both technical and business classes were quite exciting. After the dramatic growth, Internet business in the US now faces the decision point. The big dot-com setback made people finally recognize that firms could no longer apply “if you build it and they will come”. This slowdown became obvious evidence during the e-commerce search. Hundreds of Internet stores appear in a one-click search. Those stores sell similar products with competitive prices. How can they be profitable? Sites that have already built their brand such as Amazon or Ebay may have a big advantage, but even those players are in big trouble today. The same thing applies to B2B e-commerce. Numerous B2B firms offer the similar e-business solution: web application development, e-business consultant, advertisement, web marketing and so on. It is needless to say that firms must have a solid business goal and a strategy to meet customer needs, so that they can succeed in e-business.

At the end, I would like to express my appreciation of MSIS program at Dakota State University, all professors, and staff who supported me. I would like to thank Mr. & Mrs. Denny and my family, who have encouraged me throughout my study abroad in the United States for seven years. The last 2 years at DSU was a valuable experience that will influence my life. If I look back over the last two years, I had no knowledge about information technology. I believe I have now obtained substantial knowledge and skills. It is my goal to continue to expand the knowledge and skills throughout my career.
EXECUTIVE SUMMARY

The growth of e-business in the last five years has been dramatic. Web-based e-business applications have dramatically changed their looks and contents since 1995. With the evolution of web technology, business applications became extremely dynamic while playing important roles in electronic commerce among organizations and individuals. Although the recent slowing economy somewhat cooled down the e-commerce fever, Internet business including B2B (business-to-business) e-commerce and B2C (business-to-consumer) e-commerce will continue to be the important market channel for the business community.

I have chosen to develop a small-scale Internet portal as my graduate project of Master of Science in Information Systems at Dakota State University. This portal focuses on online resources related to electronic commerce. The functions include a search engine, a discussion board, and a personal events planner. There is also an administrator function to delete messages from the discussion board. Targeted users are primarily adults who are studying for, working at, or interested in the electronic commerce field. A portal is a powerful tool to manage information, and I believe that portal sites are the future of the web because of the unique content they provide.

This report is composed of four parts. Part 1 is a brief discussion of Internet portal with its background. It explains what portals are, how they are used in e-business, and how they are different from regular web sites. Part 2 is a discussion of the technology used for my portal development, JSP (JavaServer Pages). Although other popular technologies can be used to develop a portal, I chose JSP because JSP is portable, it is efficient, and I have a desire to learn more about it. In Part 3, several main issues in e-commerce are discussed. Those issues are also listed as a category in the search function of my web portal. Such issues are B2B, B2C, security, education, and career in e-commerce. In Part 4, the detail of the portal development is explained. This explanation includes the project planning, database and interface designs, the site structure, and other technical issues in each function.
PART 1
PORTAL

Definition of Portal

A portal is a system of integrated programs designed to make it easier for a user to find information. According to GuruNet, a portal is “a web supersite that provides a variety of services including Web searching, news, white and yellow pages directories, free e-mail, discussion groups, online shopping, and links to other sites.” As information grows externally and internally in organizations, portals have become the main solution for e-business to aggregate services and present them to multiple distribution points through a single interface. The main appeal of a portal is its ability to deliver a range of customized panels to both organizations and individuals. Portals are often described as a starting point for their web surfing, and previously known as search engines. However, the term “search engine” has become inadequate to describe the breadth of the offerings of these leading Internet destinations, although search and navigation are still fundamental to most people’s online experience.

Background

The history of portal goes back to late 1993, when graduate students Jerry Yang and David Filo, working in a small trailer office, began to experiment with a searchable directory of web sites which are categorized by topic, according to Kleinschmidt and Goodman. This was simply known as “Jerry Yang’s Guide to WWW.” Soon they found sponsors for their product and formed a company which they named “Yahoo”. Along with Yahoo, other Internet search engines and directories such as Altavista, Excite, Infoseek and Lycos also became popular. Most of those search companies benefited in some way with search engines or directories. However, when they began experiencing page views numbering into the millions each day, they realized they could offer more features. These features would keep people at their sites once the user finishes searching.
Today, portals include a wide range of customization options and functionality including Internet search, e-mail, news, weather, planners, calendars, real-time chat, message boards, shopping, free home pages, small business services, and much more. Not only business-to-consumer portals, but also corporate portals and industry portals are becoming more complex and significant. Kleinschmidt and Goodman classifies portals into several types: horizontal portals, vertical portals, Enterprise Resource Portals, and B2B or Industry portals. Horizontal portals are the general interest portals covering a wide range of topics and features, such as Yahoo or Lycos. Combinations of Internet access and access to a wide range of information like AOL, Excite@Home might also be called horizontal portals. Vertical portals are certain category-leading web sites in a given topical category, or providing to a given demographic. Examples include ivillage.com (aimed at women), Internet.com (aimed at Internet and IT network resources), and CEOExpress.com (for executives). Most new entrants today seek to establish themselves in a vertical area. Enterprise Resource Portals (ERP) is an intranet that provides enterprise-wide information to company employees as well as access to organizations outside of a company such as suppliers and vendors. This portal includes a search engine for internal documents as well as the ability to customize the portal page for different user groups and individuals. B2B/Industry portals are in the corporate sector like ERP and are vertical like vertical portals. The main difference is that they are for particular industries, and they can have information sharing and can complete transactions, according to Kleinschmidt and Goodman.

**Portal and Technology**

Technologies play important roles in portals. For the simplest web requests, a browser requests an HTML document, and the web server finds the corresponding files and returns it. If the HTML document includes images, the browser will in turn submit requests for the image documents as well. All of those requests are for static files, that is, the documents that are requested never change depending upon who requested them and when they were requested. This technology may be sufficient for an application like a brochure type in the earliest web business age. However, in order to generate dynamic contents, technologies must deliver high performance in a timely manner. The user
views up-to-date stock prices and the latest weather reports, and manages personal e-mail and a calendar. Those dynamic web contents require the web server to do some additional processing of the corresponding request, but the earliest HTTP servers did not generate responses dynamically. CGI (Common Gateway Interface) became the first standard for dynamic web content development. Then server-side scripting languages, such as ASP (Active Server Page) by Microsoft, Cold Fusion by Allaire, and JSP (Java Server Page) by Sun Microsystems, were developed. The following table is a partial list of current business-to-consumer portals found as the result of Internet search.

Table 1: Portals and Web Technologies

<table>
<thead>
<tr>
<th>Portal Name</th>
<th>URL</th>
<th>Purpose of the Portal</th>
<th>Web Technologies Found</th>
</tr>
</thead>
<tbody>
<tr>
<td>Go2Net</td>
<td><a href="http://www.go2net.com/">http://www.go2net.com/</a></td>
<td>Unique sports, business, and Internet content</td>
<td>PHP, GSP</td>
</tr>
<tr>
<td>American Online</td>
<td><a href="http://www.aol.com/">http://www.aol.com/</a></td>
<td>Internet online services such as electronic mail, conferencing, software, computing support, interactive magazines and newspapers, and online classes, as well as easy access to services of the Internet.</td>
<td>ADP, JSP</td>
</tr>
<tr>
<td>Netscape</td>
<td><a href="http://www.netscape.com/">http://www.netscape.com/</a></td>
<td>E-mail, news, account, stock, search, shopping, games, and much more.</td>
<td>TMPL, ADP, CGI, JSP</td>
</tr>
<tr>
<td>Traffick.com</td>
<td><a href="http://www.traffick.com/">http://www.traffick.com/</a></td>
<td>The site follows Web portal trends with regular columns, news, comparisons, tools, tutorials, specialized reports, and statistics.</td>
<td>ASP, Perl</td>
</tr>
<tr>
<td>Goo</td>
<td><a href="http://www.goo.ne.jp/">http://www.goo.ne.jp/</a></td>
<td>One of the biggest search engines in Japan.</td>
<td>ASP, GHTML, CGI</td>
</tr>
<tr>
<td>Monster.com</td>
<td><a href="http://www.monster.com/">http://www.monster.com/</a></td>
<td>Resource for employers, job seekers, and those who desire career advancement.</td>
<td>ASP</td>
</tr>
<tr>
<td>Ceoexpress.com</td>
<td><a href="http://www.ceoexpress.com/">http://www.ceoexpress.com/</a></td>
<td>One stop resource created by a busy executive for busy executives. It is the gateway to all the information to run businesses and to do business research.</td>
<td>ASP</td>
</tr>
<tr>
<td>MSN</td>
<td><a href="http://www.msn.com/">http://www.msn.com/</a></td>
<td>Services including free email, search, shopping, chat, news, and more.</td>
<td>ASP</td>
</tr>
<tr>
<td>Portalhub.com</td>
<td><a href="http://www.portalhub.com">http://www.portalhub.com</a></td>
<td>The guide to portals offers regular coverage of the major web portals: Yahoo, Excite, AOL, Go, Lycos, AltaVista, Go2Net, and Snap.</td>
<td>CGI</td>
</tr>
<tr>
<td>Lycos.com</td>
<td><a href="http://www.lycos.com">http://www.lycos.com</a></td>
<td>One of big search engines.</td>
<td>CGI, ASP</td>
</tr>
<tr>
<td>TheServerSide.com</td>
<td><a href="http://www.theserverside.com/">http://www.theserverside.com/</a></td>
<td>Site that focuses on server-side Java technologies with message boards, product reviews and other resources.</td>
<td>JSP, CGI</td>
</tr>
</tbody>
</table>
PART 2
TECHNOLOGY – JSP

Definition of JSP

JSP (JavaServer Pages) is Sun Microsystems’ Java-based technology, which allows web developers and designers to easily develop and maintain dynamic web pages. JSP files contain the traditional HTML code that displays static text and graphics, as well as client-side JavaScript, Flash animations, and Java applets. With the embedded JSP code, page designers can easily access data from Java code running on the server.

JSP enjoys all benefits of Java. For example, JSP does not lock into using specific operating software or servers because compiled Java bytecode is portable across all platforms. Also, the use of Java’s object-oriented approach increases programming productivity and leads to more robust code. Furthermore, JSP takes advantage of all of the other APIs (Application Programming Interfaces)\(^1\) such as JDBC (Java Database Connectivity)\(^2\), JNDI (Java Naming and Directory Interface)\(^3\), and JavaMail\(^4\). The JSP’s main features are the following:

Cross-platform: Java programs are compiled into Java Virtual Machine code, called bytecode. The compiled bytecode is subsequently interpreted on the machine where the program is executed. Any compiled program will run on any machine that has a Java programming language interpreter. When a Web browser requests a JSP page, the Java code is executed and the generated HTML code is sent back to the browser. JSP and Java Servlet technologies deliver “Write Once, Run Anywhere” capability on any platform or any server.

Separation of programming logic from presentation logic: Web page developers,

---

1 A language and message format used by an application program to communicate with the operating system. (GuruNet: Computer Desktop Encyclopedia)
2 A programming interface that lets Java applications access a database via the SQL language. (GuruNet: Computer Desktop Encyclopedia)
3 Standard extension to the Java\(^\text{TM}\) platform, providing Java technology-enabled applications with a unified interface to multiple naming and directory services in the enterprise. Available at http://java.sun.com/products/jndi/
4 Provides facilities for reading and sending email. Available at http://java.sun.com/products/javamail/
who have strong graphic and layout skills, are not always programmers familiar with scripting languages. JSP separates business and presentation logic; JSP makes creating and maintaining dynamic pages easier. By leveraging JSP tags for accessing JavaBeans and their properties, JSP can be written without containing Java source code. This means that page designers can focus on HTML and presentation logic and application programmers can focus on Java. This division of labor increases run-time efficiency without negatively impacting the performance of the other team.

**Reusable components:** Most JSP pages rely on reusable components, JavaBeans, to perform the more complex processing required for an application. Developers can share and exchange components that perform common operations. This component-based approach speeds overall development and leads to optimal results.

**Background of JSP**

Static HTML may be sufficient for displaying relatively simple content; however, the challenge of creating modern web sites is to create interactive web-based applications in which the content of the page is based on a user request or a system status, not predefined text. The traditional way to face challenge is the CGI (Common Gateway Interface). Perl language is a popular choice for writing CGI programs, but CGI is a language-independent interface. Therefore, the program can be written in any languages such as C++ and Visual Basic. However, using the CGI approach has some drawbacks because CGI runs in a separate process separated from the web server which requires more hardware and software resources. For each request that comes in, the web server has to create a new operating systems process, load and interpret a script, execute the script, and then tear it down again. This approach is not efficient when the amount of traffic increases (See fugue 1 on Page 9).

As a result, a number of vendors have introduced new ways of creating dynamic web content. For example, Microsoft’s ASP (Active Server Page) is a very popular technology to develop dynamic contents of web applications. VBScript is mainly used for ASP, and HTML is embedded in ASP code. However, ASP is bundled with Microsoft’s Internet Information Server (IIS) and primarily a solution for the Windows

---

5 Independent Java program modules that are called for and executed. They have been used primarily for developing user interfaces at the client side. (GuruNet: Computer Desktop Encyclopedia)
platform. Limited support for other platforms, such as Apache web server on Unix, is available, but with additional software add-ons.

**Figure 1: Server process for running CGI programs**

![Server process for running CGI programs](image)

Source: Web Development with Java Server Pages p.4

As another solution, Sun introduced servlets in 1996 as small Java-based applications for adding dynamic functionality to web servers. Servlets have a similar programming model to CGI scripts because they are given an HTTP request from a web browser as input, and they construct the appropriate content for the server’s response. By using this approach, the entire page must be composed with servlet code. Servlets are written in Java, so they enjoy all the benefits of Java-technology: object-oriented programming, machine independent portability, automatic memory management, and vast amount of existing Java APIs. However, using servlets requires detailed Java programming knowledge to develop and maintain. Also, it is difficult to take advantage of web page development tools when designing the application interface. (See Figure 2 on Page 10 to compare JSP and servlet code.)

Using JSP solves the problems mentioned above. JSP pages are automatically compiled into servlets before they are used, so they have all of the benefits of servlets. Page designers can easily access data from Java code running on the server without extensive knowledge of Java language. XML-like JSP tags can access JavaBeans components, set or retrieve bean attributes and perform other functions. Furthermore, web page developers can create their own tag libraries for common functions; using own tag libraries let the developers work with familiar tools to perform sophisticated functions.
Figure 2: Comparing JSP and servlet

JSP code for the application above

```html
<body>
  <% out.println("<h1>Hello!</h1>"); %>
</body>
</html>
```

Servlet code for the application above

```java
public class HelloWorld extends HttpServlet {

  public void doGet(HttpServletRequest request, HttpServletResponse response)
  throws IOException, ServletException {
    String title = "Hello!";
    response.setContentType("text/html");
    PrintWriter out = response.getWriter();
    out.println("<html>");
    out.println("<head>");
    out.println("<title>");
    out.println(title + "</title>");
    out.println("</head>");
    out.println("<body>");
    out.println("<h1>");
    out.println("Hello!");
    out.println("</h1>");
    out.println("</body>");
    out.println("</html>");

  }

}
```
As indicated in Figure 3, JSP processing starts with a request for a JSP document. Such requests are indicated by URLs that employ a special file extension (.jsp). When the HTTP server receives a request, that request is sent to the JSP container, which invokes the page compiler servlet to handle the request. If this is the first time the JSP file is requested, it is compiled into servlet code and then the byte code. Because of this compilation process, JSP will be slower than other technologies for this first request. The overall performance of JSP technology is comparable to that of ASP technology.

**JSP Specification and Implementations**

There are many application servers that are compliant with the JSP specification. Tomcat is one of them and it is a free, open-source web server with support for Servlet and JSP, and current version is 1.3. Tomcat was chosen to be the web server of the e-mika.net project because it is the official reference implementation of JSP/Servlet. The technology was developed under Jakarta Project at Apache Software Foundation. Major corporations such as Sun and IBM contributed to the project by aiming at producing the
“world-class” implementation of the latest servlet and JSP specifications. Tomcat can be downloaded from the Jakarta website at http://jakarta.apache.org.
PART 3

ELECTRONIC COMMERCE

B2C

After the big failure of dot-com businesses, it is now clear that B2C (business-to-consumer) e-commerce will not replace traditional brick-and-mortar retailing. Even the big player of e-commerce, Amazon.com, has seen its stocks dropped more than 70% from their high. Companies used to use the ‘dot-com’ as their trademark, but now many are busy erasing all obvious name of their Web business. For example, Jfax.com Inc. replaced its dot-com name to j2Global Communications, and Network Commerce Inc. used to be Shopnow.com.

However, B2C e-commerce has not completely faded out. In fact, B2C e-commerce sales in the U.S. is projected to grow from $37 billion in 2000 to $125.6 billion by 2004, according to 123Jump report. Considerable growth is also expected on international markets. More customers are having confidence in online purchases after several years of experience. Also, increase of high-speed Internet access among home-users may lead to the growth of Internet shopping. Strong bricks-and-mortar players, such as Wal-Mart, K-Mart, and Best Buy have all heavily invested in establishing a strong web presence and are catching up with pure Internet retailers. Those companies which have a loyal customer base, sound financing, and industry expertise make formidable competitors. B2C e-commerce may not radically alter the real world as we know it, but it is an important retail channel of growth. B2C can be part of a multi-channel strategy to reach a limited segment of retail consumers, and the future is still bright for those companies with strong business strategies.

B2B

Although many people believe that B2B (business-to-business) e-commerce is recession-free unlike B2C e-commerce, companies are cautious about launching major new e-business initiatives in the middle of the slowing economy. According to the survey, “E-Business Agenda survey of 375 IT managers” by Information Week, installations of supply chain applications and enterprise portals have dropped from 61% and 65% in December to 55% and 59% in June, respectively. In early April, so-called
B2B leaders such as Ariba, Commerce One, and i2 Technologies have fallen on hard times. Ariba and i2 Technologies announced job cuts and earning warnings, and Commerce One also lowered financial expectation. Those companies have been providing business-to-business solutions to their corporate clients through their value-added services such as partnership, marketing, back-office integration, and decision support system. The question raised is how. Even though connecting systems within a single organization is complex, integrating systems among companies is even more complex. This complexity makes a single solution difficult to apply.

Nevertheless, firms should not become too cautious and miss their business opportunities. In fact, Gartner Group, Inc, a worldwide technology research and services firm, estimated the value of business-to-business electronic commerce transactions would increase to $6 trillion by 2004 from $919 billion in 2001, according to the report of Financial Executives. B2B commerce over the Internet is still in the very early adoption stage, but using a more-efficient procurement system to cut expenses should contribute directly to a positive bottom line. The big challenge is to set a standard among the companies. If firms achieving find standards for them, conducting business over the Internet should become successful.

Security Issues

Internet security is one of the major concerns in the e-commerce market. Fraud on the Internet is rising at an amazing rate with thousands of credit card numbers being stolen by hackers. Despite various kinds of security systems, web site vandalism, viruses, and denial-of-service attacks⁶ have occurred throughout the world. Leveitt reports that an estimated one million credit-card numbers have been stolen from more than 40 e-banking and e-commerce sites across 20 states in March 2001. These attacks occurred despite the fact that firewalls and other security systems were installed in nearly all of those attacked web sites. Some other shocking cases includes Nike.com, a famous sporting apparel company, and an online travel agency, Expedia.com. The former estimates that 20 percent of purchase requests received online is fraudulent, and the latter estimates $6 million in losses to credit card fraud, according to Wallerstein.

