

Geethanjali College of Engineering and Technology
Cheeryal (V), Keesara (M), Ranga Reddy District – 501 301 (T.S)

WEB TECHNOLOGIES
LABORATORY MANUAL



DEPARTMENT OF
COMPUTER SCIENCE & ENGINEERING

Lab Incharge

G. Swapna

Asst. Prof.

HOD-CSE

Dr. D.S.R. Murthy

Prof. & Head

Geethanjali College of Engineering and Technology

Department of COMPUTER SCIENCE & ENGINEERING

(Name of the Lab Course) : WEB TECHNOLOGIES & COMPILER DESIGN

(JNTU CODE): 56610

Programme : UG

Branch: CSE A,B ,C

Version No : 2

Year: III

Updated on : 5/6/2015

Semester: II

No. of pages : 64

Classification status (Unrestricted / Restricted)

Distribution List : Department, Lab, Library, Lab In Charge

Prepared by :

Modified by :

1) Name : S.Ramanjaneyulu

1) Name : G. Lokeshwari

2) Sign :

2) Sign :

3) Design : Asst. Prof

3) Design : Assoc. Prof

4) Date :

4) Date :

Verified by :

*** For Q.C Only.**

1) Name : G. Lokeshwari

1) Name :

2) Sign :

2) Sign :

3) Design : Assoc. Prof

3) Design :

4) Date :

4) Date :

Approved by : (HOD)

1) Name :

2) Sign :

3) Date

WEB TECHNOLOGIES

LAB

Geethanjali

List of Lab Exercises

Web Technologies		
S.no.	Name of the program	Page No.
1	Design the following static web pages required for an online book store web site:1)Homepage 2)Four navigation links 3)catalogue page	
2	Design the following static web pages required for an online book store web site:4) CART PAGE 5) REGISTRATION PAGE:	
3	<p>VALIDATION:</p> <p>Write JavaScript to validate the following fields of the above registration page.</p> <ol style="list-style-type: none">1. Name (Name should contains alphabets and the length should not be less than 6 characters).2. Password (Password should not be less than 6 characters length).3. E-mail id (should not contain any invalid and must follow the standard pattern name@domain.com)4. Phone number (Phone number should contain 10 digits only).	
4	<p>Design a web page using CSS (Cascading Style Sheets) which includes the following:</p> <ol style="list-style-type: none">1) Use different font, styles:2) Set a background image for both the page and single elements on the page.3) Control the repetition of the image with the background-repeat property.4) Define styles for links as5) Work with layers:6) Add a customized cursor: Selector {cursor: value}	
5	Write an XML file which will display the Book information which	

	<p>includes the following: 1) Title of the book 2) Author Name 3) ISBN number 4) Publisher name 5) Edition 6) Price</p> <p>Write a Document Type Definition (DTD) to validate the above XML file.</p>	
6	<p>VISUAL BEANS:</p> <p>Create a simple visual bean with a area filled with a color.</p> <p>The shape of the area depends on the property shape. If it is set to true then the shape of the area is Square and it is Circle, if it is false.</p> <p>The color of the area should be changed dynamically for every mouse click. The color should also be changed if we change the color in the “property window “.</p>	
7	<p>1) Install TOMCAT web server and APACHE.</p> <p>While installation assign port number 4040 to TOMCAT and 8080 to APACHE. Make sure that these ports are available i.e., no other process is using this port.</p> <p>2) Access the above developed static web pages for books web site, using these servers by putting the web pages developed in Exp-1 and Exp-2 in the document root.</p> <p>Access the pages by using the urls : http://localhost:4040/rama/books.html (for tomcat) http://localhost:8080/books.html (for Apache)</p>	
8	<p>User Authentication:</p> <p>Assume four users user1, user2, user3 and user4 having the passwords pwd1, pwd2, pwd3 and pwd4 respectively. Write a servlet for doing the following.</p> <ol style="list-style-type: none"> 1. Create a Cookie and add these four user ids and passwords to this Cookie. 2. Read the user id and passwords entered in the Login form (Exp1) and authenticate with the values (user id and passwords) available in the cookies. 	

