CS7612

WEB TECHNOLOGY LABORATORY

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OBJECTIVES:

- Try and develop the most important technologies that are being used today by web developers to build a wide variety of web applications.
- To develop Java based web programming.
- To build web applications using proven developer tools and message formats.
- Web applications using technologies such as Java, Javascript, AJAX, Ruby on Rails, Django, XML, RSS, XSLT, and JSON.

LIST OF EXPERIMENTS

1. Using InetAddress class, Socket Programming in Java
2. RMI
3. Client side scripting using
   - XHTML
   - Javascript - DOM
   - CSS
4. XML DTD, Parsers, XSLT, XPATH, SAX
5. Programming with AJAX, JQuery, JSON
6. Server Side programming (implement these modules using any of the server side scripting languages like PHP, Servlets, JSP etc.,
   Gathering form data
   Querying the database
   Response generation
   Session management
   MySQL/JDBC/Oracle
7. Case Study – Sample Application development
8. Ruby-on-Rails setup and programming
9. Django, Jena – Integrating Databases and applications
10. JAX – RPC
11. WSDL
12. SOAP

TOTAL: 60 PERIODS

OUTCOMES:

Upon completion of the course, the students will be able to:

- Apply the Object Oriented features of Java for programming on the internet
- Implement socket programming and Client side scripting in Java
- Design a Web application using various technologies such as Java, XML, AJAX, Servlets, PHP, JSP, Django and Jena.
- Create applications using web services such as WSDL and SOAP
- Develop application using Dreamweaver/Flex/Silver Light etc.

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CS7612 – Web Technology Laboratory

List of Experiments

1. **Write a Java program using Inetaddress class and Sockets to implement**
   a. To implement simple ping application between two or more different machines.
   b. To implement date and time display from client to server using Sockets.
   c. Write a ping-pong client and server application. When a client sends a ping message to the server, the server will respond with a pong message. Other messages sent by the client can be safely dropped by the server.
   d. Write a Socket-based Java server program that responds to client messages as follows: When it receives a message from a client, it simply converts the message into all uppercase letters and sends back the same to the client. Write both client and server programs demonstrating this.
   e. To implement Broadcasting messages to in your lab.

2. **Implement Remote Method Invocation(RMI)**
   a. To write a java -program to implement Client – Server communication using RPC.
   b. To implement remote command execution using RMI.
   c. To create RMI to calculate factorial of given no.
   d. To create RMI to perform arithmetic operations using RPC.
   e. Implement Domain name server it converts IP address for given textual name.

3. Client Side Scripting

a. Create a Web page HTML CSS that holds a bulleted list of the names of your friends. Make sure that the bullets are in plain circle.

b. Create a Web Page in HTML CSS to display the maximum and minimum temperature of 5 cities using table.

c. Design a Web page in HTML that accepts User Name and Password. Opens a new window when the password corresponds to a particular value is set by the developer.

d. Design a Web page in HTML that consists of 2 text boxes. When the page is first loaded set the focus to the first textbox. The user should not be allowed to leave the box unless enters a value in it.

e. Display an alert box to alert the x and y coordinates of the cursor in java script.

f. Design simple arithmetic calculator in java script.

g. Design a Web page to display a Digital Clock in java script

h. Create, test, and validate an XHTML document that describes an ordered list of your five favorite movies

i. Create, test, and validate an XHTML document that has a form with
   a. A text box to collect the user's name
   b. Four checkboxes,
   c. A collection of three radio buttons

j. Create dynamic website of Department of Computer technology in HTML / XHTML / JAVA Script.