

INTERNET PROGRAMMING LAB

1.WEB PAGE INCLUDING MAP AND FIXING HOTSPOT

PROGRAM:

Index home page:

```
<html>
<body>
<p>
<map name="imap">
<area href="delhi.html" shape="circle" coords="459,132,16">
<area href="chennai.html" shape="circle" coords="380,475,14">
</map>

</p>
</body>
</html>
```

Delhi web page:

```
<html>
<head>
<title>DELHI</title>
</head>
<body>
</head>
<body bgcolor="lavender">
<p align="center">
<font face="arial" color="magenta" size="4">
<b><i>
<u><marquee>Welcome to DELHI</marquee></u>
</i></b>
</font>
</p>
<p align="left">
<font face="times new roman" color="red" size="4">
<b><u><i>About DELHI:</b></u></i>
</font>
</p>
```

Delhi is the capital of INDIA. It is one of the metropolitan cities in INDIA. It is the ancient and advanced city.
Indian politics is mainly concentrates in this city. The Supreme court and defense headquarters are located in the city.

```
</font>
</p>
<p align="left">
<font face="times new roman" color="red" size="4">
<b><u><i>Important places:</b></u></i>
</font></p>
<p align="left">
<font face="times new roman" color="blue" size="3">
1.India Gate<br>2.Taj Mahal<br>3.Ancient Buildings
</font>
</p>
</body>
</html>
```

Chennai web page:

```
<html>
<head>
<title>CHENNAI</title>
</head>
<body>
</head>
<body bgcolor="lavender">
<p align="center">
<font face="arial" color="magenta" size="4">
<b><i><u>
<marquee>Welcome to CHENNAI</marquee></u>
</i></b>
</font>
</p>
<p align="left">
<font face="times new roman" color="red" size="4">
<b><u><i>About CHENNAI:</b></u></i>
</font>
</p>
<p align="left">
<font face="times new roman" color="blue" size="4">
Chennai is the capital of the state Tamil Nadu.
It is one of the metropolitan cities in INDIA. It ranks 4th best city in INDIA.
The city has International airport as well as world's second beach <b> MARINA</b>.
It has IT industry focus today.
</font>
```

```
</p>
<p align="left">
<font face="times new roman" color="red" size="4">
<b><u><i>Important places:</b></u></i>
</font>
</p>
<p align="left">
<font face="times new roman" color="blue" size="3">
1.Marina Beach<br>2.Satyam Theater<br>3.Express Avenue
</font>
</p>
</body>
</html>
```

Exercise:

1) Construct a form

First Name :

Last Name :

User Name:

Password:

Retype Password :

E-mail :

Phone No :

Gender : ☒ Male ☐ Female

City :

Submit

2) Write a HTML document to construct below table

Batch No	Reg. No.	Name	Domain	Title
1	19268410	Arun	IoT	Home Automation
	19268467	Selvam		
	19268428	Kumar		
2	19268445	Selvi	IoT	Automated Alarm
3	19268401	Karan	Image Processing	Face Recognition
	19268427	Sharan		

2. WEB PAGE CREATION USING STYLE SHEETS

PROGRAM:

INLINE.html

```
<html>
<head>
<title> inline styles </title>
</head>
<body>
<p>this text doesn't have any style applied to it </p>
<p style="font-size :40pt">the style is applied to <t>"SAVEETHA"</t>text</p>
<p style="font-size :15pt;color:red">
this text has been formatted</p>
</body>
</html>
```

EXTERNAL.html

```
<html>
<head>
<title>linking to External style sheet</title>
<link rel="stylesheet" type="text/css" href="style.css"/>
</head>
<body>
<h1>Saveetha School of Engineering<em>College</em>:</h1>
<h2>Computer Science Engineering</h2>
<ul>
<li>Departments
<ul>
<li>CSE</li>
<li>IT</li>
<li>MCA</li>
</ul>
</li>
<li>ECE</li>
<li>EEE</li>
</ul>
<p><a class="nodec" href="https://arms.sse.saveetha.com/">Go to SSE Website
</a></p>
</body>
</html>
```

style.css:

```
BODY{background-color:green;font-family:sans-serif}
CAPTION{font-size:large;font-weight:bold}
H1{font-family:helvetica;color:blue}
H2{font-family:arial;color:red}
```

EMBEDDED.html:

```
<html>
<head>
<style type="text/css">
p.one
{
border-style:solid;
border-color:#00ff00
}
p.two
{
border-style:solid;
border-color:red blue
}
p.three
{
border-style:solid;
border-color:red blue green
}
p.four
{
border-style:solid;
border-color:red blue green
rgb(250,0,255)
}
</style></head></body>
<p class="one"><b>Note:</b>our college has 73 branches</p>
<p class="two"><b>Note:</b>our college has 73 branches</p>
<p class="three"><b>Note:</b>our college has 73 branches</p>
<p class="four"><b>Note:</b>our college has 73 branches</p>
</body></html>
<html>
<head>
<style type="text/css">
body{background-color:cyan}
h1{background-color:#00ff00}
h2{background-color:transparent}
p{background-color:rgb(250,0,250)}
```

```
</style>
<head>
<body>
<h1>SSE</h1>
<h2>Chennai</h2>
<p>this is a reputed college in TN</p>
<br>this college has other institution
<br>name:Saveetha Engineering College
</body></html>
```