⁶ An assault on a network that floods it with so many additional requests that regular traffic is either slowed or completely interrupted.
Another study predicts that small-scale e-commerce theft will rise within the next two years due to the increasing number of technically sophisticated people in economically depressed countries, Kandra says. The study further shows that many security attacks on e-commerce sites can be traced to Russia, and stolen credit card information may have been sold to crime organizations in Eastern Europe. On the other hand, people point that most breaches occur not because the hacker is extremely skilled, but because of the lack of understanding of security issues by companies. The companies do not practice their security system sufficiently. Most break-ins happen because systems administrators lack the right resources or employees don't understand security procedures.

The damage from Internet security attacks can be enormous because large amounts of client information can be hacked all at once. The problem is not just financial. The bad publicity from break-ins can do more damage than the dollar loss. As the e-commerce market continues to grow, the security issue with the Internet will be even more crucial, both to organizations and to individuals.

**Careers in E-commerce**

Although the growth of e-commerce created big job opportunities, corporate layoffs are always in the news due to the drop in IT stocks and the economic slow down. Nevertheless, people say that IT skills are still in demand and claim a shortage of IT professionals. According to Harris, the U.S. Department of Labor shows that companies in the data processing and computer sector added a total of 12,000 jobs between February and March this year. These numbers show an increase of almost 100,000 jobs in the previous 12 months in the sector. Another study found that IT and non-IT employers will attempt to fill more than 900,000 new IT jobs in 2001. Furthermore, the number of H1-b visa holders to be admitted to the US will be increased to 195,000 from 115,000. Filling the jobs by foreign IT professionals is clear evidence of a high-tech labor shortage in this country.

Table 2 shows the top ten list for IT job titles in demand in 2001, based on information provided by several national recruiters and staffing firms, according to Harris. The first five categories are web developer, database administrator, security analyst, Unix
administrator, and e-commerce application developer. The last five categories are C++/Object-Oriented/Visual Basic developer, Java programmer, network engineer, technical support and quality assurance tester.

Table 2: The top 10 list for IT job titles in demand in 2001

<table>
<thead>
<tr>
<th>Position</th>
<th>Titles</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Web developer</td>
</tr>
<tr>
<td>2</td>
<td>Database administrator</td>
</tr>
<tr>
<td>3</td>
<td>Security analyst</td>
</tr>
<tr>
<td>4</td>
<td>Unix administrator</td>
</tr>
<tr>
<td>5</td>
<td>E-commerce application developer</td>
</tr>
<tr>
<td>6</td>
<td>C++/Object Oriented/Visual Basic programmer</td>
</tr>
<tr>
<td>7</td>
<td>Java programmer</td>
</tr>
<tr>
<td>8</td>
<td>Network engineer</td>
</tr>
<tr>
<td>9</td>
<td>Technical support</td>
</tr>
<tr>
<td>10</td>
<td>Quality assurance tester</td>
</tr>
</tbody>
</table>

Definable skills are becoming more important. Today's business environment demands a combination of technical know-how and business expertise. Especially, e-commerce application developers with business-to-business application experience are in big demand. Also, the need for people with security expertise is huge and growing. As discussed previously, security is an issue of great concern in Electronic Commerce. The need for security specialists has exploded everywhere from financial firms, manufactures, and, of course, the dot-com companies. Table 3 shows skills most in demand over the past quarter, according to Enticknap. In addition, the popularity of Java language is increasing. Informationweek.com also reports that Java skills are in a big demand, because of Java’s machine-independent feature. The study found a significant shortage of IT workers skilled in Java.
Table 3: Skills most in demand over the past quarter

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>9</td>
<td>Internet</td>
<td>3,995</td>
<td>1,600</td>
<td>+122%</td>
</tr>
<tr>
<td>2</td>
<td>8</td>
<td>Java</td>
<td>3,290</td>
<td>2,699</td>
<td>+22%</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>C++</td>
<td>3,246</td>
<td>5,236</td>
<td>-38%</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>SQL</td>
<td>2,402</td>
<td>3,425</td>
<td>-30%</td>
</tr>
<tr>
<td>5</td>
<td>4</td>
<td>Unix</td>
<td>2,385</td>
<td>3,524</td>
<td>-32%</td>
</tr>
<tr>
<td>6</td>
<td>2</td>
<td>Oracle</td>
<td>2,173</td>
<td>4,061</td>
<td>-47%</td>
</tr>
<tr>
<td>7</td>
<td>3</td>
<td>Windows NT</td>
<td>2,015</td>
<td>3,653</td>
<td>-42%</td>
</tr>
<tr>
<td>8</td>
<td>6</td>
<td>Visual Basic</td>
<td>1,772</td>
<td>3,294</td>
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<tr>
<td>9</td>
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<td>HTML</td>
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<td>1,182</td>
<td>+50%</td>
</tr>
<tr>
<td>10</td>
<td>7</td>
<td>C</td>
<td>1,071</td>
<td>2,813</td>
<td>-40%</td>
</tr>
</tbody>
</table>

E-commerce in Education

As the e-commerce occupational field grows, so does the demand of academic offering. More business schools are now offering an e-commerce concentration as part of their MBAs, and others offering Master of Science degrees in e-commerce. Petersons.com, the comprehensive web resource in education, displayed 81 results just at the master’s level of e-commerce programs. Needless to say, very few programs would have been found if this search had been done five years ago.

The focus of the Master’s e-commerce programs ranges from being heavily business-oriented to being technical-oriented, or a combination of the two. For example, MIT’s Sloan School of Management, known as a top technology school, has an e-commerce track that is attracting many talented and entrepreneurial students. Sloan’s approach to e-commerce is business-oriented. The important thing is how the technology interacts with the business model. A different approach is taken at the Master of Science in E-Commerce (MSEC) program at the School of Business Administration of the University of San Diego. Instead of traditional marketing, business law or ethics, the school focuses on Internet marketing and law for online businesses. Taking the hybrid approach, North Carolina State has an e-commerce concentration more technically
oriented than most business schools, yet more business-oriented than other master of
science programs.

The number of programs that offer undergraduate degrees in e-commerce is also
increasing. Likewise, those bachelor curriculums vary from the business-focus to the
technology-focus. According to Prencip, some common courses include HTML I and II,
Internet programming, operating systems, e-commerce law, e-commerce technology
system design, business-to-business marketing, and human/computer interaction.
PART 4
SITE DEVELOPMENT

E-Mika.net includes three functions for users: a search engine, a discussion board and a personal event planner. In addition to functions for users, there is an administrator function for an administrator to delete messages posted in the discussion board. Part 4 visually discusses the developmental process including planning, database design (ERD, relationship and data type definition) and the site structure. The detailed explanation of each function is also provided. The attached appendix includes tables with data (as of 6/20/01) and the entire codes of this project.
### Gantt Chart

<table>
<thead>
<tr>
<th>ID</th>
<th>Task Name</th>
<th>Duration</th>
<th>Start</th>
<th>May 20, '01</th>
<th>May 27, '01</th>
<th>Jun 3, '01</th>
<th>Jun 10, '01</th>
<th>Jun 17, '01</th>
<th>Jun 24, '01</th>
<th>Jul 1, '01</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Reading</td>
<td>6 days</td>
<td>Mon 5/14/00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Portal research</td>
<td>2 days</td>
<td>Mon 5/21/00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>E-commerce search</td>
<td>8 days</td>
<td>Wed 5/23/00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Preliminary coding</td>
<td>7 days</td>
<td>Fri 6/1/00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Coding</td>
<td>12 days</td>
<td>Sat 6/9/00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Documentation</td>
<td>7 days</td>
<td>Sat 6/23/00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Preparation for presentation</td>
<td>5 days</td>
<td>Thu 6/28/00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### WBS

- **Web Portal Project**
  - **Planning**
    - Preliminary discussion with advisor
    - Select the project supervisor and committees
    - Develop schedule, Gantt chart, WBS
    - Write project proposal
  - **Preparation & Research**
    - Study JSP book
    - Portal research
    - E-commerce research
  - **Develop & Test Site**
    - Preliminary coding
    - Coding
    - Testing
  - **Close Out Project**
    - Prepare documentation
    - Prepare presentation
    - Evaluation
Entity Relationship Diagram (ERD)

Search

[Diagram of Entity Relationship Diagram]

Diagram legend:
- Entity
- Weak Entity
- Relationship
- Identifying Relationship
- Mandatory many
- Mandatory one
- Optional many

Primary Key
Foreign key

Attribute
Entity Relationship Diagram (ERD)

Search

Diagram:

- CategoryHeading
  - Category
    - CategoryID
  - SubCategoryHeading
    - SubCategory
      - SubCategoryID
      - CategoryID
  - ListingID
    - Has
    - Listing
      - Title
      - SubCategoryID
      - Description
      - URL
      - CategoryID

Legend:
- Entity
- Weak Entity
- Relationship
- Identifying Relationship
- Primary Key
- Foreign key

Key:
- Mandatory many
- Mandatory one
- Optional many
# ATTRIBUTES AND DATA TYPE DEFINITION

<table>
<thead>
<tr>
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<th>Name: CategoryID</th>
<th>Data Type: Text</th>
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<tr>
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<td>Name: ListingID</td>
<td>Data Type: Text</td>
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<td>Name: SubCategoryID</td>
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<td></td>
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<td>Data Type: Integer</td>
<td>Length:</td>
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<td></td>
<td>Name: Time</td>
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<td>Max Length: 10</td>
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<tr>
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<td>Max Length: 20</td>
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<td>User</td>
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<tr>
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<td>Name: Email</td>
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<td></td>
<td>Name: Password</td>
<td>Data Type: Text</td>
<td>Max Length: 20</td>
</tr>
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<td></td>
<td>Name: FName</td>
<td>Data Type: Text</td>
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</tr>
<tr>
<td>Name</td>
<td>Data Type</td>
<td>Max Length</td>
<td></td>
</tr>
<tr>
<td>----------------------</td>
<td>-----------</td>
<td>------------</td>
<td></td>
</tr>
<tr>
<td>Name: Name</td>
<td>Text</td>
<td>20</td>
<td></td>
</tr>
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<td>Max Length:30</td>
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<tr>
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</tr>
<tr>
<td>Max Length: 30</td>
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<td></td>
</tr>
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<tr>
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<td></td>
</tr>
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</tr>
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<td></td>
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</tr>
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<td></td>
</tr>
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<td></td>
</tr>
<tr>
<td>AccountValidated</td>
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<td></td>
</tr>
<tr>
<td>Date: DateRegistered</td>
<td>Text</td>
<td>Max Length:1</td>
<td></td>
</tr>
<tr>
<td>Max Length: 1</td>
<td></td>
<td>Max Length:1</td>
<td></td>
</tr>
</tbody>
</table>
STRUCTURE OF PERSONAL EVENTS PLANNER

- pop-up window

PrintEvents.jsp

6/12/01
5:30pm
Party at Mika’s house

Existing User

<set cookie>

NoMatch.jsp

procLogin.jsp

Main

Calendar

Submit

New User

Registration

<set cookie>

Registration.jsp

procRegistration.jsp

Lists of events

Delete

deleteEvents.jsp

Events deleted

delete.jsp

Events deleted

Add

addEvents.jsp

add.jsp

userExist.jsp

NoMatch.jsp
The search function is available to all visitors without logging in. Currently, there are six categories and 22 subcategories; total 370 listings of data are stored in the database.

A public calendar is available to all visitors without logging in. Today's date is highlighted with red color. A user must log-in in order to use the personal events planner and the discussion board.

If a user logs in, the discussion board and the personal event planner become available.

Link to a registration form.
FRONT PAGE (after the login)

The user's ID appears after the login.

Potential space for ads

Welcome kamiyam!

Browse Category

B2B
- B2B Auction, B2B Solution, ERP

B2C
- B2C General Auction, E-Mail, B2C Solution

Technology
- ASP, JSP/Servlet, PHP, XML/XSL, EDI

Security
- Encryption/Decryption, Internet Fraud, Digital Signature, Virus Application

Guidelines
- Usability, User Interface Design, Content Management

Career
- Placement Resource, Business School

Monday, June 25, 2001

A user can add or delete events for his/her private calendar.

A private calendar appears. The date, which has events, appears to be a link.
SEARCH (within a category or sub-category)

1. **Actions & Products**
   - International auction marketplace offers surplus inventory of gifts and housewares for volume purchase. Log in to browse featured merchandise.
   - [http://www.auctions.allproducts.com/](http://www.auctions.allproducts.com/)

2. **SalvageSale**
   - Marketplace for the buying and selling of commercial quantities of salvaged goods, including materials and equipment. Uses an auction system.

3. **ZoneTrader**
   - A leading provider of full-service asset management solutions, from procurement of used assets through efficient disposition, offering flexible programs designed to meet your company's asset management needs.

4. **Advanced Asset Services**
   - Provides a list of upcoming auctions of commercial assets and inventory around the country, a description of services, and a company history.

A user can view the list in each category or sub-category.

Since it is not practical to show all records in a single page, if there are more than 20 results, the link to the next page appears.
SEARCH (from a keyword)

You searched for: ariba
7 total matching documents

1. Ariba
   E-commerce company that allows business to business solutions for ordering supplies and regulating operating resources.
   http://www.ariba.com

2. E-Commerce Job
   The E-commerce Consulting Network - Developed by Sapient ES, Inc., an executive search firm specializing in the placement of E-Commerce Professionals, from the Consultant level all the way up to the Partner level.
   http://www.ecommerce-job.com/

3. ERPCentral
   Section of freebies includes time sheets, expense reports and networking advice. Read e-commerce news and business-to-business ideas.
   http://www.erpcentral.com/

4. ITtoolbox
   http://business.ittoolbox.com/

A message appears when there are no results

Sorry, no results were found
HOW SEARCH ENGINE WORKS (Search from a keyword)

For the search, I have used an open-source search library called “Lucene” because of the technical difficulty to develop it from scratch. In fact, many corporations outsource the technology when it is not available to them. Lucene is “a high-performance, full-featured text search library written entirely in Java. (http://www.lucene.com/).” It is a technology suitable for nearly any application that requires full-text search. The source can be downloaded from SourceForge.net. (http://sourceforge.net/project/showfiles.php?group_id=3922).

This open-source search library is primarily used to search and index files within a site. In other words, the search engine will only search files within the current web server. Some modifications to make the search engine to search other sites were needed. The following is how the original Lucene code works and how the modified search engine for e-Mika.net works.

Figure 4: Original Lucene Search Engine

When a user enters a keyword, the search engine looks for matched files by going through the newly created index file.

The special index files, which contain path, lastModified, and contents, are created.
Figure 5: e-Mika.net Search Engine

The database contains about 370 URLs.

<table>
<thead>
<tr>
<th>URL</th>
<th>(contents)</th>
</tr>
</thead>
<tbody>
<tr>
<td><a href="http://www.auctions.allproducts.com/">http://www.auctions.allproducts.com/</a></td>
<td></td>
</tr>
<tr>
<td><a href="http://www.bizauc.com/">http://www.bizauc.com/</a></td>
<td></td>
</tr>
<tr>
<td><a href="http://www.business-auctions.com/">http://www.business-auctions.com/</a></td>
<td></td>
</tr>
<tr>
<td><a href="http://www.businesshere.com/">http://www.businesshere.com/</a></td>
<td></td>
</tr>
<tr>
<td><a href="http://pages.ebay.com/">http://pages.ebay.com/</a></td>
<td></td>
</tr>
</tbody>
</table>

The search engine reads those URLs, goes to each URL, and indexes pages automatically. (the search engine does not index contents in the database.)

The special index files, which contain URLs and contents, are created.

When a user enters a keyword, the search engine looks for matched URLs by going through the newly created index file.
The add events window pops up.

The following event is added:

Date & Time
June 20, 2001, 6:30 pm

Event
Party at Mika's house.
PERSONAL EVENTS PLANNER (Delete events)

Displays all events a user has.

35
DISCUSSION BOARD (Viewing messages)

A user can also search messages within the discussion forum.

The number of reply is appeared if there is any.

If a user clicks a title, a message and its reply (if there is any) are displayed.
DISCUSSION BOARD (Post a new message, post a reply, and search the forum)

Posting a new message

Posting a reply

Search results are displayed.
This administrator page has currently only one function: deleting a message. For the reason of the database design, replies are automatically deleted if an original message is deleted.

Once an administrator logged out, deleting messages from previous pages is not allowed. (Page expires.)
COOKIE HANDLING

When a user logged in or registered, a user cookie is set for 24 hours. Once a user logged in, he/she does not need to log in again to use the discussion board or the even planner.

A user already signed in.

A user has not signed in.

A user will be navigated to a registration form if a user wants to register.
COOKIE HANDLING (Continued)

Once a user logs out, the user cookie is deleted. Therefore, the user name does not appear when he/she goes back to the homepage. A user must log in again to use other functions. On the other hand, if a user leaves the site without logging out, the user cookie stays in the user’s browser. If the user returns within 24 hours, he/she does not need to log in to use the functions.
USABILITY

Increasing usability is one of the goals when designing a web site. E-Mika.net was designed based on the user-friendly concept so that users can navigate the site without confusion or uncomfortable feeling. The site design is fairly simple and concise in order to be accepted by the wide range of users. Each page is standardized with the same page design and the logo (which is linked to the homepage) is placed on every page. Also, a user can search the site from almost all pages.

Viewing a front page with 17" monitor and a favorite bar (the left) and with 15" monitor (the right). Every content fits in an initial view without scrolling.

A user can view the main content without scrolling to the left or the right even if a window is resized or a favorite bar is displayed.
FORM VALIDATION

In order to make sure the user's input is free of errors, it is necessary to apply data validation. JavaScript is a good client-side validation tool because the data does not need to be sent to the server. Server-side validation is also applied for the user ID and password validation.

Displays a warning sign if a user press the submit button without inputs.

Informs a user that the user ID and the password did not match.

Displays a warning sign if an e-mail address entered was not valid. Regular expression is applied for this technique. Likewise, users are not allowed to enter a digit for their first and last name. The length of a string is also checked. For this case, user ID and password must be at least 4 characters long.

Informs that the user ID entered has been already taken.
BIBLIOGRAPHY


"Lesson: JDBC Basics."