9	<p>Install a database (Mysql or Oracle).</p> <p>Create a table which should contain at least the following fields: name, password, email-id, phone number (these should hold the data from the registration form).</p> <p>Practice 'JDBC' connectivity.</p> <p>Write a java program/servlet/JSP to connect to that database and extract data from the tables and display them. Experiment with various SQL queries. Insert the details of the users who register with the web site, whenever a new user clicks the submit button in the registration page (Exp2).</p>	
10	<p>Write a JSP which does the following job:</p> <p>Insert the details of the 3 or 4 users who register with the web site (Exp9) by using registration form. Authenticate the user when he submits the login form using the user name and password from the database (similar to Exp8 instead of cookies).</p>	
11	<p>Create tables in the database which contain the details of items (books in our case like Book name, Price, Quantity, Amount) of each category. Modify your catalogue page (Exp 2) in such a way that you should connect to the database and extract data from the tables and display them in the catalogue page using JDBC.</p>	
12	<p>HTTP is a stateless protocol. Session is required to maintain the state. The user may add some items to cart from the catalog page. He can check the cart page for the selected items. He may visit the catalogue again and select some more items. Here our interest is the selected items should be added to the old cart rather than a new cart. Multiple users can do the same thing at a time (i.e., from different systems in the LAN using the ip-address instead of local host). This can be achieved through the use of sessions. Every user will have his own session which will be created after his successful login to the website. When the user logs out his session should get invalidated (by using the method <code>session.invalidate()</code>).</p>	

ADDITIONAL PROGRAMS

Web Technologies		
S.No.	Name of the program	Page No.
1	Design and develop a JavaScript program to display date.	
2	Design and develop a program for implementation of Fonts.	
3	Design and develop a JSP program for arithmetic.	

Vision of the Department

To produce globally competent and socially responsible computer science engineers contributing to the advancement of engineering and technology which involves creativity and innovation by providing excellent learning environment with world class facilities.

Mission of the Department

1. To be a center of excellence in instruction, innovation in research and scholarship, and service to the stake holders, the profession, and the public.
2. To prepare graduates to enter a rapidly changing field as a competent computer science engineer.
3. To prepare graduate capable in all phases of software development, possess a firm understanding of hardware technologies, have the strong mathematical background necessary for scientific computing, and be sufficiently well versed in general theory to allow growth within the discipline as it advances.
4. To prepare graduates to assume leadership roles by possessing good communication skills, the ability to work effectively as team members, and an appreciation for their social and ethical responsibility in a global setting.

PEOs and POs

PROGRAM EDUCATIONAL OBJECTIVES

1. To provide graduates with a good foundation in mathematics, sciences and engineering fundamentals required to solve engineering problems that will facilitate them to find employment in industry and / or to pursue postgraduate studies with an appreciation for lifelong learning.
2. To provide graduates with analytical and problem solving skills to design algorithms, other hardware / software systems, and inculcate professional ethics, inter-personal skills to work in a multi-cultural team.
3. To facilitate graduates to get familiarized with the art software / hardware tools, imbibing creativity and innovation that would enable them to develop cutting-edge technologies of multi-disciplinary nature for societal development.

PROGRAM OUTCOMES

1. An ability to apply knowledge of mathematics, science and engineering to develop and analyze computing systems.
2. an ability to analyze a problem and identify and define the computing requirements appropriate for its solution under given constraints.
3. An ability to perform experiments to analyze and interpret data for different applications.
4. An ability to design, implement and evaluate computer-based systems, processes, components or programs to meet desired needs within realistic constraints of time and space.
5. An ability to use current techniques, skills and modern engineering tools necessary to practice as a CSE professional.
6. An ability to recognize the importance of professional, ethical, legal, security and social issues and addressing these issues as a professional.
7. An ability to analyze the local and global impact of systems /processes /applications /technologies on individuals, organizations, society and environment.
8. An ability to function in multidisciplinary teams.

9. An ability to communicate effectively with a range of audiences.
10. Demonstrate knowledge and understanding of the engineering, management and economic principles and apply them to manage projects as a member and leader in a team.
11. A recognition of the need for and an ability to engage in life-long learning and continuing professional development
12. Knowledge of contemporary issues.
13. An ability to apply design and development principles in producing software systems of varying complexity using various project management tools.
14. An ability to identify, formulate and solve innovative engineering problems.

Equipment required to conduct the experiments listed

Computer Systems	:	60/30
• RAM	:	1 GB
• PROCESSOR	:	INTEL DUAL CORE 2.0
• HARD DISK	:	160 GB.