"Servlet and JavaServer Pages (JSP) 1.0: A Tutorial."
<http://www.apl.jhu.edu/~hall/java/Servlet-Tutorial/>


REFERENCES


TECHNOLOGY USED FOR THE PROJECT

Operating System
- Microsoft Windows 98

Application Software
- Tomcat 3.2 (available at http://www.java.sun.com/products/jsp/tomcat/)
- Java 2 SDK (available at http://java.sun.com/j2se/?frontpage-javaplatform)
- Allaric HomeSite 4.5
- Adobe Photoshop 5.5
- Microsoft Word
- Microsoft Access

Languages
- JSP/Servlets
- HTML
- DHTML (Dynamic HTML)
- JavaScript
- CCS (Cascading Style Sheet)

Other Source
- Lucene

(Search API: available at http://sourceforge.net/project/showfiles.php?group_id=3922)
# Appendix

## Category Table with Data (as of 6/22/01)

<table>
<thead>
<tr>
<th>CategoryID</th>
<th>CategoryHeading</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1</td>
<td>B2B</td>
</tr>
<tr>
<td>C2</td>
<td>B2C</td>
</tr>
<tr>
<td>C3</td>
<td>Technology</td>
</tr>
<tr>
<td>C4</td>
<td>Guideline</td>
</tr>
<tr>
<td>C5</td>
<td>Security</td>
</tr>
<tr>
<td>C6</td>
<td>Career</td>
</tr>
</tbody>
</table>

## Subcategory Table with Data (as of 6/22/01)

<table>
<thead>
<tr>
<th>SubCategoryID</th>
<th>SubCategoryHeading</th>
<th>CategoryID</th>
</tr>
</thead>
<tbody>
<tr>
<td>S1</td>
<td>B2B Auction</td>
<td>C1</td>
</tr>
<tr>
<td>S2</td>
<td>B2B Market Place</td>
<td>C1</td>
</tr>
<tr>
<td>S3</td>
<td>ERP</td>
<td>C1</td>
</tr>
<tr>
<td>S4</td>
<td>B2C General Auction</td>
<td>C2</td>
</tr>
<tr>
<td>S5</td>
<td>E-Malls</td>
<td>C2</td>
</tr>
<tr>
<td>S6</td>
<td>B2C Solution</td>
<td>C2</td>
</tr>
<tr>
<td>S7</td>
<td>ASP</td>
<td>C3</td>
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<td><a href="http://www.ecommercetax.com/">http://www.ecommercetax.com/</a></td>
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<td>L369</td>
<td>Georgia Institute of Technology</td>
<td><a href="http://dupree.gatech.edu/">http://dupree.gatech.edu/</a></td>
</tr>
</tbody>
</table>
This program inserts events into a database, and informs a user.

```java
String userID = request.getParameter("userID");
String month = request.getParameter("month");
String day = request.getParameter("day");
String year = request.getParameter("year");
String hourString = request.getParameter("hour");
String min = request.getParameter("min");
String event = request.getParameter("event");
    event = event.replace('\\', '');

String ampm = null;
String hour = null;
int hourLength = hourString.length();
    if(hourLength == 3){
        hour = hourString.substring(0, 1);
        ampm = hourString.substring(1);
    } else{
        hour = hourString.substring(0, 2);
        ampm = hourString.substring(2);
    }

String time = hour + ":" + min + " " + ampm;
String dateTime = month + " " + day + ", " + year + ", " + time;
int EID = 0;
String select = "SELECT * FROM Events ORDER BY EID";
ResultSet results = connection.executeQuery(select);

while(results.next()){  
    EID = results.getInt("EID");
}  
EID++;
String insert = "INSERT INTO Events VALUES(" + EID + ", " + month + ", " + day + ", " + year + ", " + time + ", " + event + ", " + userID + ");"
connection.executeUpdate(insert);

event = event.replace('\\', '');
```

The following event is added</h4>
<td>
  <b>Date & Time</b><br>
  <%=dateTime%>
</td>
</tr>
<tr>
  <td>
    <b>Event</b><br>
    <%=event%>
  </td>
</tr>
</table>
<p align="right"><a href="" onClick="self.close();">Close this window</a></p>
</body>
</html>
A user adds events here.

```html
<html>
<head>
    <title>Add Events</title>
    <style type="text/css">
        <!--
        body {font-family: verdana; font-size: 10pt;}
        table {font-family: verdana; font-size: 10pt;}
        //-->
    </style>
    <script language="JavaScript1.2">
        <!--
        function validForm(form) {
            if (form.month.value == "" || form.day.value == "" || form.year.value == "" ||
                form.hour.value == "" || form.min.value == "" || form.event.value == "){
                alert("You must fill out all");
                return false;
            }
            return true;
        }
        //-->  
    </script>
</head>

<body>

<!-- String userID = request.getParameter("userID");-->

<table border="0" width="270" cellpadding="0" cellspacing="0" class="event" align="center">
    <form action="add.jsp" method="post" onSubmit="return validForm(this)"

        <tr>
            <td colspan="2">Date & Time</td>
        </tr>
        <tr>
            <td><select name="month">
                <option selected value="">Month
                    <option value="January">January
                    <option value="February">February
                    <option value="March">March
                    <option value="April">April
                    <option value="May">May
                    <option value="June">June
                    <option value="July">July
                    <option value="August">August
                    <option value="September">September
                    <option value="October">October
                    <option value="November">November
                    <option value="December">December
                </select>
                <select name="day">
                    <option selected value="">Day
                        <%
                            int day=1; day<=31; day++;
                            out.print("<option value=" + day + ">" + day);
                        %>
                </select>
            </td>
        </tr>

<!-- Calendar year = Calendar.getInstance();
        int thisYear = year.get(Calendar.YEAR); -->
```
```html
int nextYear = thisYear + 1;  
<select name="year">
    <option selected value="">Year
    <option value="<%=thisYear%>"><%=thisYear%>
    <option value="<%=nextYear%>"><%=nextYear%>
</select>
</td>
</tr>
<tr>
<td><select name="hour">
    <option selected value="">Hour
    <%
        out.print("<option value=12am>12am");
        for(int hour=1; hour<11; hour++){
            out.print("<option value=" + hour + "am"> + hour + " am");
        }
        out.print("<option value=12pm>12pm");
        for(int hour=1; hour<11; hour++){
            out.print("<option value=" + hour + "pm"> + hour + " pm");
        }
    %>
</select>
</td>
<tr>
<td><select name="min">
    <option selected value="">Minute
    <option value="00">:00
    <option value="15">:15
    <option value="30">:30
    <option value="45">:45
</select>
</td>
</tr>
<tr>
<td colspan="2">
  <br/>&lt;Event
  &lt;textarea cols="30" rows="6" name="event"&gt;&lt;/textarea&gt;&lt;br&gt;
  &lt;input type="hidden" name="userID" value="&lt;%=userID%>"&gt;
  &lt;input type="submit" value="Add"&gt;
  &lt;input type="reset" value="Clear"&gt;
  &lt;input type="button" value="Cancel" onClick="self.close();"&gt;
&lt;/td&gt;
</tr>
&lt;/form&gt;
&lt;/table&gt;
&lt;p align="right"&gt;&lt;a href="" onClick="self.close();"&gt;Close&lt;/a&gt;
</p>
</body>
&lt;/html&gt;
```
public int daysInMonth(int month, int year){
    month = month + 1; //to make it natural month
    int daysInMonth = 0;
    if(month == 1 || month == 3 || month == 5 || month == 7 ||
        month == 8 || month == 10 || month == 12 ){
        daysInMonth = 31;
    }else if (month == 4 || month == 6 || month == 9 || month == 11){
        daysInMonth = 30;
    }else if(month == 2){
        if(year % 400 == 0 || ((year % 4 == 0) && (year % 100 != 0))){
            daysInMonth = 29;
        }else{
            daysInMonth = 28;
        }
    }
    return daysInMonth;
}
}

public int emptyCell(int num){
    int empty = 0;
    switch(num){
    case 1 :
        empty = 0;
        break;
    case 2 :
        empty = 1;
        break;
    case 3 :
        empty = 2;
        break;
    case 4 :
        empty = 3;
        break;
    case 5 :
        empty = 4;
        break;
    case 6 :
        empty = 5;
        break;
    case 7 :
        empty = 6;
        break;
    }
    return empty;
}

public int convertToIntMonth(String m){
int intM = 0;
if(m.equals("January")){
    intM = 0;
} else if(m.equals("February")){
    intM = 1;
} else if(m.equals("March")){
    intM = 2;
} else if(m.equals("April")){
    intM = 3;
} else if(m.equals("May")){
    intM = 4;
} else if(m.equals("June")){
    intM = 5;
} else if(m.equals("July")){
    intM = 6;
} else if(m.equals("August")){
    intM = 7;
} else if(m.equals("September")){
    intM = 8;
} else if(m.equals("October")){
    intM = 9;
} else if(m.equals("November")){
    intM = 10;
} else if(m.equals("December")){
    intM = 10;
}
return intM;
}

/**
 * get today's info
 */
GregorianCalendar calendar = new GregorianCalendar();
int todaysDate = calendar.get(calendar.DATE);
int todaysMonth = calendar.get(calendar.MONTH);
int todaysYear = calendar.get(calendar.YEAR);

GregorianCalendar firstDayOfMonth = new GregorianCalendar(todaysYear, todaysMonth, 1);
int dayOfWeek = firstDayOfMonth.get(calendar.DAY_OF_WEEK);
int dayOfMonth = firstDayOfMonth.get(calendar.DAY_OF_MONTH);

int daysInMonth = daysInMonth(todaysMonth, todaysYear); //The number of days in a month
int emptyCell = emptyCell(dayOfWeek);

<table border="1" bordercolor="#ffcc66" class="calendar" cellpadding="2" cellspacing="0" width="200">
<tr>
</tr>
</table>

//retrieve dates which have events
int arrayCounter=0;
String dayTime = null;
int[] dayArray = new int[31];
if(isCookie){
    //Events part
    for(arrayCounter = 0; arrayCounter< 31; arrayCounter++){
        dayArray[arrayCounter] = 0;
    }
}
String sql = "SELECT * FROM Events WHERE UserID = '" + userName + "'";
ResultSet results = connection.executeQuery(sql);
String month=null;
int day = 0;
int year = 0;
int intMonth = 0;
while(results.next()){
    int eid = results.getInt("EID");
    month = results.getString("Month");
    intMonth = convertToIntMonth(month);
    day = results.getInt("Day");
    year = results.getInt("Year");
    String t = results.getString("Time");
    String des = results.getString("Description");
    String uid = results.getString("UserID");
    if(todaysMonth == intMonth){
        dayArray[day - 1] = 1;
    }
}

//Create the content of a calendar with proper empty cells
int dayNum = 1;
int counter = 0;
out.print("<tr>");
for(counter = 0; counter < emptyCell; counter++){
    out.print("<td &nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&n
```java
out.print("<td align="center">" + dayNum + "</td>");
}
dayNum++;

out.print("</tr>");
}
int restOfDays=0;
restOfDays = daysInMonth - dayNum;

if(restOfDays < 6){
    out.print("<tr>");
    for(counter=1; counter <= restOfDays + 1; counter++){
        if(dayArray[dayNum-1] == 1 & isCookie==true){
            if(todaysDate == dayNum){
                out.print("<td align="center"><font color="red">" + dayNum + "</font></td>");
                if(todaysDate == dayNum){
                    out.print("<td align="center"><font color="red">" + dayNum + "</font></td>");
                } else{
                    out.print("<td align="center"></td>");
                }
            } else{
                out.print("<td align="center"></td>");
            }
        }
        dayNum++;    
    }
}

if(restOfDays ==6){
    out.print("<tr>");
    for(counter=1; counter<=7; counter++){
        if(dayArray[dayNum-1] == 1 & isCookie==true){
            if(todaysDate == dayNum){
                out.print("<td align="center"><font color="red">" + dayNum + "</font></td>");
                if(todaysDate == dayNum){
                    out.print("<td align="center"><font color="red">" + dayNum + "</font></td>");
                } else{
                    out.print("<td align="center"></td>");
                }
            } else{
                out.print("<td align="center"></td>");
            }
        }
        dayNum++;    
    }
}

if(restOfDays >= 7){
    out.print("<tr>");
    for(counter=1; counter<=7; counter++){
        if(dayArray[dayNum-1] == 1 & isCookie==true){
            if(todaysDate == dayNum){
                out.print("<td align="center"><font color="red">" + dayNum + "</font></td>");
                if(todaysDate == dayNum){
                    out.print("<td align="center"><font color="red">" + dayNum + "</font></td>");
                } else{
                    out.print("<td align="center"></td>");
                }
            } else{
                out.print("<td align="center"></td>");
            }
        }
        dayNum++;    
    }
}
```
<tr valign="top"></tr>
</table>
</body>
</html>
<DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">

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Summer 2001 Graduate Project

This program deletes a user's events in Event table.

```java
%@ page import="java.sql.*;
java.util.*;
java.lang.*;
DiscussionBoard.*" %>
<jsp:useBean id="myCon" class="DiscussionBoard.ConnectionBean" scope="session"/>

<html>
<head><title>Events Deleted</title>
<style type="text/css">
</style></head>
<body {font-family: verdana; font-size: 10pt;}
</body>

String userID = request.getParameter("userID");
String[] strEID = request.getParameterValues("EID");

String select = "SELECT * FROM Events";
ResultSet results = myCon.executeQuery(select);
while(results.next()){
   int eid = results.getInt("EID");
   String month = results.getString("Month");
   int day = results.getInt("Day");
   int year = results.getInt("Year");
   String time = results.getString("Time");
   String events = results.getString("Description");
   String userid = results.getString("UserID");
}

int arrayLen = strEID.length;
for (int i = 0; i < arrayLen; i++){
   String delete = "DELETE FROM Events WHERE EID = " + strEID[i];
   myCon.executeUpdate(delete);
}

<br><br>
<p align="center"><b>Events deleted</b></p>
<p align="right"><a href="" onClick="self.close();">Close this window</a></p>
</body>
</html>
<%@ page import="java.sql.*,
DiscussionBoard.*" %>
<jsp:useBean id="myCon" class="DiscussionBoard.myConnectionBean" scope="session"/>
<html>
<head>
<title>Delete Events</title>
<style type="text/css">
<!--
body {font-family: verdana; font-size: 10pt;}
table {font-family: verdana; font-size: 9pt;}
//-->
</style>
</head>

String userID = request.getParameter("userID");

int id = 0;
String month=null;
int day = 0;
int year = 0;
String time=null;
String event=null;
String dateStr=null;

<body>
<form action="delete.jsp" method="post">
<table width="470" border="0" cellspacing="0" cellspacing="0">
<tr>
<td width="460" border="1" cellpadding="0" cellspacing="0" bordercolor="white">
<tr>
	<th bgcolor="#6699cc"&nbsp;>Date</th><th width="70" bgcolor="#6699cc"&nbsp;>Time</th><th width="300" bgcolor="#6699cc"&nbsp;>Events</th></tr>
<tr>
	String select = "SELECT * FROM Events WHERE UserID = '" + userID + "' ";

ResultSet set = myCon.executeQuery(select);
int counter=0;

while(set.next()){
	id = set.getInt("EID");
	month = set.getString("Month");
	day = set.getInt("Day");
	year = set.getInt("Year");
	time = set.getString("Time");
	event = set.getString("Description");
	event = event.replace("\", ", "); //replace " to ','

dateStr = month + " " + day + ", " + year;

counter++;

}
</tr>
<input type="checkbox" name="EID" value="<%=id%>">
</form>
</body>
<%if(counter==0){%>
<tr>
<td align="center" colspan="4">You do not have any events added.</td>
</tr>
<%}%>
</table>
</td>
</tr>
<%if(counter > 0){%>
<tr>
<td><br><br>
<input type="submit" value="Delete">
<input type="reset" value="Clear">
<input type="button" value="Cancel" onClick="self.close();">
</td>
</tr>
<%}%>
</table>
<input type="hidden" name="userID" value="<%=userID%>">
</form>
<p align="right"><a href="" onClick="self.close();">Close</a></p>

</body>
</html>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">
<!--
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This error page is displayed if an error occurs.
--->
<html>
<head>
<title>Error Occurred</title>
<style type="text/css">
<!--
body {font-family: verdana; font-size: 10pt;}
//-->
</style>
</head>
<body>
<p align="center">Sorry, an error has occurred.</p>
<p align="center"><a href="home.jsp">Go To Home</a></p>
</body>
</html>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">

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The main page of e-Mika.net

```jsp
&page import="java.sql.*, java.text.*, java.util.Date, java.util.*, java.lang.*", DiscussionBoard::* %
<jsp:useBean id="connection" class="DiscussionBoard.myConnectionBean" scope="session"/>

<html>
<head>
<title>Welcome to Ultimate E-Commerce Resource Center</title>
<style type="text/css">
<!--
a:link {color: black; text-decoration: none;}
a:visited {color: black; text-decoration: none;}
.arLink {color: #003399;}
.ar:visited {color: #003399;}
.ar:hover {color: red;}

body {font-family: verdana; font-size: 10pt;}
table {font-family: verdana;}
.top {font-size: 11pt;}
.category {font-size: 12pt;}
.box {border-color: #6699cc; border-style: solid; border-width: 1px; font-weight: bold; color: site;}
.calendar {font-size: 9pt;}
-->
</style>
<script language="JavaScript1.2">
<!--
pics = new Array("images/no9.gif", "images/eh.gif");
thisImage = 0;
counter = pics.length;

function rotate(){
  if(document.images){
    if(document.picture.complete){
      thisImage++;
      if(thisImage == counter){
        thisImage =0;
      }
      document.picture.src=pics[thisImage];
    }
    setTimeout("rotate()", 5*1000);
  }
}
//Checks if input is empty.
function validForm(form) {
  if (form.userID.value == ""){
    alert("You must enter user ID");
    form.userID.focus();
    return false;
  }
  return true;
}
//A window pops up. Depends on a user's choice.
function jumpPage(newLoc){
  newPage = newLoc.options[newLoc.selectedIndex].value
if(newPage != "") {
    window.open(newPage, "newPage", "height=400, width=500, scrollbars=yes");
}

//-->
</script>

<%//Read a cookie
String userName=null;
boolean isCookie = false;
String cookieName = "userCookie";
Cookie c = null;
Cookie cookies[]= request.getCookies();

if(cookies !=null){
    for(int i=0; i < cookies.length; i++){
        if(cookies[i].getName().equals(cookieName)){
            isCookie = true;
            c = cookies[i];
            break;
        }
    }
}
if(isCookie){
    userName = c.getValue();
}else{
    userName = "Guest";
}

%>
</head>

<body onLoad="rotate();">
<%@ include file="homeTitle.jsp" %>
<table border="0" cellspacing="0" height="100" width="709" align="center">
<tr>
    <td><b><small>Welcome <%=userName%>!</small></b></td>
</tr>
</table>
<table width="450" cellpading="0" cellspacing="0" class="box">
<tr>
    <td bgcolor="#6699cc"&nbsp;&nbsp;Browse Category</td>
</tr>
<tr>
    <table width="450" border="0" cellspacing="0" cellpacing="3">
        <tr><a href="showList.jsp?id=C1">B2B</a>, <a href="showList.jsp?id=C5">Security</a></tr>
        <tr><a href="showList.jsp?id=S1">B2B Auction</a>, <a href="showList.jsp?id=S2">B2B Solution</a>, <a href="showList.jsp?id=S3">ERP</a>, <a href="showList.jsp?id=S16">Encryption/Decryption</a>, <a href="showList.jsp?id=S17">Internet Fraud</a>, <a href="showList.jsp?id=S19">Digital Signature</a>, <a href="showList.jsp?id=S20">Virus</a>, <a href="showList.jsp?id=S18">Application</a></tr>
    </table>
</body>
<tr>
    <td width="225" class="category"><a href="showList.jsp?id=C2">B2C</a></td>
    <td width="225" class="category"><a href="showList.jsp?id=S4">B2C General Auction</a></td>
    <td width="225" class="category"><a href="showList.jsp?id=S5">E-Mail</a></td>
    <td width="225" class="category"><a href="showList.jsp?id=S6">B2C Solution</a></td>
    <td width="225" class="category"><a href="showList.jsp?id=S12">Usability</a></td>
    <td width="225" class="category"><a href="showList.jsp?id=S13">User Interface Design</a></td>
    <td width="225" class="category"><a href="showList.jsp?id=S15">E-Business</a></td>
    <td width="225" class="category"><a href="showList.jsp?id=S14">Web Site Management</a></td>
</tr>
<tr>
    <td width="225"><a href="showList.jsp?id=C3">Technology</a></td>
    <td width="225"><a href="showList.jsp?id=C6">Carrer</a></td>
</tr>
<tr>
    <td width="225"><a href="showList.jsp?id=S7">ASP</a></td>
    <td width="225"><a href="showList.jsp?id=S8">JSP/Servlet</a></td>
    <td width="225"><a href="showList.jsp?id=S9">PHP</a></td>
    <td width="225"><a href="showList.jsp?id=S10">XML/XSL</a></td>
    <td width="225"><a href="showList.jsp?id=S11">EDI</a></td>
    <td width="225"><a href="showList.jsp?id=S21">Placement Resource</a></td>
    <td width="225"><a href="showList.jsp?id=S22">Business School</a></td>
</tr>
</table>

// Displays choices if a user has logged in.
if(isCookie){
    ...
    <br/>
    <p align="center">
        <form name="eventsForm" method="post" onsubmit="jumpPage(eventsForm.events)">
            <select name="events">
                <option selected value="addEvents.jsp?userID=$username">Add Events</option>
                <option value="deleteEvents.jsp?userID=$username">Delete Events</option>
            </select>
            <input type="submit" value="Go">
        </form>
    </p>
    <small>
        [a href="DiscussionBoard/list.jsp?userID=$username">Discussion Board</a]
        [a href="logout.jsp">Log Out</a]
    </small>
    ...
    