Software's

1. A Web Browser either IE or Firefox.
2. Tomcat Web Server & Apache Web Server.
3. XML editor like Xml-spy.
4. A data base either Mysql or Oracle.
5. JVM (Java Virtual Machine).
6. BDk (Bean Development Kit).

Objectives & Outcomes of the Web technologies & Compiler Design Lab Course

Objectives of the Web technologies & Compiler Design Lab Course

- To create a fully functional website with mvc architecture.
- To develop an online Book store using we can sell books (Ex amazon .com).

Outcomes of the Web technologies & Compiler Design Lab Course:

- Ability to design and implement a basic website.
- Implement different navigation strategies on website.
- Develop a simple bean application
- Effectively use client-side technologies (XHTML, CSS, forms and JavaScripts) to implement static websites.
- Use server-side technologies (Servlets and JSP) to implement dynamic websites.
- Develop simple back-end database to support a website.
- Recognize and evaluate website organizational structure and design elements.
- Create an XML application.

Prerequisites for Web technologies

- Java Programming, C Programming, SQL.

Assessment and Evaluation Techniques used for measurement of Outcomes of the Laboratory course:

- Writing Code.
- Program Execution.
- Testing the program by giving different inputs.
- Observation and Record work.
- Viva – Voce.
- Lab internal and external examinations.

Mapping of Lab Course with Programme Educational Objectives

S.No	Course component	code	Course	Semester	PEO 1	PEO 2	PEO 3
1	Professional core	56610	WEB TECHNOLOGIES	II	√	√	√

Mapping of Lab Course outcomes with Programme outcomes:

Experiment Name/Number	Course Outcomes(CO's)	Linkage with Theory	Linkage with other Subjects	Program Outcomes (PO's) Strengthen
1, 2, 3 & 4	CO56610.1: Students will able to design web pages for a static web site, validate the user information by regular expressions and apply different styles to web pages by css.	HTML tags, CSS, JavaScript Regular Expressions	JAVA: AWT and Swings.	PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO11, PO12, PO13, PO14
5 & 6	CO56610.2: Students will gain the knowledge of storing and transforming information through web and create a simple bean and reusing this for multiple bean applications	eXtensible Markup Language, JavaBean	Setter and Getter methods in java	PO2, PO3, PO5, PO6, PO8, PO11, PO12, PO13, PO14
7 & 8	CO56610.3: Students will able to know the installation of web servers for maintaining the web pages and how the user information is stored in cookie, when user send	Web Servers: Apache Tomcat, Servlets: Cookie		PO2, PO3, PO5, PO6, PO8, PO11, PO12, PO13, PO14

	requests to the server			
9 & 10	CO56610.4: Students will be able to connect database with jsp/servlet to retrieve the data from data base and know the authentication process of the user when login into the webpage	Servlet, Jsp, JDBC	Database Management Systems	PO2, PO3, PO5, PO6, PO8, PO11, PO12, PO13, PO14
11 & 12	CO56610.5: Students will be able to analyze how the data is extracted from the tables for doing computations on it and maintain the state of the user by using stateless protocol.	HTML, JDBC, Servlets : Session Tracking		PO2, PO3, PO5, PO6, PO8, PO11, PO12, PO13, PO14

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Geethanjali College of Engineering & Technology

Department of Computer Science & Engineering

LAB OCCUPANCY SHEET

Year/Sem/Sec: B.Tech Odd Semester

Acad Yr : 2014-15

LAB INCHARGE NAME:G.SWAPNA

Time	09.30-10.20	10.20-11.10	11.10-12.00	12.00-12.50	12.50-1.30	1.30-2.20	2.20-3.10	3.10-4.00
Period	1	2	3	4	LUNCH	5	6	7
Monday						III YEAR CSE B WT & CD LAB		
Tuesday								
Wednesday						III YEAR CSE A WT&CD LAB		
Thursday								
Friday						III YEAR CSE C WT&CD LAB		
Saturday								

S.No	Subject(T/P)	Faculty Name	Lab Incharge
1	WEB TECHNOLOGIES AND COMPILER DESIGN LAB	G.LOKESHWARY	G.SWAPNA
2		S.RAMANJANEYULU	

TT. Coord:_____

HOD:_____

Dean Academics:-_____

Principal:_____

WEEK 1

AIM

Design the following static web pages required for an online book store web site.

1) HOME PAGE: The static home page must contain three frames.