    <table>
        <form name="login" action="procLogin.jsp" method="get" onsubmit="return validForm(this)">
            <tr>
                <td><small>User Name:</small></td><td><input type="text" size="15" name="userID"></td>
            </tr>
            <tr>
                <td><small>Password:</small></td><td><input type="password" size="15" name="password"></td>
            </tr>
            <tr>
                <td align="right"><input type="submit" value="Sign in"></td>
            </tr>
        </form>
    </table>
</small>
<tr>
  </tr>
</table>
</body>
</html>
Mika Kamiya  
Dakota State University Master of Science in Information Systems  
Summer 2001 Graduate Project

The title for the homepage.

```html
<html><head></head>
<body>
<table class="top" border="0" cellspacing="0" cellpadding="0" width="700"
    height="90" align="center">
  <tr>
    <td rowspan="2" width="170" bgcolor="#ff9900"><img src="images/e-mika.gif" width="170"
        height="90" border="0" alt="E-Mika.net"></td>
    <td width="350" align="center" bgcolor="#6699cc">
      <table>
        <tr>
          <td width="320" bgcolor="#6699cc">
            <form action="searchList.jsp" method="get">
              <small><font color="white">Search the site</font></small>
              <input type="text" name="searchString" size="30"/>
              <input type="submit" name="Search"></form></td>
        </tr>
      </table>
    </td>
  </tr>
  <tr>
    <td width="180" border="0" alt="DSU #9"><a href="http://www.dsu.edu"><img src="images/eh.gif" name="picture" width="180"
        height="75" border="0" alt="DSU #9"></a></td>
  </tr>
</table>
</body></html>
```
<table border="0" class="leftTable" width="180">
    <tr>
        <td>
            [a href="home.jsp"]Home[/a][a href="loginPage.jsp"]Discussion board[/a]
            &nbsp;&nbsp;<a href="showList.jsp?id=11">B2B Auctions</a>&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&n...
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">

<!--
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Summer 2001 Graduate Project

This program first checks if a user has been logged in.
If a user has not logged in, then log-in page appears.
-->
<html>
<head>
  <title>Discussion Board Login</title>
</head>
<style type="text/css">
  body {font-family: verdana; font-size: 10pt;}
table {font-family: verdana; font-size: 12pt;}
.login {font-family: verdana; font-size: 10pt;}
</style>
<script language="JavaScript1.2">
  <!--
  //data validation
  function validForm(form) {
    if (form.userID.value == "") {
      alert("You must enter user ID");
      form.userID.focus();
      return false;
    }
    return true;
  }
  //-->  
</script>

<body>

<%//Read a cookie
String userName=null;
boolean isCookie = false;
String cookieName = "userCookie";
Cookie c = null;
Cookie cookies[] = request.getCookies();

  if(cookies !=null){
    for(int i=0; i< cookies.length; i++){
      if(cookies[i].getName().equals(cookieName)){
        isCookie = true;
        c = cookies[i];
        break;
      }
    }
  }

if(isCookie){
  userName = c.getValue();
  //debugging below
  //out.print(userName);
  //out.print("There is a cookie.");
%>

<META HTTP-EQUIV="REFRESH" CONTENT="0;URL=DiscussionBoard/list.jsp?userID=<%=userName%>">

<%}else{%>
<%out.print("There isn't a cookie.");%>

<%String message = "&nbsp;Please login"; %>
<%@ include file="title2.jsp" %>

- 1 -
<form action="procLogin.jsp" method="post" name="login" onSubmit="return validForm(this)" >
<table class="login" align="center">
<tr>
<td width="100">User ID:</td><td><input type="text" size="25" name="userID"></td></tr>
<tr>
<td width="100">Password:</td><td><input type="password" size="25" name="password"></td></tr>
</table>
</form>
<p align="center"><a href="registration.jsp">New user? Click here to register</a></p>
<p align="center"><a href="home.jsp">Go to home</a></p>
</body>
</html>
<%@ page import="java.sql.*, DiscussionBoard.*, MyCookie.*" %>
<jsp:useBean id="connection" class="DiscussionBoard.ConnectionPoolBean" scope="session" />

<html>
<head>
<title>Logged out</title>
<style type="text/css">

body {font-family: verdana; font-size: 10pt;}
table {font-family: verdana; }
.login {font-size: 10pt;}

</style>

<script language="JavaScript1.2">

function validForm(form) {
    if (form.userID.value == "") {
        alert("You must enter user ID");
        form.userID.focus();
        return false;
    }
    return true;
}
//-->
</script>
</head>

<body>

User logout. A cookie will be deleted.

String userID = request.getParameter("userID"); //get a current user's ID
String cookieName = "userCookie";
String userCookie = null;
String yourCookieName = null;
String sql = null;
Cookie cookies[] = request.getCookies();
Cookie deleteCookie = null;

if(cookies !=null){
    for(int i=0; i < cookies.length; i++) {
        if(cookies[i].getName().equals(cookieName)) {
            Cookie c = cookies[i];
            userCookie = c.getValue();
            yourCookieName = c.getName();
            deleteCookie = new Cookie(yourCookieName, null);
            deleteCookie.setMaxAge(0);
            response.addCookie(deleteCookie);
            sql = "UPDATE User SET AccountValidated = 'N' WHERE UserID = " + userID + "";

            connection.executeUpdate(sql);
            break;
        }
    }
}

String message = "&nbsp;Logged out"; %>
<%@ include file ="title2.jsp" %>

<p align="center">If you would like to return to e-Mika.net:<br>
<form action="procLogin.jsp" method="post" name="login" onSubmit="return validForm(this)">
<table class="login" align="center">
<tr>
    <td width="100">User ID:</td><td><input type="text" size="25" name="userID"></td>
</tr>
<tr>
    <td width="100">Password:</td><td><input type="password" size="25" name="password"></td>
</tr>
<tr>
    <td colspan="2"><input type="submit" Value="Submit"&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;input type="reset" Value="Clear"></td>
</tr>
</table>
</form>
<br><a href="home.jsp">Go To Home</a>
</p>
</body>
</html>
<DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">

<html>
<head>
<title>e-Mika.net</title>
</head>
<body>

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This program display more listing results in a category or a sub-category

```jsp
<%@ page import="java.sql.*, java.util.*, java.lang.*, search.*"%>
<jsp:useBean id="con" class="search.mySearchConnectionBean" scope="session"/>

<html>
<head>
   ...
</head>

<body background="images/bg.gif" leftmargin=0 rightmargin=0 topmargin=0 bottommargin=0>

<!--

a.nav:link {color: black; text-decoration: none;}
a.nav:visited {color: black; text-decoration: none;}
a:link {color: #003399;}
a:visited {color: #003399;}
a:hover {color: red;}
table.top {font-family: verdana; font-size: 11pt}
table.list {font-family: verdana; font-size: 10pt;}
table.left {font-family: verdana; font-size:10pt;}
-->

</style>
</head>

<% include file="title.jsp" %>
<% //getParameters
String ID = request.getParameter("ID");
String idType = request.getParameter("idType"); //from category or sub category?
String strCounter = request.getParameter("counter");
   int counter = Integer.parseInt(strCounter);
%
<table border=0 cellpadding=5 cellspacing=0 width=100% class="list">
<tr>
   <td rowspan=3 width=195 align="right" valign="top">
      <% include file="leftTable.jsp" %>
   </td>
   ...
</tr>
<% out.print("<a href=home.jsp>Home</a> >>");
String headingC = "SELECT DISTINCT * FROM Category WHERE CategoryID = " + ID + "";
String headings = "SELECT DISTINCT * FROM SubCategory WHERE SubcategoryID = " + ID + "";

//display a small navigation heading
if(idType.equals("CategoryID")){
   ResultSet showHeadingC = con.executeQuery(headingC);
   while(showHeadingC.next()){
      String c = showHeadingC.getString("CategoryId");
      System.out.print("<b>");
      if(c.equals("C1"){  
         category = "B2B";
      }
   }
}
```

</body>
</html>
```java
category = "B2C";
} else if(c.equals("C3")){
category = "Technology";
} else if(c.equals("C4")){
category = "Guideline";
} else if(c.equals("C5")){
category = "Security";
} else if(c.equals("C6")){
category = "Career";
} //end if%
</out.print(category);%>
</out.print("  ");%>
</out.print("<b>");%>
<s=%>
</out.print("</b>");%>
</%> //end while
} //end if%
</td>
</tr>
<tr>
<td valign="top" colspan="2">%
<int firstNum = counter +1; %>
<ol start=%firstNum%>
<%//display listings
String sql = "SELECT DISTINCT * FROM Listing WHERE " + idType + '" + ID + '"';
ResultSet results = con.executeQuery(sql);
int i = 0;
String title = null;
String url = null;
String description = null;

while(results.next() && i < counter){
    title = results.getString("Title");
    url = results.getString("URL");
    description = results.getString("Description");
i++;
}%>
</ol>
while(results.next() && i < counter + 20){
    title = results.getString("Title");
    url = results.getString("URL");
    description = results.getString("Description");
%>
<li><a href="%url%"><b>%title%</b></a>
+%description%<br>
+%url%<br>
+%i++;
  //out.print("i: "+ i);
} //end while%
</td>
</tr>
<tr>
<td align="left">%
//link to the previous page
counter = counter - 20;
//out.print(counter);
if(counter < 0){
    out.println("&nbsp;");
} else{
    out.println("a href=nextListPage.jsp?counter=" + counter + "&idType=" + idType + 
+"&ID=" + ID + ">
Previous Results<a>");
}
%>
```
</td>
<td align="right">
     <a href="nextListPage.jsp?counter=" + i + "&idType=" + idType + ";" + "&ID=" + "More Results"/>
     )else{
         out.println("&nbsp;");
     } //end if%

</td>
</tr>
</table>
</body>
</html>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">

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This program informs a user that a user ID and password did not match.

<html>
<head>
  <title>Try Again</title>
  <style type="text/css">
    body {font-family: verdana; font-size: 10pt;}
    table {font-family: verdana; font-size: 12pt;}
    .login {font-family: verdana; font-size: 10pt;}
  </style>
</head>
<body>
<table border="0" width="600" cellpadding="3" cellspacing="0" align="center">
  <tr>
    <td height="68"><a href="home.jsp"><img src="images/e-mika2.gif" width="170" height="68" border="0" alt="e-Mika.net"></a></td>
    <td align="right" valign="bottom"><b>Ultimate E-Commerce Resource Portal</b></td>
  </tr>
  <tr>
    <td colspan="2" height="27" bgcolor="#FF9900"><b>&nbsp;Sorry</b></td>
  </tr>
</table>
<p align="center">User ID and password do not match. Please go back and try again.</p>
<p align="center"><a href="home.jsp">Go back and try again</a></p>
<p align="center"><a href="registration.jsp">Click here to register</a></p>
</body>
</html>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">

--

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This program displays events (if there are) when a user clicks the day.

```java
<%@ page import="java.sql.*, java.util.*, java.lang.*, DiscussionBoard.*" %>
<jsp:useBean id="connection" class="DiscussionBoard.ConnectionPoolBean" scope="session"/>

<html>
<head>
<title>Your Event</title>
</head>
<style type="text/css">
body {font-family: verdana; font-size: 10pt;}
table {font-family: verdana; font-size: 10pt;}
</style>
<body>

//Convert a number to a string month
public String convertToStr(int m) {
    String strM = null;
    switch(m) {
    case 0:
        strM = "January";
        break;
    case 1:
        strM = "February";
        break;
    case 2:
        strM = "March";
        break;
    case 3:
        strM = "April";
        break;
    case 4:
        strM = "May";
        break;
    case 5:
        strM = "June";
        break;
    case 6:
        strM = "July";
        break;
    case 7:
        strM = "August";
        break;
    case 8:
        strM = "September";
        break;
    case 9:
        strM = "October";
        break;
    case 10:
        strM = "November";
        break;
    case 11:
        strM = "December";
        break;
    }
    return strM;
}
$>$
String strDay = request.getParameter("sDay");
    int day = Integer.parseInt(strDay);
String userID = request.getParameter("userID");

//a calendar displays only current month and year.
GregorianCalendar calendar = new GregorianCalendar();
int todaysMonth = calendar.get(calendar.MONTH);
String month = convertToStr(todaysMonth);
int todaysYear = calendar.get(calendar.YEAR);
String event=null;
String time=null;
String sql = "SELECT * FROM Events WHERE UserID = '" + userID + '" AND Day = "" + day + " AND
if = "" + todaysYear + " AND Month = "" + month + '"';
ResultSet results = connection.executeQuery(sql);

&lt;b&gt;Your event for &lt;%=month%&gt; &lt;%=day%&gt;, &lt;%=todaysYear%&gt;&lt;/b&gt;&lt;br&gt;&lt;br&gt;
<table border="0" width="270" cellpadding="0" cellspacing="0" align="center">

&lt;%
while(results.next()){
    event = results.getString("Description");
    event = event.replace('\"', '"'); //replace " to '
    time = results.getString("Time");
%
&lt;tr&gt;
    &lt;td&gt;
    &lt;%=time%&gt;&lt;br&gt;&lt;%=event%&gt;
    &lt;/td&gt;
&lt;/tr&gt;
&lt;%}%&gt;
&lt;/table&gt;
&lt;p align="right"><a href="" onClick="self.close();">Close this window</a>&gt;
&lt;/p&gt;
&lt;/body&gt;
&lt;/html&gt;
<html>
<head>
  <title>e-Mika.net</title>
</head>
<body background="images/bg.gif" leftmargin=0 rightmargin=0 topmargin=0 bottommargin=0 marginheight=0 marginwidth=0>

<%@ include file="title.jsp" %>
<table border="0" cellspacing="5" cellpadding="0" width="100%" class="list">
<tr>
<td rowspan="3" width="195" align="right" valign="top">
<%@ include file="leftTable.jsp" %>
</td>
<td>

String strSearch = request.getParameter("searchString");
int nPageNum = Integer.parseInt(request.getParameter("PageNum"));
int counter = Integer.parseInt(request.getParameter("counter"));

IndexSearcher("c:\Tomcat3.2\webapps\project\Web-inf\classes\index");
Analyzer analyzer = new StopAnalyzer();
Query query = QueryParser.parse(strSearch, "contents", analyzer);
Hits hits = searcher.search(query);
int numHits = hits.length();

<% out.println("You searched for: " + strSearch + "\n" + numHits + " total matching documents\n" + hits); %>
</td>
</tr>
</table>
</body>
</html>
<tr>
<td colspan="2" valign="top">

```java
int hitsLen = hits.length();

out.println("<ol start=" + (nPageNum * 20 + 1) + ">");
String strURL = null;
int i=0;

double ndPages = hits.length() / 20.0;
int nPages = (int)ndPages;
if (ndPages < nPages) {
    nPages++;
}

boolean more = true;
int rest = 0;

//if the rest of results is less than 20 listings
if(nPageNum + 1 == nPages){
    rest = hitsLen - nPageNum * 20;

    for (i = counter; i < counter + rest; i++){
        strURL = hits.doc(i).get("path");
        String sql = "SELECT DISTINCT * FROM Listing where URL='" + strURL + ";";
        ResultSet results = con.executeQuery(sql);

        if (results.next() ) {
            String description = results.getString("Description");
            String title = results.getString("Title");

            out.println("<li>");
            out.println("<a href='" + strURL + ">" + title + "</a><br>");
            out.println(description + "<br>");
            out.println(strURL + "<br>");
            out.println("</li>");
        } //end if
    } //end for
    more = false;
} //end for
else{

    for ( i = counter; i < counter + 20 ; i++){
        strURL = hits.doc(i).get("path");
        String sql = "SELECT DISTINCT * FROM Listing where URL='" + strURL + ";";
        ResultSet results = con.executeQuery(sql);

        if (results.next() ) {
            String description = results.getString("Description");
            String title = results.getString("Title");

            out.println("<li>");
            out.println("<a href='" + strURL + ">" + title + "</a><br>");
            out.println(description + "<br>");
            out.println(strURL + "<br>");
            out.println("</li>");
        } //end if
    } //end for
}

out.println("</ol>");

searcher.close();

</td>
</tr>
```
<tr>
<td align="left">
  <%// link to the previous page
  int previous = nPageNum - 1;
  if (previous >= 0) {
    counter = counter -20;
    out.println("<a href=PrintNext.jsp?numHits=" + numHits + "&PageNum=" + previous + searchString + "&counter=" + counter + ">
Previous</a>");
  } else {
    out.println("&nbsp;");
  }
  %>
</td>
<td align="right">
  <%// link to the next page.
  if (counter % 20 == 0 && more) {
    nPageNum = nPageNum + 1;
    out.println("<a href=PrintNext.jsp?PageNum=" + nPageNum + "&searchString="
Search + 
"&counter=" + i + ">More Results</a>");
  } else {
    out.println("&nbsp;");
  }
  %>
</td>
</tr>
</table>
</body>
</html>
<DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">

<!--
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This program checks if a user ID and password match.
-->

<%@ page import="java.sql.*, java.util.*, java.net.*, DiscussionBoard.*, MyCookie.*" %>
<jsp:useBean id="connection" class="DiscussionBoard.ConnectionPoolBean" scope="session" />
<jsp:useBean id="myCookie" class="MyCookie.CookieBean" scope="session" />

<html>
<body>

<% String userID = request.getParameter("userID");
    String password = request.getParameter("password");
    String uid = null;
    String psw = null;
    String sql = "SELECT * FROM User";
    boolean matched = false;
    String firstName = null;

    ResultSet results = connection.executeQuery(sql);

    while (results.next()) {
        uid = results.getString("UserID");
        psw = results.getString("Password");
        firstName = results.getString("FName");
        if (uid.equals(userID) && psw.equals(password)) {
            matched = true;
            break;
        }
    }

    if (matched) {
        //out.print("hello");
        //set a cookie
        String cookieName = "userCookie";
        Cookie c = myCookie.setCookie(cookieName, userID);
        response.addCookie(c);

        //Database is updated. AccountValidated = Y.
        String updateSql = "UPDATE User SET AccountValidated = 'Y' WHERE UserID = '" + userID + "';"
        connection.executeUpdate(updateSql);
    } else {
        <jsp:forward page="noMatch.jsp" />
    }

</body>
</html>
<DOCTYPE HTML PUBLIC "-/W3C//DTD HTML 4.0 Transitional//EN">

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This program inserts user's registration information to the database.

<%@ page import="java.sql.Statement, java.sql.ResultSet, java.util.*, java.text.*,
DiscussionBoard.%>

<jsp:useBean id="connection" class="DiscussionBoard.ConnectionPoolBean" scope="session"/>

<html>
<head>
</head>

<body>

<%! Date today = new Date();
DateFormat formatFULL = DateFormat.getDateInstance(DateFormat.FULL);
String d = formatFULL.format(today);
%>

//Get input from a user.
String firstName = request.getParameter("firstName");
String lastName = request.getParameter("lastName");
String email = request.getParameter("email");
String userID = request.getParameter("userID");
String password = request.getParameter("password");

boolean thereIs = false;
String sql="SELECT * FROM User";

String uid =null;
String fName=null;

ResultSet results = connection.executeQuery(sql);

while(results.next()){
    uid = results.getString("UserID");
    fName = results.getString("FName");
    if(uid.equals(userID)){
        thereIs = true;
        break;
    }
}

if(thereIs){ %>
    <jsp:forward page="userExist.jsp" />
<%}
else{
    //set a cookie
    String cookieName = "userCookie";
    Cookie cookie = new Cookie(cookieName, userID);
    response.addCookie(cookie);

    String accValidated = "Y";
    String insert ="INSERT INTO User VALUES ('" + userID + ",', " + password + ",', " + email + "," + firstName + ",', " + lastName + ",', " + d + ",'," + accValidated + ");"
    connection.executeUpdate(insert);
%>
    <META HTTP-EQUIV="REFRESH" CONTENT="0;URL=home.jsp">
<%} %>

</body>
</html>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">

<html>
<head>
    <title>Registration</title>
    <style type="text/css">
        body {font-family: verdana; font-size: 10pt;}
        table {font-family: verdana; font-size: 12pt;}
        .registration {font-family: verdana; font-size: 10pt;}
    </style>
    <!--
    //checks if e-mail is valid
    function isEmail(string) {
            return true;
        else
            return false;
    }
    //checks if names are proper
    function isProper(string) {
        if (string.search(/^[\w]+\ ([\w]+)?$/) != -1)
            return true;
        else
            return false;
    }
    //display an alert box is any of input is not valid.
    function validForm(form) {
        if (form.userID.value == "" || form.userID.value.length <= 4)
            alert("Please enter valid user ID");
            form.userID.focus();
            return false;
        else if (form.password.value == "" || form.password.value.length <= 4)
            alert("Please enter valid password");
            form.userID.focus();
            return false;
        else if (isEmail(form.email.value) == false) {
            alert("Please enter a valid email address.");
            form.email.focus();
            return false;
        } else if (isProper(form.firstName.value) == false) {
            alert("Please enter a valid name.");
            form.firstName.focus();
            return false;
        } else if (isProper(form.lastName.value) == false) {
            alert("Please enter a valid name.");
            form.lastName.focus();
            return false;
        } else return true;
    }
    //-->
    
</head>

<body>

</body>

<!--
String message = "&nbsp;Registration"; -->

<!--
include file ="title2.jsp" -->
<form action="procRegistration.jsp" method="post" onSubmit="return validForm(this)"
name="registration">
  <table class="registration" align="center">
    <tr>
      <td width="150">First Name:</td><td><input type="Text" size="25" name="firstName"></td>
    </tr>
    <tr>
      <td width="150">Last Name:</td><td><input type="Text" size="25" name="lastName"></td>
    </tr>
    <tr>
      <td width="150">E-mail:</td><td><input type="Text" size="25" name="email"></td>
    </tr>
    <tr>
      <td width="150">*Choose a user ID:</td><td><input type="Text" size="25" name="userID"></td>
    </tr>
    <tr>
      <td width="150">*Choose a password:</td><td><input type="password" size="25" name="password"></td>
    </tr>
    <tr>
      <td colspan="2">&nbsp;</td>
    </tr>
    <tr>
      <td colspan="2">
        *Must be at least 4 characters long.<br><br>
        <input type="Submit" Value="Register">&nbsp;&nbsp;<input type="Reset" Value="Clear"></td>
    </tr>
  </table>
</form>
</body>
</html>
<DOCTYP HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">
<!--
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Summer 2001 Graduate Project

This program gets a search string from a user, and searches matched documents from the index

Lucene's classes are imported.
--%>


<jsp:useBean id="con" class="search.mySearchConnectionBean" scope="session"/>
<html>
<head>
    <title>e-Mika.net</title>
    <!--[style type="text/css"]
    a.nav:link { color: black; text-decoration: none; }
    a.nav:visited { color: black; text-decoration: none; }
    a:link { color: #003399; }
    a:visited { color: #003399; }
    a:hover { color: red; }
    table.top { font-family: verdana; font-size: 11pt; }
    table.list { font-family: verdana; font-size: 10pt; }
    table.left { font-family: verdana; font-size:10pt; }
    -->
    </style>
    </head>
<body background="images/bg.gif" leftmargin=0 rightmargin=0 topmargin=0 bottommargin=0 marginheight=0 marginwidth=0>

<%@ include file="title.jsp" %>
<table border="0" cellpadding="5" cellspacing="0" width="100%" class="list">
<tr>
    <td rowspan="3" width="195" align="right" valign="top">
        <!--% include file="leftTable.jsp" %>
    </td>
</tr>

String strSearch= request.getParameter("searchString"); // get a user's input
int strLen = strSearch.length();

Searcher searcher = new
IndexSearcher("c:\Tomcat3.2\webapps\project\Web-inf\classes\index");
Analyzer analyzer = new StopAnalyzer();
Query query = QueryParser.parse(strSearch, "contents", analyzer);
Hits hits = searcher.search(query);

String strURL;
int numHits = hits.length();
%>
<out.println("You searched for: "+strSearch+"</b><br>");
out.println(numHits + " total matching documents" + "<br>");%>
</td>
</tr>
<tr>
<td align="top">

% 
boolean noMore=false;
boolean noMatch=false;
int counter = 0;
out.println("<ol start=1>");
if(strLen == 1){
    //when a user enters only one alphabet -->meaningless
    out.println("<h3>Sorry, no results were found<h3>");
    noMatch = true;
}else{
    if(numHits == 0 ){
        out.println("<h3>Sorry, no results were found<h3>");
        noMatch = true;
    }else if(numHits <=20){
        for(int i =0; i < numHits-1; i++){
            strURL = hits.doc(i).get("path");
            String sql = "SELECT DISTINCT * FROM Listing where URL='" + strURL + "'";
            ResultSet results = con.executeQuery(sql);
            if (results.next()) {
                String description = results.getString("Description");
                String title = results.getString("Title");

                out.println("<li>");
                out.println("<a href=" + strURL + "">"+title + "</b></a><br>");
                out.println(description + ">"+
                out.println(strURL + "">"+
                out.println("</li>");
            }
        }
    } //end for
    noMore = true;
    out.println("</ol>");
}else{//if the results is less than 20.
    for ( int i = 0; i < 20; i++){
        strURL = hits.doc(i).get("path");
        String sql = "SELECT DISTINCT * FROM Listing where URL='" + strURL + "'";
        ResultSet results = con.executeQuery(sql);
        if (results.next()) {
            String description = results.getString("Description");
            String title = results.getString("Title");

            out.println("<li>");
            out.println("<a href=" + strURL + "">"+title + "</b></a><br>");
            out.println(description + ">"+
            out.println(strURL + "">"+
            out.println("</li>");
        }
        counter++;
    } //end for
    out.println("</ol>");

double ndPages = hits.length() / 20.0;
in nPages = (int)ndPages;
if ((double)nPages < ndPages) {
    nPages++;
```html
} 
  } //end if
} //end if
//searcher.close();

</td>
</tr>
<tr>
<td align="right">
<p>
 more results shown on the next page.
</p>
</td>
</tr>
</table>
</body>
</html>
```
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Summer 2001 Graduate Project

This program display all events a user has. Then a user can delete events.

```html
<!--
<%@ page import="java.sql.*,
DiscussionBoard.*" %>
<jsp:useBean id="connection" class="DiscussionBoard.ConnectionPoolBean" scope="session"/>
<html>
<head>
    <title>Delete Events</title>
    <style type="text/css">
    <!--
    body {font-family: verdana; font-size: 10pt;}
    table {font-family: verdana; font-size: 9pt;}
    <!---->
    </style>
</head>

<% String userID = request.getParameter("userID");

    int id = 0;
    String month=null;
    int day = 0;
    int year = 0;
    String time=null;
    String event=null;
    String dateStr=null;
%>