Top frame: Logo and the college name and links to Home page, Login page, Registration page, Catalogue page and Cart page (the description of these pages will be given below).

Left frame: At least four links for navigation, which will display the catalogue of respective links.

For e.g.: When you click the link “CSE” the catalogue for CSE Books should be displayed in the Right frame.

Right frame: The pages to the links in the left frame must be loaded here. Initially this page contains description of the web site.

2) LOGIN PAGE:

3) CATALOGUE PAGE:

The catalogue page should contain the details of all the books available in the web site in a table.

The details should contain the following:

1. Snap shot of Cover Page. 2. Author Name. 3. Publisher. 4. Price. 5. Add to cart button.

Objectives:

Student will able to learn

- To combine basic HTML elements to create Web pages.
- To use HTML tags and tag attributes to control a Web page's appearance.
- To add absolute URLs, relative URLs, and named anchors to your Web pages.
- To use tables and frames as navigational aids on a Web site.

Outcomes:

Student gains the knowledge to use HTML tags and tag attributes to control a Web page's appearance.

Algorithm:

Step1: Start

Step2: Create a HTML document.

Step3: Create frames Using <FRAMESET> tag divides the html page as preferred.

Step4: In top frame include the image of the college in the html document using the tag and create links as home, login, register, catalogue and cart page.

Step5: In left frame create links as CSE, IT etc. and display the menu in the left side of the window.

Step6: Make the respective forms to be displayed in the right side of web page when the menu is clicked.

Step7: Stop.

VIVA QUESTIONS:

1. What are the basic tags used to develop a webpage?
2. What are the attributes of frameset tag?
3. What is the use of anchor tag?
4. What are the properties of table tag?
5. What are the difference between cellpadding and cell spacing?

WEEK 2

AIM

Design the following static web pages required for an online book store web site.

4) CART PAGE: The cart page contains the details about the books which are added to the cart.

5) REGISTRATION PAGE: Create a “registration form “with the following fields

1) Name (Text field) 2) Password (password field) 3) E-mail id (text field) 4) Phone number (text field) 5) Sex (radio button) 6) Date of birth (3 select boxes) 7) Languages known (check boxes – English, Telugu, Hindi, Tamil) 8) Address (text area)

Objectives:

Student will able to learn

- To combine basic HTML elements to create Web pages.
- To use HTML tags and tag attributes to control a Web page’s appearance.
- To add absolute URLs, relative URLs, and named anchors to your Web pages.
- To use tables and frames as navigational aids on a Web site.

Outcomes:

Student gains the knowledge to use HTML tags and tag attributes to control a Web page’s appearance.

Algorithm:

Step1: Start

Step2: Create a HTML document.

Step3: Create frames Using <FRAMESET> tag divides the html page as preferred.

Step4: In top frame include the image of the college in the html document using the tag and create links as home, login, register, catalogue and cart page.

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Step6: Make the respective forms to be displayed in the right side of web page when the menu is clicked.

Step7: Stop.

VIVA QUESTIONS:

1. What are the basic tags used to develop a webpage?
2. What are the attributes of frameset tag?
3. What is the use of anchor tag?
4. What are the properties of table tag?
5. What are the difference between cell padding and cell spacing?

WEEK 3

AIM

VALIDATION:

Write JavaScript to validate the following fields of the above registration page.

1. Name (Name should contains alphabets and the length should not be less than 6 characters).
2. Password (Password should not be less than 6 characters length).
3. E-mail id (should not contain any invalid and must follow the standard pattern name@domain.com)
4. Phone number (Phone number should contain 10 digits only).

Student will able to learn about JavaScript that can be used to validate data in HTML forms before sending off the content to a server.

Outcomes:

Student gains the ability

- To use the fundamental components of the JavaScript programming language.
- To utilize various tools and capabilities of the JavaScript language.

Algorithm:

Step1: Start

Step2: Create a HTML document

Step3: In Head tag create script tag as `<script language="javascript" >`.

Step4: In this validation Registration page we access data entered by users in forms, to validate text fields and passwords, radio buttons, checkboxes, select menus and text areas.

Step5: When the user submits the form, the register event handler captures the event and calls the validate () function, passing in the form object.

Step6: The validate () function stores the form object in the form variable.

Step7: The values entered into the Username and Password fields are stored in variables (username and password).

Step8: An if condition is used to check if username is an empty string the function returns false and the function stops processing and the form does not submit.

Step9: If neither if condition catches a problem, the function returns true and the form submits.

Step10: If the user enters a wrong password it display message as password should contain only 6 digit numbers.

Step11: Close all the tags.

Step12: Stop.

VIVA QUESTIONS:

1. What is difference between java and JavaScript?
2. How to include external js file to html?
3. What is regular expression?
4. How to validate form data?
5. What are the objects in javascript?

Week4

AIM

Design a web page using CSS (Cascading Style Sheets) which includes the following:

1) Use different font, styles: In the style definition you define how each selector should work (font, color etc.). Then, in the body of your pages, you refer to these selectors to activate the styles.

2) Set a background image for both the page and single elements on the page.

3) Control the repetition of the image with the background-repeat property.

As background-repeat: repeat Tiles the image until the entire page is filled, just like an ordinary background image in plain HTML.

4) Define styles for links as A:link A:visited A:active A:hover

Example: <style type="text/css"> A:link {text-decoration: none} A:visited {text-decoration: none} A:active {text-decoration: none} A:hover {text-decoration: underline; color: red;} </style>

5) Work with layers:

For example: LAYER 1 ON TOP: <div style="position:relative; font-size:50px; z-index:2;">LAYER 1</div> <div style="position:relative; top:-50; left:5; color:red; font-size:80px; z-index:1">LAYER 2</div> LAYER 2 ON TOP: <div style="position:relative; font-size:50px; z-index:3;">LAYER 1</div> <div style="position:relative; top:-50; left:5; color:red; font-size:80px; z-index:4">LAYER 2</div>

6) Add a customized cursor: Selector {cursor: value}.

Objectives

Student will able to learn

- To apply CSS to your own webpage.
- Changing browser defaults using CSS.

Outcomes:

Student gains the knowledge

- To incorporate CSS into their webpage.
- To demonstrate apply CSS to images
- To create tabular data using CSS.
- To implement forms and user interfaces using CSS.

Algorithm:

Step1: Start

Step2: Create a HTML document

Step3: Including all the information using various HTML tags.

Step4: Create a CSS file to predefine the appearance of the HTML

Step5: Add the CSS file in all the HTML pages.

Step6: Close all the tags.

Step7: Stop.

VIVA QUESTIONS:

1. How to create FORMS in html?

2. What is the difference between POST and GET method?
3. What are the input type componenets in FORM?
4. What is the mandatory attribute in <form>?
5. What are the attributes of <form>?
6. What is CSS?
7. What are the advantages of CSS?
8. What are the types of CSS?
9. What is the Syntax of CSS?
10. What are the properties of table in CSS?

Week5

AIM

Write an XML file which will display the Book information which includes the following:

- 1) Title of the book 2) Author Name 3) ISBN number 4) Publisher name 5) Edition 6) Price**

Write a Document Type Definition (DTD) to validate the above XML file. Display the XML file as follows. The contents should be displayed in a table. The header of the table should be in color GREY and the Author names column should be displayed in one color and should be capitalized and in bold. Use your own colors for remaining columns. Use XML schemas XSL and CSS for the above purpose.

Objectives:

Student will able to learn

- About XML i.e. is used to share data more effectively between software applications
- About XML's role in relation to the web-based technologies you are already familiar with
- Document-based middleware.
- Graphical user interface format.
- Elements and attributes and describe how they structure an XML document

Outcomes:

Student gains the ability

- To implement XML.
- To manipulate XML elements and documents at run-time.
- About practical experience in working with XML and will be competent in working with XML as well as being able to work with XML programmatically.

Algorithm:

Step1: Start

Step2: Create three files in book information as books.xml, books.xsl and books.dtd.

Step3: In books.xml we give links of books.xsl and books.dtd.

```
(<?xml version="1.0" encoding="UTF-8"?>
<?xml:stylesheet type="text/XSL" href="books.xsl" ?>
<!DOCTYPE books SYSTEM "books.dtd">)
```

Step4: Include all the information using various html tags in books.xml.

Step5: In books.xsl include font colors, size for the information.

Step6: In books.dtd it contains

```
<!ELEMENT BOOKS (BOOK+)>
<!ELEMENT BOOK (TITLE,AUTHOR,PUBLISHER,EDITION,PRICE)>
<!ELEMENT TITLE (#PCDATA)>
```

Step7: Save all the files as .html.