<body>

Delete Events</b>
<form action="delete.jsp" method="post">
<table width="470" border="1" cellpadding="0" cellspacing="0">
<tr>
    <td>
        <table width="460" border="1" cellpadding="0" cellspacing="0" bordercolor="white">
        <tr>
            <th bgcolor="#6699cc">&nbsp;&nbsp;</th>
            <th width="70" bgcolor="#6699cc">Date</th>
            <th width="300" bgcolor="#6699cc">Events</th>
        </tr>
        %>
        String select = "SELECT * FROM Events WHERE UserID = '" + userID + '"";
    ResultSet results = connection.executeQuery(select);
    int counter=0;
    while(results.next()){
        id = results.getInt("EID");
        month = results.getString("Month");
        day = results.getInt("Day");
        year = results.getInt("Year");
        time = results.getString("Time");
        event = results.getString("Description");
        dateStr = month + " " + day + ", " + year + ";
        counter++;
    %>
        <tr bgcolor="#d8ff11"><input type="checkbox" name="EID" value="<%=id%>">
    </tr>
    </td bgcolor="#d8ff11"><%=dateStr%></td><td bgcolor="#d8ff11"><%=time%></td><td bgcolor="#d8ff11"><%=event%></td>
    </tr>
    <%} //end while%>
    <if(counter==0){%>
        <tr><td align="center" colspan="4">You do not have any events added.</td>
    </tr>
```
<table><tr><td>
<input type="submit" value="Delete">
<input type="reset" value="Clear">
<input type="button" value="Cancel" onClick="self.close();"> 
</td></tr></table>
</form>
<p align="right"><a href="" onClick="self.close();">Close</a></p>
</body>
</html>
<DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">
<!--
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This program shows listings in a category or sub-category
--%>
<%@ page import="java.sql.*, java.util.*, search.*" %>
<jsp:useBean id="con" class="search.mySearchConnectionBean" scope="session"/>

<html>
<head>
<title>e-Mika.net</title>
<style type="text/css">
<!--
a.nav:link {color: black; text-decoration: none;}
a.nav:visited {color: black; text-decoration: none;}
a:link {color: #003399;}
a:visited {color: #003399;}
a:hover {color: red;}
table.top {font-family: verdana; font-size: 11pt}
table.list {font-family: verdana; font-size: 10pt;}
table.left {font-family: verdana; font-size:10pt;}
-->
</style>
</head>

<body background="images/bg.gif" leftmargin=0 rightmargin=0 topmargin=0 bottommargin=0
marginheight=0 marginwidth=0>
<%@ include file="title.jsp" %>
<%
String idType=null;
String ID = request.getParameter("id");
if(ID.substring(0,1).equals("C")) {
   idType = "CategoryID";
} else if(ID.substring(0,1).equals("S")) {
   idType = "SubCategoryID";
}%
<table border="0" cellpadding="5" cellspacing="0" width="100%" class="list">
<tr>
   <td rowspan="3" width="195" align="right" valign="top">
      <jsp:include file="leftTable.jsp"/>
   </td>
   <td>
      <%
      //Create a small navigation heading.
      out.print(\"<a href=home.jsp>Home</a> \">");
      String headingC = "SELECT DISTINCT * FROM Category WHERE CategoryID = \" + ID + \"";
      String headingS = "SELECT DISTINCT * FROM SubCategory WHERE SubcategoryID = \" + ID + \"";

      if(idType.equals("CategoryID")) {
         ResultSet showHeadingC = con.executeQuery(headingC);
         while(showHeadingC.next()) {
            String c = showHeadingC.getString("CategoryHeading");
            %>
            <%@out.print("<b>");%>
            <%=c%>
            <%@out.print("</b>");%>
            <%}
      } else if(idType.equals("SubCategoryID")) {
         ResultSet showHeadingS = con.executeQuery(headingS);
         while(showHeadingS.next()) {
            String s = showHeadingS.getString("SubCategoryHeading");
            String c = showHeadingS.getString("CategoryID");
            String category = null;
      - 1 -
if(c.equals("C1")){
category = "B2B";
} else if(c.equals("C2")){
category = "B2C";
} else if(c.equals("C3")){
category = "Technology";
} else if(c.equals("C4")){
category = "Guideline";
} else if(c.equals("C5")){
category = "Security";
} else if(c.equals("C6")){
category = "Career";
}
%
Bitte.print(category);%

Bitte.print(">> ");%
Bitte.print("<b>");%
$=s$
Bitte.print("</b>");%

%
</td>
</tr>
</table>
</body>

//Display all listing in category or sub-category.
String sql = "SELECT DISTINCT * FROM Listing WHERE " + idType +" = " + ID + ";
ResultSet results = con.executeQuery(sql);
int i = 0;
int counter = 20;
String title = null;
String url = null;
String description = null;

while(results.next() && i < counter){
    title = results.getString("Title");
    url = results.getString("URL");
    description = results.getString("Description");
%
<li><a href="%=url%">"+title"></a></li>
$=description$<br>
$=url$><br><br>
<i i +=;> //Bitte.print("i: "+ i);
%
</i>
</td>
</tr>

<% //go to the next page if there are more than 20 results.
if(i % 20 == 0){
    Bitte.println("<a href=nextListPage.jsp?counter=" + i + ":idType=" + idType + ":ID="
ID + ">More Results</a> ");
} else {
    Bitte.println("&nbsp;");
%
}
</td>
</tr>
</table>
</body>
</html>
<%- Mika Kamiya
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%->
<table class="top" border="0" cellpadding="0" cellspacing="0" height="90" width="100%">
  <tr align="center">
    <td rowspan="2" width="208" bgcolor="#ff9900"><a href="home.jsp"><img src="images/e-mika.gif" width="170" height="90" border="0" alt="E-Mika.net"></a></td>
    <table>
      <tr bgcolor="#6699cc">
        <form action="searchList.jsp" method="get">
          <small><font color="white">Search the site</font></small><br>
          <input type="text" name="searchString" size="30"><br>
          <input type="submit" value="Search"></form>
        </td>
      </tr>
      </table>
    </td>
    <td width="200"><a href="http://departments.dsu.edu/gradoffice/"><img src="images/graduateOffice.gif" width="200" height="75" border="0" alt=""></a></td>
    <tr><td colspan="2" height="15" bgcolor="#ffcc66">Ultimate E-commerce Resource</td></tr>
  </tr>
</table>
<%--
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--%>
<%--Sub-title for Login.jsp, Registration.jsp and Confirmation.jsp --%>
<table border="0" width="700" cellpadding="3" cellspacing="0" align="center">
<tr>
  <td height="68"><a href="../home.jsp"><img src="../images/e-mika2.gif" width="170" height="68" border="0" alt="e-Mika.net"></a></td>
  <td align="right" valign="bottom"><h2>E-Commerce Discussion Board</h2></td>
</tr>
<tr>
  <td colspan="2" height="27" bgcolor="#ff9900">&nbsp;${message}&nbsp;</td>
</tr>
</table>
<DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">

<!--
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This page informs a user that the user's ID has been already taken.
-->
<html>
  <title>Try Again</title>
  <style type="text/css">
  <!--
body { font-family: verdana; font-size: 10pt; }
table { font-family: verdana; font-size: 12pt; }
.login { font-family: verdana; font-size: 10pt; }
-->
</style>
</head>
<body>
  <table border="0" width="600" cellpadding="3" cellspacing="0" align="center">
    <tr>
      <td height="68"><a href="home.jsp"><img src="images/e-mika2.gif" width="170" height="68" border="0" alt="e-Mika.net"></a></td>
    </tr>
    <tr align="right" valign="bottom">
      <td>E-Commerce Discussion Board</td>
    </tr>
    <tr>
      <td colspan="2" height="27" bgcolor="#ff9900">&nbsp;User already exists</td>
    </tr>
  </table>
  <p align="center">User ID you chose is taken. </p>
  <p align="center"><a href="registration.jsp">Go back</a></p>
</body>
</html>
<DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">

<!--Mika Kamiya
Dakota State University MSIS Graduate Project -->
<!-- Display all messages stored in the database-->
<jsp:useBean id="connection" class="DiscussionBoard.ConnectionPoolBean" scope="session"/>
<html>
<head>
<title>e-Mika.net: E-Commerce Discussion Board</title>
<style type="text/css">
<!--
.a nav:link {color: black; text-decoration: none}
.a nav:visited {color: black; text-decoration: none}
a:link {color: #003399;}
a:visited {color: #003399;}
a:hover {color: red;}
body {font-family: verdana; font-size: 10pt;}
table {font-family: verdana; font-size: 10pt; }
.listing{border-style: solid; border-color: #6699cc; border-width: 1px;}
-->
</style>
<script language="JavaScript1.2">
<!--
pics = new Array("../images/msis.gif", "../images/expand.gif");
thisImage = 0;
counter = pics.length;
function rotate()
{
  if(document.images){
    if(document.picture.complete){
      thisImage++;
      if(thisImage == counter){
        thisImage =0;
      }
      document.picture.src=pics[thisImage];
    }
    setTimeout("rotate()", 5*1000);
  }
} //-->
</script>
</head>
<body onload=rotate() leftmargin=0 rightmargin=0 topmargin=0 bottommargin=0 marginheight=0 marginwidth=0>
<!--
include file ="title.jsp" %>

"% //Read a cookie
String cookieName = "userCookie";
Cookie cookies[] = request.getCookies();
String user = null;
boolean isCookie = false;
if(cookies !=null){
  for(int i=0; i< cookies.length; i++){
    if(cookies[i].getName().equals(cookieName)){
      Cookie c = cookies[i];
      user = c.getValue();
      isCookie = true;
      break;
    }
  }
}
%
"%>

String userID = request.getParameter("userId"); //get a user's ID
String title = null;
int numReply = 0;
String msgID = null;
String date = null;
String sql = "SELECT * FROM Message ORDER BY DatePosted DESC";
ResultSet results = connection.executeQuery(sql);
%>
<table border="0" width="100%" cellpadding="5" cellspacing="0">
<tr align="left">
  <td align="left" width="20%" valign="top" rowspan="3" align="center">
    <a href="postNew.jsp?userID=###user###">Post New</a><br>
    <a href="../home.jsp">Go To Home</a><br>
    <a href="../logout.jsp?userID=###user###">Log Out</a><br>
  </td>
  <td align="left">
    <br>
    <form action="searchMessage.jsp?userID=###user###" method="post">
      <td align="left">Search Forum</td><br>
      <input type="text" size="20" name="search"><br>
      <input type="submit" value="Search">
    </form>
  </td>
</tr></table>
</td>
<br>Welcome to the forum, ###user###!

</tr>
<tr align="top">
  <table border="0" cellpadding="5" cellspacing="0" width="100%" align="center">
    <tr align="left">
      <th align="left" bgcolor="#92b4dc" color="white">Topic</th
      <th align="left" bgcolor="#92b4dc" color="white">Date Posted</th
      <th align="right" bgcolor="#92b4dc" width="50">Replies</th>
    </tr>
    <tr align="left">
      <td valign="top">
        <!-- Get fields in Message table.
        String reply = ";
        while(results.next() && i < counter){
          msgID = results.getString("MsgID");
          title = results.getString("MsgTitle");
          title = title.replace('"', '\"');
          date = results.getString("DatePosted");
          numReply = results.getInt("NumReply");

          if(numReply == 1){
            reply = "reply";
          } else if(numReply > 1){
            reply = "replies";
          }
          even++;
        } %>
      </td>
    </tr>
    <tr align="left">
      <!-- add color in even rows
      <td bgcolor="#f7e1e1" align="left">
    %}
```html
<td>bgcolor="#d7e1ec"?><%=date%></td>
</tr>
<tr>
<td>bgcolor="#d7e1ec"><%if(numReply == 1){%>
<td align="right" width="50" bgcolor="#d7e1ec"><%=numReply%>&nbsp;<%=reply%></td>
</%}else{%>
<td align="right" width="50" bgcolor="#d7e1ec"></td>
</%}%>
<tr>
<td>bgcolor="#d7e1ec"><%if(numReply == 1){%>
<td align="right" width="50" bgcolor="#d7e1ec"></td>
</%}else{%>
<td align="right" width="50"></td>
</%}%>
</tr>
<tr>
<td align="right"><%>
  if(i % 20 == 0){
    out.println("<a href=nextMsgList.jsp?counter=" + i + "&amp;userID=" + userID + ">More results</a>");
  }else{
    out.println("&nbsp;");
  }
%
</td>
</tr>
</table>
</body>
</html>
```
<html>
<head>
  <title>Discussion Board Login</title>
  <style type="text/css">
    body { font-family: verdana; font-size: 10pt; }
    table { font-family: verdana; font-size: 12pt; }
    .login { font-family: verdana; font-size: 10pt; }
  </style>
</head>
<body border="0" width="600" cellspacing="3" cellpadding="0">
  <table border="0" width="600" cellspacing="3" cellpadding="0">
    <tr height="68">
      <td height="68"><a href="../home.html"><img src="../images/e-mika2.gif" width="170" border="0" alt="e-Mika.net"></a></td>
      <td align="right" valign="bottom" width="270">E-Commerce Discussion Board</td>
    </tr>
    <tr>
      <td width="150">User ID:</td>
      <td><input type="Text" size="25" name="userID"></td>
    </tr>
    <tr>
      <td width="150">Password:</td>
      <td><input type="Text" size="25" name="password"></td>
    </tr>
    <tr colspan="2">
      <td>&nbsp;&nbsp;&nbsp;&nbsp;</td>
    </tr>
    <tr colspan="2">
      <td><input type="Submit" Value="Submit">&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&n

</td>
</body>
</html>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">

<head>
    <title>E-Mika.net: Discussion Board</title>
    <style type="text/css">
        a.nav:link {color: black; text-decoration: none}
        a.nav:visited {color: black; text-decoration: none}
        a:link {color: #003399;}
        a:visited {color: #003399;}
        a:hover {color: red;

        body {font-family: verdana; font-size: 10pt;}
        table {font-family: verdana; font-size: 10pt;}
        .message{border-color: #6699cc ;border-style: solid; border-width: 1px;}
        .reply{border-color: #ffcc66;border-style: solid; border-width: 1px;}
        
        </style>
    <script language="JavaScript1.2">
        function rotate()
        {
            if(document.images)
            {
                if(document.picture.complete){
                    thisImage++;
                    if(thisImage == counter){
                        thisImage =0;
                    }
                    document.picture.src=pics[thisImage];
                }
                setTimeout("rotate()", 5*1000);
            }
        }
        //-->
    </script>
</head>

<body onLoad="rotate()" leftmargin=0 rightmargin=0 topmargin=0 bottommargin=0 marginheight=0 marginwidth=0>

<!--Read a cookie
 String cookieName = "userCookie";
 Cookie cookies[] = request.getCookie();
 String user = null;
 if(cookies !=null){
    for(int i=0; i < cookies.length; i++){
      if(cookies[i].getName().equals(cookieName)){
        Cookie c = cookies[i];
        user = c.getValue();
        break;
      }
    }
 }
-->

String uid = request.getParameter("userID"); //get a current user's ID
String num = request.getParameter("msgID");
String strNumReply = request.getParameter("numReply");
int numReply = Integer.parseInt(strNumReply);
String sql = "";
if(numReply >= 1){
}else{
    sql = "SELECT * FROM Message WHERE MsgID = "" + num + ""
}
ResultSet results = connection.executeQuery(sql);

String msgID = null;
String title = null;
String body = null;
String dPosted = null;
String userID = null;

Vector v = new Vector(10, 10); //create vector for replies (don't know the number of reply)
String replyMsg = null;
String replyTitle = null;
String replyDPosted = null;
String replyUserID = null;

while(results.next()){
    title = results.getString("MsgTitle");
    body = results.getString("MsgBody");
    //replace " to \\
    title = title.replace("\", "\\")
    body = body.replace("\", "\\")
    dPosted = results.getString("DatePosted");
    userID = results.getString("UserID");

    //Get fields in Reply table
if(numReply >= 1){
    replyTitle = results.getString("ReplyTitle");
    replyTitle = replyTitle.replace("\", "\\")
    replyMsg = results.getString("ReplyMsg");
    replyMsg = replyMsg.replace("\", "\\")
    replyDPosted = results.getString("RDatePosted");
    replyUserID = results.getString("RUserID");
    v.add(replyTitle);
    v.add(replyMsg);
    v.add(replyUserID);
} //end while

"%>

<%@ include file ="title.jsp" %>
<br>
<table border="0" width="100%" cellspacing="5" cellpadding="0">
<tr>
    <td align="left" width="20%" align="top">
        <table border="0" cellspacing="5" cellpadding="0" width="100%" align="center" valign="top">
            <tr>
                <td align="left">
                    <a href="postNew.jsp?userID=%uid%">Post New</a></b></a></br>
                    <a href="postReply.jsp?thisUserID=%uid%&msgID=%num%&title=%title%&body=%body%&userID=%userID"
                    &dPosted=%dPosted%">Reply</a>
                        <br>
        <a href="list.jsp?userID=%uid%">View All Messages</a>
        <a href="../home.jsp">Go To Home</a>
        <a href="../logout.jsp?userID=%uid%">Log Out</a>
    </td>
</tr>
</table>
</td>
</tr>
<tr><br></tr>
<form action="searchMessage.jsp?userID=<%=uid%>" method="post">
<tr align="left"><b>Search Forum</b></tr>
<input type="text" size="20" name="search"><br>
<input type="submit" value="Search">
</form>
</td>
</tr>
</table>
</td>
</tr>
<td width="80%" class="listing" align="center" width="100%">
<table border="0" class="message" width="100%" cellpadding="5" cellspacing="0">
<tr>
<td align="left" bgcolor="#92b4dc" <font color="white">Message</font></td>
</tr>
<tr>
<td><b><%=title%></b>
<br><font color="red"><%=userID%></font> -- posted on <%=dPosted%>
<br><%=body%>
</td>
</tr>
</table>
</td>
</tr>
</table>

<% //If there is any reply,
if(numReply >=1){%
<tr>
<td>
<br>
<table class="reply" width="100%" cellpadding="5" cellspacing="0">
<tr>
<th align="left" bgcolor="#f8c449" <font color="white">Reply</font>
</th>
</tr>
<tr>
<td>
<% int i =0;
for(int y =0; y < numReply; y++){
out.print("<tr><td>");
out.print("<b>");
out.print((String)v.get(i));
i++;
out.print("</b>");
out.print("<font color="red">");
out.print((String)v.get(i));
i++;
out.print("</font>"+
</td></tr>

out.print(" -- posted on " + (String)v.get(i));
i++;
out.print("<br>"+

out.print("<br>"+

out.print(((String)v.get(i));
i++;
if(y == numReply -1){
oout.print("<tr>");
}else{
out.print("<hr color="#ffcc66"></td></tr>"+<tr>
} //end for%
</table>
</tr>
<% } //end if%>
<%results.close();%>
<tr>
  <td height="50">&nbsp;</td>
</tr>
</table>
</td>
</tr>
</table>
</body>
</html>
<html>
<head>
<title>e-Mika.net: E-Commerce Discussion Board</title>
</head>
<body onload="rotate()" leftmargin=0 rightmargin=0 topmargin=0 bottommargin=0 marginwidth=0>

<!--
-->

<p>

function rotate(){
    if(document.images)
        if(document.picture.complete){
            thisImage++;
            if(thisImage == counter){
                thisImage = 0;
            }
        document.picture.src=pics[thisImage];
    }else
        setTimeout("rotate()", 5*1000);
}

//-->
</script>
</head>

<!--
-->

<% include file ="title.jsp" %>
<% //Read a cookie
String cookieName = "userCookie";
Cookie cookies[] = request.getCookies();
String user = null;
boolean isCookie = false;
if(cookies !=null){
    for(int i=0; i< cookies.length; i++){
        if(cookies[i].getName().equals(cookieName)){
            Cookie c = cookies[i];
            user = c.getValue();
            isCookie = true;
            break;
        }
    }
}
%>

<%
String userID = request.getParameter("userID"); // get a user's ID
String strCounter = request.getParameter("counter");
int counter = Integer.parseInt(strCounter);

<table border="0" width="100%" cellspacing="0" cellpadding="5">
<tr>
<td align="left" width="20%" valign="top" rowspan="3">
<table border="0" cellspacing="0" cellpadding="5" width="100%" align="center">
<tr>
<td align="left">
<br>
<a href="postNew.jsp?userID=${userID}">Post New</a><br>
<a href="../home.jsp">Go To Home</a><br>
<a href="../logout.jsp?userID=${userID}">Log Out</a><br>
<br>
</td>
</tr>
</table>
</td>
</tr>
<br>
<form action="searchMessage.jsp?userID=${userID}" method="post">
<tr align="left" valign="top">
<input type="text" size="20" name="search" value=""><br>
<input type="submit" value="Search">
</tr>
</form>
</tr>
<td align="right" colspan="2">

</td>
</tr>
<tr align="top" valign="bottom">
<table border="0" cellspacing="0" cellpadding="5" width="100%" align="center"
align="right" class="listing">
<tr>
<th align="left" bgcolor="#92b4dc" font color="white">Topic</font></th>
<th align="left" bgcolor="#92b4dc" font color="white">Date Posted</font></th>
<th align="right" bgcolor="#92b4dc" width="50%" font color="white">Reply</font></th>
</tr>

int i = 0;
int even = 0;

// Get fields in Message table.
String reply = "";
while(results.next() &amp;&amp; i < counter){
msgID = results.getString("MsgID");
title = results.getString("MsgTitle");
title = title.replace("\", \\");
date = results.getString("DatePosted");
numReply = results.getInt("NumReply");
if(numReply ==1){
reply = "reply";
}
else if(numReply > 1){
    reply = "replies";
}

even++;
i++;
} // end the first while

while(results.next() && i < counter + 20){
    msgID = results.getString("MsgID");
    title = results.getString("MsgTitle");
    title = title.replace('\\', '\');
    date = results.getString("DatePosted");
    numReply = results.getInt("NumReply");

    if(numReply ==1){
        reply = "reply";
    }else if(numReply > 1){
        reply = "replies";
    }
    even++;
%
<tr>
    <a href="message.jsp?msgID=<%=msgID%>&amp;numReply=<%=numReply%>&amp;userID=<%=userID%>"><b><%=title%></b></a>
    
    %
    <td bgcolor="#d7e1ec"><%=date%></td>
    
    <%if(numReply > 1){%>
    <td align="right" width="50" bgcolor="#d7e1ec"><%=numReply%>&nbsp;<%=reply%></td>
    <%}else{ %>
    <td align="right" width="50" bgcolor="#d7e1ec"></td>
    <%}%>
    
    <%}%>
</a>
</tr>

<%}
</table>
</table>
</tr>
<tr>
    <td align="left">
        

        counter = counter - 20;
        //out.print(counter);
        if(counter < 0){
            out.println("&nbsp;");
        }else{
            out.println("&lt;a href="+counter+" + counter + "&amp;userID=" + userID + 
            
            Previous Results&lt;/a&gt;");
        }
    %>
</td>

<td align="right">
    
    %>
</td>
<tr align="left">
    <td align="right">
        

        %>
</td>
<tr align="left">
    <td align="right">
        

        %>
</td>
</tr>

</table>

//out.print("i: " + i);
if(i % 20 == 0){
    out.println("<a href=nextMsgList.jsp?counter=" + i + "&userID=" + userID + ">More

</a>"));
} else{
    out.println("&nbsp;");
} //end if

</td>
</tr>
</table>

</body>
</html>
<%=Mika Kamiya
Dakota State University MSIS Graduate Project -->%>
<%=The next page for searching discussion forum -->%>
</DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">
<%=page import="java.sql.*,java.util.*,java.lang.Integer,DiscussionBoard.*"%>
<jsp:useBean id="connection" class="DiscussionBoard.ConnectionPoolBean" scope="session"/>

<html>
<head>
<title>Discussion Forum Search Result</title>
</head>
</body>
</html>

String currentUserID = request.getParameter("userID"); //Get a current user's ID
String searchString = request.getParameter("searchString");
int counter = Integer.parseInt(request.getParameter("counter"));
int pageNum = Integer.parseInt(request.getParameter("pageNum")); %>

<table border="0" width="100%" cellpadding="5" cellspacing="0">
<tr>
<td align="left" width="20%" valign="top" rowspan="2">&lt;form action="searchMessage.jsp?userID=<%=currentUserID%>" method="post"&gt;
<td align="left">&lt;b&gt;Search Forum&lt;/b&gt;&lt;/td&gt;
<input type="text" size="20" name="search"><br>
<input type="submit" value="Search" &gt;</form&gt;
</td>
</tr>
</table>
</td>
</tr>
<tr><br>
</tr>
</form>
</table>
</td>
</tr>
</table>
</td>
</tr>
</table>
</td>
</tr>
</table>
</td>
</tr>
</table>
</html>

 String sql = "SELECT * FROM Message WHERE MsgBody Like ('"%"+searchString+"%')";
ResultSet results = connection.executeQuery(sql);
String msgID =null;
String msg =null;
String msgTitle=null;
String date =null;
int numReply=0;
String userID = null;

int i =0;

while(results.next() && i < counter){
    msgID = results.getString("MsgID");
    msg = results.getString("MsgBody");
    msg = msg.replace('\n', ' ');
    msgTitle = results.getString("MsgTitle");
    msgTitle = msgTitle.replace('\n', ' ');
    date = results.getString("DatePosted");
    numReply = results.getInt("NumReply");
    userID = results.getString("UserID");
    i++;
} //end the first while
while(results.next() && i < counter + 10){
    msgID = results.getString("MsgID");
    msg = results.getString("MsgBody");
    msg = msg.replace('\n', ' ');
    msgTitle = results.getString("MsgTitle");
    msgTitle = msgTitle.replace('\n', ' ');
    date = results.getString("DatePosted");
    numReply = results.getInt("NumReply");
    userID = results.getString("UserID");
    %>
    <li><a href="message.jsp?msgID=\%&numReply=\%&userID=\%"><b>&lt;%=numReply%&gt;&lt;%=userID%&gt;&lt;%=msgID%&gt;&lt;b&gt;&lt;%=msgTitle%&gt;&lt;/b&gt;&lt;/a&gt;

    &lt%;
    String firstPart=null;
    if(msg.length() &lt; 30){
        firstPart = msg;
    }else{
        firstPart = msg.substring(0, 30);
    }%&gt;
    Replies:&lt;%=numReply%&gt;&lt;%=firstPart%&gt;&lt;br&gt;
    Date posted on &lt;%=date%&gt;&lt;br&gt;&lt;br&gt;
    &lt;/li&gt;
    &lt;%i++;&nbsp;&gt;
} //end the second while%&gt;
&lt;/ol&gt;
&lt;/td&gt;
&lt;/tr&gt;
&lt;tr&gt;
&lt;td align="left"&gt;
&lt;%/link to the previous counter = counter-10;
if(counter &lt; 0){
    pageNum = pageNum - 1;
    out.println("&nbsp;"n);
    %&gt;
}&lt;/td&gt;
&lt;td align="right"
&lt;%/link to the next page
if(i % 10 == 0){
    pageNum = pageNum + 1;
    out.println("<a href=nextSearchMessage.jsp?searchString=" + searchString +
    "eNum=" + pageNum + "&counter=" + i + "&userID=" + currentUserID + ">
More Results</a> ");
} else{
    out.println("&nbsp;");
} //end if%>
</td>
</tr>
</table>
</td>
</tr>
</table>
</body>
</html>
<body onload="rotate()" leftmargin=0 rightmargin=0 topmargin=0 bottommargin=0 marginheight=0 marginwidth=0>

<%@ include file="title.jsp" %><br>

<%// Read cookie
String cookieName = "userCookie";
Cookie cookies[] = request.getCookies();
String user = null;
if(cookies != null){
    for (int i = 0; i < cookies.length; i++){
        if (cookies[i].getName().equals(cookieName)){
            Cookie c = cookies[i];
        }
    }
%>
```html
user = c.getValue();
break;
}

$>
String userID = request.getParameter("userID");