Step8: Close all the tabs.

Step9: Stop.

VIVA QUESTIONS

1. What is XML?
2. Difference between XML and HTML?
3. Structure of XML document.
4. What is DTD?
5. Difference between SAX and DOM parsers?

Week6

AIM

VISUAL BEANS:

Create a simple visual bean with a area filled with a color.

The shape of the area depends on the property shape. If it is set to true then the shape of the area is Square and it is Circle, if it is false.

The color of the area should be changed dynamically for every mouse click. The color should also be changed if we change the color in the “property window “.

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Week7

AIM

- 1) Install TOMCAT web server and APACHE. While installation assign port number 4040 to TOMCAT and 8080 to APACHE. Make sure that these ports are available i.e., no other process is using this port.
- 2) Access the above developed static web pages for books web site, using these servers by putting the web pages developed in week-1 and week-2 in the document root.

Objectives:

Student will able to learn

- Install apache – tomcat web server
- To write and run servlets.
- To deploy a web application in Tomcat.
- To attach source code for libraries.

Outcomes:

Student gains the ability

- To use the concept of servlets.
- To describe the life cycle of a servlet.
- To use HTML forms.

Algorithm:

Step1: Start.

Step2: Create a directory for application in \$CATALINA_HOME/webapps/

Step3: Create a sub directory WEB-INF in application folder.

Step4: Create 3 sub directories in WEB-INF a) src, b) classes, c) lib.

Step5: Write the Servlet Program.

Step6: Set class path set

classpath=%classpath%;.;%\$CATALINA_HOME%\common\lib\servlet-api.jar.

Step7: Compile the servlet program using java compiler.

Step8: Create a web.xml to configure the servlet.

Step9: Open Program files->Apache Software foundation->Tomcat5.5->

Web-apps->wtlab->src->lib->classes.

Step10: Copy java file in src folder and .class file in classes folder.

Step11: Open Mozilla Firefox give http:localhost:8080/ in address bar, click on tomcat manager specify username as admin.

Step12: Give folder name and java filename near 8080 .It shows folder in application click on folder it displays output as Hello World!

Step13: Stop.

VIVA QUESTIONS

1. What is servlet?
2. Advantages of servlet.
3. Explain servlet life cycle?
4. Explain servlet directory structure?
5. What is the purpose of web.XML in servlets?

Week8

AIM

User Authentication:

Assume four users user1, user2, user3 and user4 having the passwords pwd1, pwd2, pwd3 and pwd4 respectively. Write a servelet for doing the following.

1. Create a Cookie and add these four user ids and passwords to this Cookie.

2. Read the user id and passwords entered in the Login form (Exp1) and authenticate with the values (user id and passwords) available in the cookies.

If he is a valid user (i.e., user-name and password match) you should welcome him by name (user-name) else you should display “You are not an authenticated user “. Use init-parameters to do this. Store the user-names and passwords in the webinf.xml and access them in the servlet by using the getInitParameters() method.

Objectives:

Student will able to learn

- Cookies are the mostly used technology for session tracking.
- Cookie as a key value pair of information, sent by the server to the browser.
- About Server can identify the client using the cookie.

Outcomes:

Student gains the knowledge about Session tracking i.e. easy to implement and maintain using the cookies.

Algorithm:

Step1: Start

Step2: Create a directory for application in \$CATALINA_HOME/webapps/

Step3: Create a sub directory WEB-INF in application folder.

Step4: Create 3 sub directories in WEB-INF a) src, b) classes, c) lib.

Step5: Write the Servlet Program.

Step6: Set class path set

classpath=%classpath%;.;%\$CATALINA_HOME%\common\lib\servlet-api.jar.

Step7: Compile the servlet program using java compiler.

Step8: Create Cookies.html Cserv1.java,Cserv2.java and Web.xml.

Step9: Open Program files->Apache Software foundation->Tomcat5.5->

Web-apps->wtlab->src->lib->classes.

Step10: Copy java file in src folder and .class file in classes folder.

Step11: Open Mozilla Firefox give http:localhost:8080/ in address bar, click on tomcat manager specify username as admin.

Step12: Give folder name and java filename near 8080 .It shows folder in application click on folder it displays output.

Step13: Stop.