<table border="0" width="100%" cellpadding="5" cellspacing="0">
<tr>
  <td align="left" width="20%" valign="top">
    <table border="0" cellpadding="5" cellspacing="0" width="100%" align="left" valign="top">
      <tr>
        <td align="left">
          <a href="list.jsp?userID=<%=userID%>"&gt;View All Messages</a><br>
          <a href="..\home.jsp">Go To Home</a><br>
          <a href="..\logout.jsp?userID=<%=userID%>"&gt;Log Out</a><br>
        </td>
      </tr>
    </table>
  </td>
  <td align="left" width="80%" valign="top">
    <h5 align="left">Post a new discussion</h5>
    <table border="0" width="500" align="left">
      <tr>
        <td align="left">
          <form action="updateMessage.jsp?userID=<%=userID%>" method="post" onSubmit="return validForm(this)">
            <b>Title: </b><input type="text" size="40" name="title"><br>
            <b>Message: </b><br>
            <textarea cols="60" rows="10" name="msgBody"></textarea><br>
            &lt;p align="right"&gt;
            <input type="submit" value="Submit" onClick="return confirmSubmit();"&nbsp;>&nbsp;
            <input type="reset" value="Clear"&gt;
          </form>
        </td>
      </tr>
    </table>
  </td>
</tr>
</table>
</body>
</html>
```
<DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">
<!--Mika Kamiya
Dakota State University MSIS Graduate Project-->
<!--A user posts a reply here-->
<html>
<head>
    <title>E-Mika.net: Discussion Board</title>
</head>
<body>
    <style type="text/css">
        a {color: black; text-decoration: none;}
    table {font-family: verdana; font-size: 10pt;}
    table {font-family: verdana; font-size: 10pt;}
</style>
    <script language="JavaScript1.2">
        var pics = new Array("../images/msis.gif", "../images/expand.gif");
        var thisImage = 0;
        var counter = pics.length;
        function rotate(){
            if(document.images){
                if(document.picture.complete){
                    thisImage++;
                    if(thisImage == counter){
                        thisImage = 0;
                    }
                    document.picture.src=pics[thisImage];
                }
                setTimeout("rotate()", 5*1000);
            }
        }
        function confirmSubmit(){
            return confirm("Submit a reply?");
        }
        function validForm(form) {
            if(form.replyMsgBody.value == ""){
                alert("Please enter the reply.");
                form.replyMsgBody.focus();
                return false;
            }else if(form.replyTitle.value == ""){
                alert("Please enter the title.");
                form.replyTitle.focus();
                return false;
            } else {
                return true;
            }
        }
    </script>
</body>
</html>
String userID = request.getParameter("thisUserID"); //the current user's ID
String messageID = request.getParameter("msgID");
String message = request.getParameter("body");
String title = request.getParameter("title");

<table border="0" width="100%" cellpadding="5" cellspacing="0">
<tr>
<td align="left" width="20%" valign="top">
</td>
</tr>
<tr>
<td align="left" width="100%" valign="top">
<a href="/list.jsp?user.UserID=${user.UserID}">View All Messages</a></td>
<td align="left" width="100%" valign="top">
<a href="/home.jsp">Go To Home</a></td>
<td align="left" width="100%" valign="top">
<a href="/logout.jsp?user.UserID=${user.UserID}">Log Out</a></td>
</tr>
</table>

<form action="/searchMessage.jsp?user.UserID=${user.UserID}" method="post">
<table border="0" width="500" align="left">
<tr>
<td align="left">
Search Forum</td>
<td align="left">
<input type="text" size="20" name="search" />
<input type="submit" value="Search" />
</td>
</tr>
</table>
</form>

<h5 align="left">Post a reply</h5>
<table border="0" width="500" align="left">
<tr>
<td><b>Title: </b><input type="text" name="replyTitle" value="Re: ${title}" size="30"></td>
</tr>
<tr>
<td><b>Your reply: </b><textarea cols="60" rows="10" name="replyMsgBody"></textarea>
<p align="right">
<input type="submit" value="Submit" onClick="return confirmSubmit();" />
<input type="reset" value="Clear" />
<input type="hidden" name="originalMsgID" value=${messageID} />
<input type="hidden" name="userID" value=${userID} />
</p>
</tr>
</table>
<tr><td><b>Original Message: </b>${message}</td></tr>
</table>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">
<Mika Kamiya Dakota State University MSIS Graduate Project --
<html>
<head>
	<title>Registration</title>
<style type="text/css">
	body {font-family: verdana; font-size: 10pt;}
	table {font-family: verdana; font-size: 12pt;}
	.login {font-family: verdana; font-size: 10pt;}
</style>
</head>
<body border="0" width="600" cellpadding="3" cellspacing="0">
<tr>
	<td height="68"><a href="../home.html"><img src="../images/e-mika2.gif" width="170" height="68" border="0" alt=""></a></td>
	<td align="right" valign="bottom"><b>E-Commerce Discussion Board</b></td>
</tr>
<tr>
	<td colspan="2" bgcolor="#ff9900"><b>&nbsp;Registration Form</b></td>
</tr>
</table>
<form action="confirmation.jsp" method="post">
<table class="login">
<tr>
	<td width="150">First Name:</td>
	<td><input type="Text" size="25" name="firstName"></td>
</tr>
<tr>
	<td width="150">Last Name:</td>
	<td><input type="Text" size="25" name="lastName"></td>
</tr>
<tr>
	<td width="150">E-mail:</td>
	<td><input type="Text" size="25" name="e-mail"></td>
</tr>
<tr>
	<td width="150">Choose a user ID:</td>
	<td><input type="Text" size="25" name="userID"></td>
</tr>
<tr>
	<td width="150">Choose a password:</td>
	<td><input type="Text" size="25" name="password"></td>
</tr>
<tr>
	<td colspan="2">&nbsp;</td>
</tr>
<tr>
	<td colspan="2"><input type="Submit" Value="Register"&nbsp;&nbsp;&nbsp;&nbsp;<input type="Reset" Value="Clear"></td>
</tr>
</table>
</form>
</body>
</html>
<html>
<head>
  <title>Discussion Forum Search Result</title>
</head>
<body>
  <table border="0" cellspacing="5" width="100%">
    <tr align="left">
      <td align="left">
        <a href="postNew.jsp">Post New</a>
      </td>
      <td align="left">
        <a href="list.jsp">View All Messages</a>
      </td>
      <td align="left">
        <a href="../home.jsp">Go To Home</a>
      </td>
      <td align="left">
        <a href="../logout.jsp">Log Out</a>
      </td>
    </tr>
  </table>
  <br>
  <form action="searchMessage.jsp" method="post">
    <input type="text" size="20" name="search">
    <input type="submit" value="Search">
  </form>
  <br>
  <table border="0" cellspacing="5" width="100%">
    <tr align="left">
      <td align="left">
        <table border="0" cellspacing="5" width="100%">
          <tr align="left">
            <td align="left">
              String searchString = request.getParameter("search");
              String sql = "SELECT * FROM Message WHERE MsgBody Like ('"+searchString+"%')";
              ResultSet results = connection.executeQuery(sql);
              String msgID = null;
            </td>
          </tr>
        </table>
      </td>
    </tr>
  </table>
</body>
String msg = null;
String msgTitle = null;
String date = null;
int numReply = 0;
String userID = null;
int result = 0;

int i = 0;
int counter = 10;

while(results.next() && i < counter){
    msgID = results.getString("MsgID");
    msg = results.getString("MsgBody");
    msg = msg.replace(\\", \\", \\", \\"); //replace " to '
    msgTitle = results.getString("MsgTitle");
    msgTitle = msgTitle.replace(\\", \\", \\", \\");
    date = results.getString("DatePosted");
    numReply = results.getInt("NumReply");
    userID = results.getString("UserID");
}

<a href="message.jsp?msgID=&amp;msgTitle=&amp;numReply=&amp;userID="><b>&lt;b&gt;&lt;%=msgTitle%&gt;&lt;/b&gt;&lt;/a&gt;</b></a>

 <% String firstPart = null;
    if(msg.length() < 30){
        firstPart = msg;
    }else{
        firstPart = msg.substring(0, 30); //show only first 30 characters.
    }
    Replies:&lt;%=numReply%&gt;&lt;%=firstPart%&gt;&lt;br&gt;
Date posted on &lt;%=date%&gt;&lt;br&gt;&lt;br&gt;

for(i=0;i&lt;result;i++)
<%}
%
</ol>

if(result == 0){
    out.print("No results were found for your search. ");
}%>
</td>
</tr>

<table align="right">

<tr>
    int pageNum = 1;
    if(i % 10 == 0 && result != 0){
        out.println("&lt;a href=nextSearchMessage.jsp?searchString=" + searchString + "&amp;pageNum=" + pageNum + "&amp;counter=" + i + ",&amp;userID=" + currentUserID + ",&amp;userID=&gt;More Results&lt;/a&gt;");
    }else{
        out.println("&amp;nbsp;");
    }
%
</td>
</tr>
</table>
</tr>
</td>
</tr>
</table>
</body>
</html>
<%@ Title bar at the discussion board--%>

<table border="0" cellpadding="0" cellspacing="0" height="90" width="100%" align="center">
<tr>
  <td rowspan="2" width="170" bgcolor="#ff9900"><a href="../home.jsp"><img src="../images/e-mika.gif" width="170" height="90" border="0" alt="E-Mika.net"></a></td>
  <td align="center" bgcolor="#6699cc">
    <table>
      <tr>
        <td bgcolor="#6699cc">
          <form action="../searchList.jsp" method="get">
            <small><font color="white">Search the site</font></small><br>
            <input type="text" name="searchString" size="30">&nbsp;&nbsp;<input type="submit" value="Search"></form>
          </td>
        </tr>
      </table>
    </td>
  </tr>
  <td width="200"><img src="../images/expand.gif" width="200" name="picture" height="75" border="0" alt=""></td>
</tr>
<tr>
  <td colspan="2" height="15" bgcolor="#ffcc66">&nbsp;&nbsp;<big><b>Ultimate E-commerce Source Portal</b></big></td>
</tr>
</table>
<%-- Mika Kamiya
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<%-- Title for Login.jsp, Logout.jsp, Registration.jsp and Confirmation.jsp --%>
<table border="0" width="100%" cellpadding="3" cellspacing="0" align="center" class="title2">
<tr>
<td height="68"><a href="../home.jsp"><img src="images/e-mika2.gif" width="170" height="68" alt="e-Mika.net"></a></td>
<td align="right" valign="bottom"><font size="3">Ultimate E-Commerce Resource</font></td>
</tr>
<tr>
<td colspan="2" height="27" bgcolor="#ff9900"><font size="3"><b>&nbsp;&nbsp;</b>&nbsp;&nbsp;%message%<b></b></font></td>
</tr>
</table><br><br>
<%-- Mika Kamiya
Dakota State University MSIS Graduate Project --%>

<%-- The top part of page --%>

<table class="top" border="0" cellpadding="0" cellspacing="0" height="90" width="100%" align="center">
<tr>
  <td rowspan="2" width="208" bgcolor="#ff9900">a href="home.jsp"><img src="images/e-mika.gif" width="170" height="90" border="0" alt="E-Mika.net"></a></td>
  <td align="center" bgcolor="#f6f6f6">
    <form action="searchList.jsp" method="get">
      <small><font color="white">Search the site</font></small><br>
      <input type="text" name="searchString" size="30" &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &n...
<%@-- Mika Kamiya
Dakota State University MSIS Graduate Project -->
<%--This program insert a message to the database -->
<%@ page import="java.sql.Statement, java.sql.ResultSet, java.lang.*, java.util.*, java.net.*, java.text.*, DiscussionBoard.*" %>
<jsp:useBean id="connection" class="DiscussionBoard.ConnectionPoolBean" scope="session"/>

<!--Check cookie
String cookieName = "userCookie";
Cookie cookies[] = request.getCookies();
Cookie c = null;
String user = null;
if(cookies != null) {
  for(int i = 0; i < cookies.length; i++) {
    if(cookies[i].getName().equals(cookieName)) {
      c = cookies[i];
      user = c.getValue();
      break;
    }
  }
}

//get parameters
String userID = request.getParameter("userID"); //Get this user's ID
String title = request.getParameter("title");
title = title.replace('\\', '"');
String msgBody = request.getParameter("msgBody");
msgBody = msgBody.replace('\\', '"');

Date today = new Date();
String strToday = today.toString();
String msgID = null;
String sql = "SELECT * FROM Message ORDER BY MsgID";
int max = 0;
int len = 0;
String strMsgID = null;
int intMid = 0;
ResultSet results = connection.executeQuery(sql);
while(results.next()) {
  msgID = results.getString("MsgID");
  out.println("msgID: " + msgID + ";br");
  len = msgID.length();
  out.println("len: " + len + ";br");
  if(len > 2) {
    strMsgID = msgID.substring(1, len);
  } else {
    strMsgID = msgID.substring(1);
  }
  //retrieve number part
  out.println("strMsgID: " + strMsgID + ";br");
  intMid = Integer.parseInt(strMsgID);
  if(intMid > max) {
    max = intMid;
  } else {
    max = max;
  }
}
out.println("Checking for the last MsgID: " + msgID + ";br");
max = max + 1;
msgID = "M" + max;
int numReply=0;

out.print("next msgID: " + msgID + "<br>" );
out.print("title: " + title + "<br>" );
out.print("msgBody: " + msgBody + "<br>" );
out.print("strToday: " + strToday + "<br>" );
out.print("numReply: " + numReply + "<br>" );
out.print("userID: " + userID + "<br>" );
String insert = "INSERT INTO Message VALUES (" + msgID + ", " + title + ", " + msgBody + ", " + strToday + ", " + numReply + ", " + userID + ");"
connection.executeUpdate(insert);

<%>
</jsp:forward page='"list.jsp?userID=" + userID%'> /&gt;
```java
// Check cookie
String cookieName = "userCookie";
Cookie cookies[] = request.getCookies();
Cookie c = null;
String user = null;
if(cookies != null){
    for(int i=0; i< cookies.length; i++){
        if(cookies[i].getName().equals(cookieName)){
            c = cookies[i];
            user = c.getValue();
            break;
        }
    }
}

// get parameters
String userID = request.getParameter("userID");
String replyTitle = request.getParameter("replyTitle");
    replyTitle = replyTitle.replace("", "");
String replyMsgBody = request.getParameter("replyMsgBody");
    replyMsgBody = replyMsgBody.replace(",", ");
String originalMsgID = request.getParameter("originalMsgID");

Date today = new Date();
String strToday = today.toString();
String sql = "SELECT * FROM Reply ORDER BY ReplyID";

int max = 0;
inlen=0;
String strRepID=null;
inintMID = 0;

ResultSet results = connection.executeQuery(sql);
String repID = null;
while(results.next()){ repID = results.getString("ReplyID");
    out.print("replyID: " + repID + "<br>");
    len = repID.length();
    out.print("len: " + len + "<br>");
    if(len > 2){
        strRepID = repID.substring(1, len);
    }else{
        strRepID = repID.substring(1);
    }
    // retrieve number part
    out.print("strRepID: " + strRepID + "<br>");
    intMID = Integer.parseInt(strRepID);
    if(intMID > max){
        max = intMID;
    }else{
        max=max;
    }
}
max = max + 1;
repID = "R" + max;
out.print("Checking for the next repID: " + repID + "<br>");