VIVA QUESTIONS

1. What is session tracking?
2. How to create cookie
3. How to add cookies to response object
4. How to delete cookies from response object
5. Write the methods of Genericservlet class?

Week9

AIM

Install a database (Mysql or Oracle).

Create a table which should contain at least the following fields: name, password, email-id, phone number (these should hold the data from the registration form). Practice 'JDBC' connectivity.

Write a java program/servlet/JSP to connect to that database and extract data from the tables and display them. Experiment with various SQL queries. Insert the details of the users who register with the web site, whenever a new user clicks the submit button in the registration page (Exp2).

Objectives:

Student will able to learn update relational data using jdbc to execute select and insert queries.

Outcomes:

Student gains the knowledge about JDBC to execute common SQL statements and perform other objectives common to database applications.

Algorithm:

Step1: Start

Step2: Create Type4InsRet.java

Step3: Open Administrative Tools in Control Panel and click on Set up data sources (ODBC).

Step4: Click on Add in System DSN tab. Select the Oracle Driver name and click on finish.

Step5: Enter the required Data Source Name and click on OK.

Step6: Compile as javac Type4InsRet.java,run as java Type4InsRet and displays output.

Step7: Stop.

VIVA QUESTIONS

1. What is JDBC?
2. Explain the steps to create JDBC application?
3. What is the purpose of execute()?
4. What is the purpose of executeQuery()?
5. What is the purpose of executeUpdate()?

Week10

AIM

Write a JSP which does the following job:

Insert the details of the 3 or 4 users who register with the web site (Exp9) by using registration form. Authenticate the user when he submits the login form using the user name and password from the database (similar to Exp8 instead of cookies).

Objectives:

Student will able to learn to connect a database using jdbc and perform simple query.

Outcomes:

Student gains the knowledge

- About to connect a database using JDBC.
- About to perform local transactions using JDBC API.

Algorithm:

Step1: Start

Step2: Create store.html, jspjdbc.jsp and web.xml.

Step3: Open Administrative Tools in Control Panel and click on Set up data sources (ODBC).

Step4: Click on Add in System DSN tab. Select the Oracle Driver name and click on finish.

Step5: Enter the required Data Source Name and click on OK.

Step6: Open <http://localhost:8080/JDBC/store.html> enter the details in register form click on save to database and displays the output.

Step7: Stop.

VIVA QUESTIONS

1. What is JDBC?
2. What are types of JDBC?
3. What are JSP directives?
4. What are JSP scriptlets?
5. What are steps to create JDBC applications?

Week11

AIM

Create tables in the database which contain the details of items (books in our case like Book name, Price, Quantity, Amount) of each category. Modify your catalogue page (Exp 2) in such a way that you should connect to the database and extract data from the tables and display them in the catalogue page using JDBC.

Objectives:

Student will able to learn update relational data using jdbc to execute select and insert queries.

Outcomes:

Student gains the knowledge about JDBC to execute common SQL statements and perform other objectives common to database applications.

Algorithm:

Step1: Start

Step2: Create Type4InsRet.java

.Step3: Open Administrative Tools in Control Panel and click on Set up data sources (ODBC).

Step4: Click on Add in System DSN tab. Select the Oracle Driver name and click on finish.

Step5: Enter the required Data Source Name and click on OK.

Step6: Compile as `javac Type4InsRet.java`, run as `java Type4InsRet` and displays output.

Step7: Stop.

VIVA QUESTIONS

1. What is JDBC?
2. Explain the steps to create JDBC application?
3. What is the purpose of `execute()`?
4. What is the purpose of `executeQuery()`?
5. What is the purpose of `executeUpdate()`?

Week12

AIM

HTTP is a stateless protocol. Session is required to maintain the state. The user may add some items to cart from the catalog page. He can check the cart page for the selected items. He may visit the catalogue again and select some more items. Here our interest is the selected items should be added to the old cart rather than a new cart. Multiple users can do the same thing at a time(i.e., from different systems in the LAN using the ip-address instead of local host). This can be achieved through the use of sessions. Every user will have his own session which will be created after his successful login to the website. When the user logs out his session should get invalidated (by using the method `session.invalidate()`). Modify your catalogue and cart JSP pages to achieve the above mentioned functionality using sessions.

Objectives:

Student will be able to learn to implement a servlet program to demonstrate the session tracking using sessions.

Outcomes:

Student gains the knowledge

- About the concept of session tracking using sessions.
- About the session tracking which helps the servers to maintain the state to track the series of requests from the same user across some period of time.