String insert = "INSERT INTO Reply (ReplyID, ReplyTitle, ReplyMsg, RDatePosted, RUserID, MsgID)
```

- 1 -
VALUES ('' + repID + ',' + replyTitle + ',' + replyMsgBody + ',' + strToday + ',' + userID + ',' + originalMsgID + ''');
connection.executeUpdate(insert);

/*Update the number of reply in the Message table*/
String anotherSql = "SELECT * FROM Message WHERE MsgID= '' + originalMsgID + '';";
int numReply =0;
ResultSet anotherResults = connection.executeQuery(anotherSql);

while(anotherResults.next()){       
    numReply = anotherResults.getInt("NumReply");
}
numReply = numReply + 1;
out.print("NumReply: " + numReply);
String addReplyCount = "UPDATE Message SET NumReply = " + numReply + " WHERE MsgID= '' + originalMsgID + '';
connection.executeUpdate(addReplyCount);
%
<jsp:forward page='
=' "list.jsp?userID=" + userID" />'
/*
Mika Kamiya
Dakota State University Master of Science in Information Systems
Graduate Project

This bean handles discussion database connection, update, delete, and closing.
*/
package DiscussionBoard;
import java.sql.*;

public class myConnectionBean {
    String driver = "sun.jdbc.odbc.JdbcOdbcDriver";
    String url = "jdbc:odbc:discussion";
    String username="mika";
    String password="project";
    Connection connection;
    Statement statement;

    public myConnectionBean(){
        try{
            Class.forName(driver);
            connection = DriverManager.getConnection(url, username, password);
            statement=connection.createStatement();

        }catch(SQLException e){
            System.err.println("Could not load database driver!");
            connection = null;
        }catch(SQLException e){
            System.err.println("Could not connect to the database!");
            connection = null;
        }

    }

    public int executeUpdate(String sql) throws SQLException {
        return statement.executeUpdate(sql);
    }

    public ResultSet executeQuery(String sql) throws SQLException {
        return statement.executeQuery(sql);
    }

    protected void finalize() {
        try {
            connection.close();
        } catch (SQLException e) { }
    }
}
/*
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Dakota State University Master of Science in Information Systems
Graduate Project

This bean creates and delete cookie.
*/

package MyCookie;
import javax.servlet.http.*;

public class CookieBean{
    public CookieBean(){
    }

    public Cookie setCookie(String cookieName, String userID){
        Cookie cookie = new Cookie(cookieName, userID);
        cookie.setMaxAge(24*60*60);   //24 hours
        return cookie;
    }

    public Cookie deleteCookie(String yourCookieName){
        Cookie deleteCookie = new Cookie(yourCookieName, null);
        deleteCookie.setMaxAge(0);
        return deleteCookie;
    }
}
import com.lucene.analysis.StopAnalyzer;
import com.lucene.index.IndexWriter;

import java.io.File;
import java.util.Date;
import java.util.Vector;
import java.net.*;
import java.sql.*;

class IndexFiles {
  public static void main(String[] args) {
    try {
      Date start = new Date();

      IndexWriter writer = new IndexWriter("index", new StopAnalyzer(), true);
      writer.mergeFactor = 20;

      mySearchConnectionBean connection = new mySearchConnectionBean();
      String sql = "SELECT * FROM Listing";

      ResultSet results = connection.executeQuery(sql);

      String URL = null;
      Vector urls = new Vector(370, 10);
      int i = 0;

      //Read URLs here. Vector created because of the possibility of record expansion.
      while (results.next()) {
        URL = results.getString("URL");
        urls.add(URL);
        String vectorURL = (String)urls.get(i);
        i++;
        indexURLDocs(writer, vectorURL);
        System.out.println(vectorURL);
      }

      /*Testing purpose*/
      //indexDocs(writer, new File(args[0]));
      //indexURLDocs(writer, "http://www.yahoo.com");
      //indexURLDocs(writer, "http://www.lycos.com");

      writer.optimize();
      writer.close();

      Date end = new Date();

      System.out.println(end.getTime() - start.getTime());
      System.out.println(" total milliseconds");
    } catch (Exception e) {
      System.out.println(" caught a " + e.getClass() + \\n        " with message: " + e.getMessage());
    }
  }

  public static void indexURLDocs(IndexWriter writer, String strURL) {
  
  }
try {
    URL url = new URL(strURL);
    writer.addDocument(URLDocument.Document(url));
} catch (java.net.MalformedURLException e) {
} catch (java.io.IOException e) {
}

public static void indexDocs(IndexWriter writer, File file)
    throws Exception {
    if (file.isDirectory()) {
        String[] files = file.list();
        for (int i = 0; i < files.length; i++)
            indexDocs(writer, new File(file, files[i]));
    } else {
        System.out.println("adding " + file);
        writer.addDocument(FileDocument.Document(file));
    }
}

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Graduate Project

This bean handles Search database connection, update, delete, and closing.

package search;
import java.sql.*;

public class mySearchConnectionBean {
    String driver = "sun.jdbc.odbc.JdbcOdbcDriver";
    String url = "jdbc:odbc:Search";
    String username="mika";
    String password="project";
    Connection connection;
    Statement statement;

    public mySearchConnectionBean(){
        try{
            Class.forName(driver);
            connection = DriverManager.getConnection(url, username, password);
            statement=connection.createStatement();
        }
        catch(ClassNotFoundException e){
            System.err.println("Could not load database driver!");
            connection = null;
        }
        catch(SQLException e){
            System.err.println("Could not connect to the database!");
            connection = null;
        }

    }

    public int executeUpdate(String sql) throws SQLException {
        return statement.executeUpdate(sql);
    }

    public ResultSet executeQuery(String sql) throws SQLException {
        return statement.executeQuery(sql);
    }

    protected void finalize() {
        try {
            connection.close();
        }
        catch (SQLException e) { }
    }
}
import java.io.File;
import java.io.Reader;
import java.io.FileInputStream;
import java.io.BufferedReader;
import java.io.InputStreamReader;
import java.net.*;
import java.sql.*;
import com.lucene.document.Field;
import com.lucene.document.DateField;

public class URLDocument {
    /** Makes a document for a File. */
    public static Document Document(URL url) {
        // make a new, empty document
        Document doc = new Document();

        try {
            HttpURLConnection hc = (HttpURLConnection)url.openConnection();
            //add url and contents fields in the index file
            doc.add(Field.Text("path", url.toString()));
            doc.add(Field.Keyword("modified", oDate.toString()));

            Reader reader = new BufferedReader(new InputStreamReader(hc.getInputStream()));
            doc.add(Field.Text("contents", reader));
        }

        } catch(java.io.IOException e) {
        }

        return doc;
    }

    private URLDocument() {} 
}

public static void main(String[] args) {
    try {
        URLDocument uli = new URLDocument();
    }

    } catch(java.net.MalformedURLException e) {
    }
}
<%@-- Mika Kamiya
Dakota State University MSIS Graduate Project -->%
<%@-- Log in page for an administrator -->%>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">

<html>
<head>
  <title>Untitled</title>
  <style type="text/css">
    a.nav:link {color: black; text-decoration: none}
    a.nav:visited {color: black; text-decoration: none}
    a:link {color: #003399;}
    a:visited {color: #003399;}
    a:hover {color: red;}

    body {font-family: verdana; font-size: 10pt;}
    table {font-family: verdana; font-size: 10pt;}
    .message{border-color: #6699cc; border-style: solid; border-width: 1px;}
    .reply{border-color: #ffcc66; border-style: solid; border-width: 1px;}
  </style>
</head>

<body>
<%@String message = "&nbsp;Administrator's Page"; %>
<%@ include file ="title2.jsp" %>
<p align="center">  
<form action="adminProcLogin.jsp" method="get">
<table border="0">
<tr>
  <td align="right">ID: </td><td><input type="text" size="20" name="id"></td>
</tr>
<tr>
  <td align="right">Password: </td><td><input type="password" size="20" name="password"></td>
</tr>
<tr>
  <td>&nbsp;</td>
  <td><input type="submit" value="Submit"><nbsp;<input type="reset" value="Clear"></td>
</tr>
</table>
</form>
</p>
</body>
</html>
<%@ page import="java.sql.*, Bean.*"%>
<jsp:useBean id="connection" class="Bean.ConnectionPoolBean" scope="session"/>

String adminID=null;
String cookieName = "adminCookie";
String yourCookieName = null;
String sql= null;
Cookie cookies[]= request.getCookies();
Cookie deleteCookie = null;

if(cookies !=null){
    for(int i=0; i< cookies.length; i++){
        if(cookies[i].getName().equals(cookieName)){
            Cookie c = cookies[i];
            adminID = c.getValue();
            yourCookieName = c.getName();
            deleteCookie = new Cookie(yourCookieName, null);
            deleteCookie.setMaxAge(0);
            response.addCookie(deleteCookie);
            sql = "UPDATE Admin SET AccountValidated = 'N' WHERE AdminID = \"" + adminID + \\"";
            connection.executeUpdate(sql);
            break;
        }
    }
}

<jsp:forward page="adminLogin.jsp"/>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">
<!-- Mika Kamiya
Dakota State University MSIS Graduate Project -->
<!-- List all messages in the database. -->
<%@ page import="java.sql.*,java.util.*", Bean.*" %>
<%@include file="Administrator's Page" scope="session" %>
<html>
<head>
<title>Administrator's Page</title>
<style type="text/css">

a.nav:link {color: black; text-decoration: none} 
.a.nav:visited {color: black; text-decoration: none} 
a:link {color: #003399;} 
a:visited {color: #003399;} 
a:hover {color: red;}

body {font-family: verdana; font-size: 10pt;}
table {font-family: verdana; font-size: 10pt; 
     .listing {border-style: solid; border-color: #6699cc; border-width: 1px;}

</style>

<!-- /checks if a cookie is here. 
String adminID=null; 
String cookieName = "adminCookie"; 
String yourCookieName = null; 
boolean isValid = false;
Cookie cookies[] = request.get_cookies();

if(cookies !=null){
    for(int i=0; i< cookies.length; i++){ 
        if(cookies[i].getName().equals(cookieName)){ 
            isValid = true;
            break;
        }
    }
}%>
</head>
<body>
<% if(isValid)%>

<!--String message = "&nbsp;Administrator's Page"; -->
<% include file = "title2.jsp" %>

<p align="center"><font color="red">Warning: If you delete a message which has replies, those replies also will be deleted .</font></p>
<% 
String title = null; 
int numReply = 0; 
String msgID = null; 
String sql = "SELECT * FROM Message ORDER BY DatePosted DESC";
String datePosted = null; 
ResultSet results = connection.executeQuery(sql); 
%
<table border="0" cellpadding="5" cellspacing="0" width="700" align="center" class="listing">
<tr>
<th align="left" bgcolor="#6699cc" width="300"><font color="white">Topic</font></th>
<th align="left" bgcolor="#6699cc">User ID</th>
<th align="left" bgcolor="#6699cc">Date Posted</th>
<th align="right" bgcolor="#6699cc" width="50"><font color="white">Reply</font></th>
</tr>
</table>
// Get fields in Message table.
int i = 0;
int counter = 20;
String reply = "";
int even = 0;
String userID = null;
while(results.next() && i < counter){
    msgID = results.getString("MsgID");
    title = results.getString("MsgTitle");
    title = title.replace('"', '"');
    datePosted = results.getString("DatePosted");
    numReply = results.getInt("NumReply");
    userID = results.getString("UserID");

    if(numReply == 1){
        reply = "reply";
    } else if(numReply > 1){
        reply = "replies";
    }
}
even++;

<tr>
    <%if(even % 2 == 0){%>
        <td bgcolor="#d7e1ec"><a href="messageAdmin.jsp?msgID=<%=msgID%>&amp;numReply=<%=numReply%>"&gt;<b><%=title%></b></a></td>
    <td bgcolor="#d7e1ec"><%=userID%></td>
    <td bgcolor="#d7e1ec"><%=datePosted%></td>
    %<if(numReply >= 1){%>
        <td align="right" bgcolor="#d7e1ec"><%=numReply%>&nbsp;<%=reply%></td>
    %}else{ %>
        <td align="right" bgcolor="#d7e1ec"></td>
    %}</if%>
    </td>
</%if%>
</tr>

<%i++;
} // end while%
</table>
<p align="right">
    <%
        if(i % 20 == 0){
            out.println("<a href=adminPageNext.jsp?counter=" + i + ">More Results</a>");
        } else{
            out.println("&nbsp;");
        }
    %>
</p>
<p align="center"><a href="adminLogout.jsp">Log Out</a></p>
</%>
</h3>
Page expired</h3>
</%>
</body>
</html>
<DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">
<!--Mika Kamiya
Dakota State University MSIS Graduate Program
-->
<!-- This program print message titles as the next page if there are more than 20 of them -->
<%@ page import="java.sql.*, java.util.*, Bean.*" %>
<jsp:useBean id="connection" class="Bean.ConnectionPoolBean" scope="session" />
</html>
<head>
  <title>Administrator's Page</title>
</head>
<style type="text/css">
</style>
<body>
  <!-- //check cookie
String adminID=null;
String cookieName = "adminCookie";
String yourCookieName = null;
boolean isValid = false;
Cookie cookies[]= request.getCookies();
if(cookies !=null){
  for(int i=0; i< cookies.length; i++){  
    if(cookies[i].getName().equals(cookieName)){
      isValid = true;
      break;
    }
  }
}%>

String strCounter = request.getParameter("counter");
int counter = Integer.parseInt(strCounter);

</body>
</html>

<p align="center"><font color="red">Warning: If you delete a message which has replies, these replies also will be deleted .</font></p>

<title>Administrator's Page</title>
<th align="left" bgcolor="#6699cc">Date Posted</th>
<th align="right" bgcolor="#6699cc" width="50">Reply</th>

//Get fields in Message table.
String reply = "";
int i =0;
int even = 0;
while(results.next() && i < counter){
    msgID = results.getString("MsgID");
    title = results.getString("MsgTitle");
    title = title.replace('"', '\'');
    datePosted = results.getString("DatePosted");
    numReply = results.getInt("NumReply");

    if(numReply ==1){
        reply = "reply";
    } else if(numReply > 1){
        reply = "replies"
    }
    even++;
    i++;
} //end the first while
while(results.next() && i < counter + 20){
    msgID = results.getString("MsgID");
    title = results.getString("MsgTitle");
    title = title.replace('"', '\'');
    datePosted = results.getString("DatePosted");
    numReply = results.getInt("NumReply");

    if(numReply ==1){
        reply = "reply";
    } else if(numReply > 1){
        reply = "replies"
    }
    even++;
    i++;
}

<!--if(even % 2 == 0){%>
<td bgcolor="#d7elec"><a href="messageAdmin.jsp?msgID=<%=msgID%>&amp;numReply=<%=numReply%>"<b><%=title%></b></a></td>

    <td bgcolor="#d7elec"><%=datePosted%></td>
    <if(numReply >= 1){%>
    <td align="right" bgcolor="#d7elec"><%=numReply%>&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&n

</a>
</td>
</if>
</table>
<p align="right">
<%}

    counter = counter - 20;
    //out.println(counter);
    if(counter < 0){
        out.println("&nbsp;");

    }}}}
```html
} else{
    out.println("<a href=adminPageNext.jsp?counter=" + counter + ">Previous
its</a>\n");
}
%

</p><p align="center"><a href="adminLogout.jsp">Log Out</a></p>

<div class="container">
  <div class="row">
    <div class="col-md-12">
      <h3>Page expired</h3>
    </div>
  </div>
</div>
```

<DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">

<%--Mika Kamiya
Dakota State University MSIS Graduate Program
--%>
<%-- Checks if admin ID and password matches --%>

<%@ page import="java.sql.*,Bean.*"%>
<jsp:useBean id="connection" class="Bean.ConnectionPoolBean" scope="session"/>
<jsp:useBean id="myCookie" class="Bean.CookieBean" scope="session"/>

<%
String adminID = request.getParameter("id");
String password = request.getParameter("password");
String id = null;
String psw = null;
String sql = "SELECT * FROM Admin";
boolean matched = false;

ResultSet results = connection.executeQuery(sql);

while(results.next()){
id = results.getString("AdminID");
psw = results.getString("Password");
if(id.equals(adminID) && psw.equals(password)){
    matched = true;
    break;
}
} if (matched){
    //set a cookie
    String cookieName = "adminCookie";
    Cookie c = myCookie.setCookie(cookieName, adminID);
    response.addCookie(c);
    //Database is updated. AccountValidated = Y.
    String updateSql = "UPDATE Admin SET AccountValidated = 'Y' WHERE AdminID = '" + adminID +
    connection.executeUpdate(updateSql);
}%>

<MET HTTP-EQUIV="REFRESH" CONTENT="0;URL=adminPage.jsp">
<%@else%@>
<jsp:forward page="adminLogin.jsp" />
<%} %>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">
<!--Mika Kamiya
Dakota State University MSIS Graduate Program
-->
<!-- This program deletes messages in the database. Replies are
automatically deleted if the original message is deleted.-->
<%@ page import="java.sql.*,
java.util.*,
java.lang.*,
Bean." %>
<%@ page import="connection" class="Bean.ConnectionPoolBean" scope="session" />
<html>
<head>
<title>Administrator's Page</title>
<style type="text/css">
<!--
body {font-family: verdana; font-size: 10pt;}
table {font-family: verdana; font-size: 10pt;}
//-->
</style>
<!--check cookie
String adminID=null;
String cookieName = "adminCookie";
String yourCookieName = null;
boolean isValid = false;
Cookie cookies[] = request.getCookie();
if(cookies !=null){
    for(int i=0; i< cookies.length; i++){
        if(cookies[i].getName().equals(cookieName)){
            isValid = true;
            break;
        }
    }
}
-->
</head>
<body>
<%@if(isValid){%>
    <!--
    boolean doNothing = false;
    String MsgID = request.getParameter("message");
    String[] strReplyID = request.getParameterValues("reply");
    String numReply = request.getParameter("numReply");
    String hiddenMsgID = request.getParameter("msg");
    int numReply = Integer.parseInt(strNumReply);

    int arrayLen = 0;
    //delete message
    if(MsgID == null){
        doNothing = true;
    }else{
        String deleteMessage = "DELETE FROM Message WHERE MsgID = " + MsgID + ";";
        connection.executeUpdate(deleteMessage);
    }

    //delete replies
    if(strReplyID == null){
        doNothing= true;
    }else {
        arrayLen = strReplyID.length;
        for ( int i =0; i < arrayLen; i++){
            String deleteReply = "DELETE FROM Reply WHERE ReplyID = " + strReplyID[i] + ";";
        }
    }
    %>
</body>
numReply = numReply -1;
String updateNumReply = "UPDATE Message SET NumReply = " + numReply + " WHERE MsgID " + hiddenMsgID + ""
connection.executeUpdate(deleteReply);
connection.executeUpdate(updateNumReply);

</META HTTP-EQUIV="REFRESH" CONTENT="0;URL=adminPage.jsp">
</%}
<h3>Page expired</h3>
</%>
</body>
</html>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">
<!--Mika Kamiya
Dakota State University MSIS Graduate Program
-->-

<%@ page import="java.sql.*,java.util.*,java.lang.Integer,Bean."%>
<jsp:useBean id="connection" class="Bean.ConnectionPoolBean" scope="session"/>

<html>
<head>
<title>Administrator's Page</title>
<style type="text/css">
<!--
 a.nav:link {color: black; text-decoration: none}
 a.nav:visited {color: black; text-decoration: none}
 a:link {color: #003399;}
 a:visited {color: #003399;}
 a:hover {color: red;}

body {font-family: verdana; font-size: 10pt;}
table {font-family: verdana; font-size: 10pt;}
.message{border-color: #6699cc ;border-style: solid; border-width: 1px;}
.reply{border-color: #ffcc66;border-style: solid; border-width: 1px;}
-->
</style>
<script language="javascript">
<!--
 function confirmPage(){
   confirm("Are you sure you delete this record?");
 }
//--->
</script>
</head>
<body>
%% //check cookie
String adminID=null;
String cookieName = "adminCookie";
String yourCookieName = null;
boolean isValid = false;
Cookie cookies[]= request.getCookies();
if(cookies !=null){
  for(int i=0; i< cookies.length; i++){  
    if(cookies[i].getName().equals(cookieName)){
      isValid = true;
      break;
    }
  }
}
%%>
%%if(isValid){%%

<String message = "&nbsp;Administrator's Page"; %>
<%@ include file ="title2.jsp" %>
<p align="center">
<font color="red">Warning: If you delete a message which has replies, those replies also
will be deleted.</font>
</p>

String num = request.getParameter("msgID");
String strNumReply = request.getParameter("numReply");
int numReply = Integer.parseInt(strNumReply);
String sql= null;
if(numReply >= 1){
  sql = "SELECT * FROM Message, Reply WHERE Message.MsgID = Reply(MsgID AND Reply.MsgID =
+ num + ";");

} else{
    sql = "SELECT * FROM Message WHERE MsgID = '" + num + "'";
}

ResultSet results = connection.executeQuery(sql);

String msgID =null;
String title = null;
String body =null;
String dPosted =null;
String userID =null;

Vector v = new Vector(10, 10); //create a vector
Vector RidVector = new Vector(10, 10); //this vector is only for replyID
String replyID =null;
String replyMsg =null;
String replyTitle =null;
String replyDPosted =null;
String replyUserID =null;

while(results.next()){
    msgID = results.getString("MsgID");
    title = results.getString("MsgTitle");
    title = title.replace('\n', '\n');
    body = results.getString("MsgBody");
    //replace " to ' 
    body = body.replace('"', ' '); 
    dPosted = results.getString("DatePosted");
    userID = results.getString("UserID");

    //Get fields in Reply table
    if(numReply >= 1){
        replyID = results.getString("replyID");
        replyTitle = results.getString("ReplyTitle");
        replyTitle = replyTitle.replace('\n', '\n');
        replyMsg = results.getString("ReplyMsg");
        replyMsg = replyMsg.replace('\n', '\n');
        replyDPosted = results.getString("RDatePosted");
        replyUserID = results.getString("RUserID");

        RidVector.add(replyID);
        v.add(replyTitle);
        v.add(replyUserID);
        v.add(replyDPosted);
        v.add(replyMsg);
    }
}
</form>
<form action="deleteAdmin.jsp" method="post">
<table border="0" class="listing" width="700" align="center">
<tr>
    <td>
        <table border="0" class="message" width="700" cellpadding="5" cellspacing="0">

        <tr>
            <td width="5" valign="top"><input type="checkbox" name="message" value="<%=msgID%>"></td>
            <td><b><%=title%></b><br>
                <b><%=font color="red"><%=userID%></font></b> -- posted on <%=dPosted%><br><br>
                <%=body%>
            </td>
        </tr>

    </table>
</td>
</tr>
</table>
</form>

<!-- If there is any reply, if(numReply >=1) -->
<tr>
  <td>
    <table border="0" class="reply" width="700" cellspacing="5" cellpadding="0">
      
        <tr>
          <td width="5" align="top"><input type="checkbox" name="reply"></td>
          <td>
            int i = 0;
            for(int y = 0; y < numReply; y++){
              //out.print("vector: " + (String)RidVector.get(y)); //debugging purpose
              out.print("<tr><td width="5" align="top"><input type="checkbox" name="reply value=" + (String)RidVector.get(y) + ">
            out.print("</td><td>");
            out.print("<b>");
            out.print((String)v.get(i));
            i++;
            out.print("<br>");
            out.print("<font color="red">");
            out.print((String)v.get(i));
            i++;
            out.print("</font>"+</b>";
            out.print(" -- posted on " + (String)v.get(i));
            i++;
            out.print("<br><br>");
            out.print((String)v.get(i));
            i++;
            if(y == numReply -1){
              out.print("</td><tr>";}
            }else{
              out.print("<hr color="#ffcc66"><td><tr>";}
            }
          } //end for%
        </td>
      </tr>
    </table>
  </td>
</tr>

<div class="searchform">
  <input type="hidden" name="numReply" value="<%=numReply%>">
  <input type="hidden" name="msg" value="<%=msgID%>>
</div>

<p align="center"><input type="submit" value="Delete" onClick="confirmPage();"></p>

<p align="center"><a href="adminPage.jsp">Go to the message list</a></p>

<p align="center"><a href="adminLogout.jsp">Log Out</a></p>

</body>
</html>
<%--Mika Kamiya  
Dakota State University MSIS Graduate Program  
--%>

<%--Title for addEvents.jsp  --%>
<table border="0" width="700" cellpadding="3" cellspacing="0" align="center">
<tr>
<td height="68"><img src="images/e-mika2.gif" width="170" height="68" border="0" alt="e-Mika.net"></td>
<td align="right" valign="bottom"><b>Ultimate E-Commerce Resource Portal</b></td>
</tr>
<tr>
<td colspan="2" height="27" bgcolor="#ff9900"><b>&nbsp;%message%</b></td>
</tr>
</table>
<br><br>