Algorithm:

Step1: Start

Step2: Create a directory for application in \$CATALINA_HOME/webapps/

Step3: Create a sub directory WEB-INF in application folder.

Step4: Create 3 sub directories in WEB-INF a) src, b) classes, c) lib.

Step5: Write the Servlet Program.

Step6: Set class path set
classpath=%classpath%;.;%\$CATALINA_HOME%\common\lib\servlet-api.jar.

Step7: Compile the servlet program using java compiler.

Step8: Create sessions.html, Sserv1.java, Sserv2.java and Web.xml.

Step9: Open Program files->Apache Software foundation->Tomcat5.5->

Web-apps->wtlab->src->lib->classes.

Step10: Copy java file in src folder and .class file in classes folder.

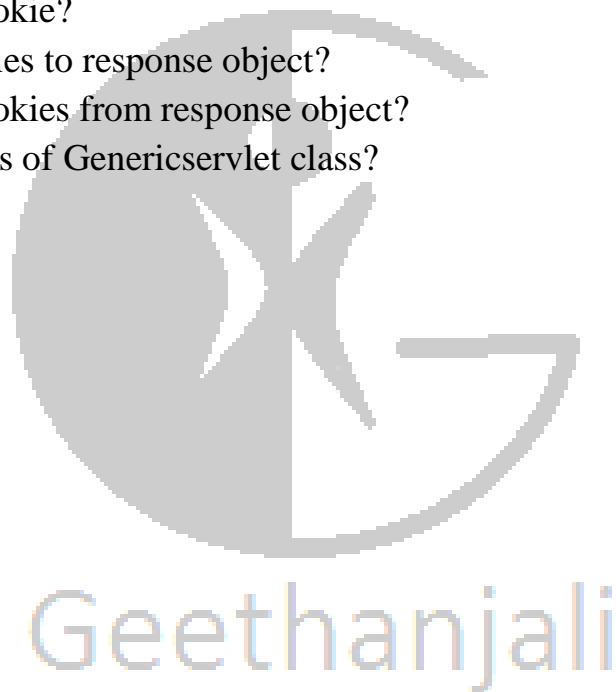
Step11: Open Mozilla Firefox give http://localhost:8080/ in address bar, click on tomcat manager specify username as admin.

Step12: Give folder name and java filename near 8080 .It shows folder in application click on folder it displays output.

Step13: Stop.

VIVA QUESTIONS

1. What is session tracking?
2. How to create cookie?
3. How to add cookies to response object?
4. How to delete cookies from response object?
5. Write the methods of Genericservlet class?



ADDITIONAL PROGRAMS



Geethanjali

AIM:

1) Design and develop a JavaScript program to display date.

Objectives:

Student will learn to design a JavaScript program to display date.

Outcomes:

Student gains the ability to implement JavaScript programs.

Algorithm:

Step1: Start.

Step2: Create a Html document.

Step3: Open head tag.

Step4: Create function as display date

```
Document.getElementById ("demo").innerHTML=Date();
```

Step5: Open <body> tag.

Step6: Create button as <button type="button" onClick="displayDate()">Display Date</button>

Step7: Close all the tags.

Step8: Stop.

AIM:

2) Design and develop a program for implementation of Fonts.

Objectives:

Student will able to learn to implement fonts.

Outcomes:

Student gains the knowledge about fonts.

Algorithm:

Step1: Start.

Step2: Create <html>,<head>,<title> tags.

Step3: Open <body> tag.

Step4: In body tag specify fonts as
all Operations.

Step5: Close all tags as </body> </title> </head> and </html>.

Step6: Stop.

Geethanjali

AIM:

3) Design and develop a JSP program for arithmetic.

Objectives:

Student will able to learn JSP programs for arithmetic.

Outcomes:

Student gains the knowledge about JSP programs.

Algorithm:

Step1: Start.

Step2: Create a Html document.

Step3: This program illustrates basic expression language arithmetic as addition (+), subtraction (-), multiplication (*), division (/) and modulus(5) are all supported.

Step4: Error conditions like division by zero are handled gracefully.

Step5: Create table as

```
<table border="1">
```

```
<th><td><b>EL expression</b></td>
```

```
<td><b>result</b></td></th>
```

Step6: Close all the tags.

Step7: Stop.