To Learn the basic of Creating a web page

<https://www.browserstack.com/guide/build-a-website-using-html-css>

Exercise:

- 1) Design a page to fulfill the following Requirements

Home Page

Name of the Library System along with Login and Registration Menu.

When the Login menu clicked there are two sub menu User and admin.

When the Registration menu clicked a new window popped up to receive details for the user (using Form and Button Control of HTML)

When the user or admin sub menu clicked the new page popped up for asking login credentials.

3. Validating simple form

PROGRAM:

```
<html>
<head>
<title>A Simple Form with JavaScript Validation</title>
<script type="text/javascript">
function validate_form ( )
{
    valid = true;
    if ( document.contact_form.contact_name.value == "" )
    {
        alert ( "Please fill in the 'Your Name' box." );
        valid = false;
    }
    if ( document.contact_form.contact_name.value != "" )
    {
        alert ( "Succesfull" );
        valid = false;
    }
    return valid;
}
</script>
</head>
<body bgcolor="#FFFF56">
<form name="contact_form" method="post" onSubmit="return validate_form();">
<h1>Please Enter Your Name</h1>
<p>Your Name: <input type="text" name="contact_name"></p>
<p><input type="submit" name="send" value="Send Details"></p>
</form>
</body>
</html>
```

Exercise:

- 1) Write a script code to hide and show image in the web page.
- 2) There is a Text message present earlier with Red background blue color with font size of 10 and family of times new roman.
When the button clicked the text background color changed to green text color yellow size must be 12 and bolded.

TOMCAT RUNNING PROCEDURE

How to compile servlet program:

1. In the command prompt ,move to
C:\program files\apache group\tomcat 4.1\webapps\SERVLET\ WEB-INF\classes.\
2. Set path=c:\j2sdk1.4.2_1 \ bin
3. Set classpath= C:\program files\apache group\tomcat4.1\lib\servlet-api.jar
4. Compile the program by using javac filename.

Note: 1. Servlet java program should be in the ..\classes folder

2. Client program(html/java) Should be in the ..\SERVLET folder

3. Go to **web.xml** file which is inside of **WEB-INF** folder modify the **<servlet-class>** tag by the servlet class name.

4. In the **HTML client file**, change the action attribute to
action="http://localhost:8080/SERVLET/servlet class name"

Content of web.xml:

```
<servlet>
<servlet-name>myForm</servlet-name>
<servlet-class>myForm</servlet-class>
</servlet>
<servlet-mapping>
<servlet-name>myForm</servlet-name>
<url-pattern>/myForm</url-pattern>
</servlet-mapping>
```

Start tomcat:

1. Start tomcat startup
2. Goto the Internet Explorer type,
<http://localhost:8080/SERVLET/html> file

If Tomcat is not running;

Goto my computer then right click,
Properties, advanced, environment variables,
System variables new,
Add
JAVA_HOME to jdk path
CATELINA_HOME to tomcat path.

4. INVOKING SERVLETS FROM HTML FORMS

PROGRAM:

HTML Form:

```
<html>
<head>
<title>Ordering Pen</title>
<body>
<form name=order action="http://localhost:8080/servlet/myForm"
method=POST>
<input type=radio name=cost value=10>Big<br>
<input type=radio name=cost value=7>Medium<br>
<input type=radio name=cost value=5>Small<br>
Quantity<input type=textField name=quant><br>
Item<input type=textField name=item><br>
<input type=Submit name=submit value=Submit>
</form>
</body>
</html>
```

Servlet Code:

```
import javax.servlet.*;
import javax.servlet.http.*;
import java.io.*;

public class myForm extends HttpServlet {
    public void doPost(HttpServletRequest request, HttpServletResponse response) {
        PrintWriter out;
        int cost=Integer.parseInt(request.getParameter("cost"));
        int quant=Integer.parseInt(request.getParameter("quant"));
        String m=request.getParameter("item");
        try {
            out=response.getWriter();
            out.println("<html><head><title>Order</title></head><body>");
            out.println("Your Order for "+m+" of cost "+cost+" is accepted. Your total Bill is
                                                                    Rs."+cost*quant+".");
            out.println("</body></html>");
        }
        catch(Exception e){}
    }
}
```

5. INVOKING SERVLETS USING DATA BASE

PROGRAM:

Input file :input.html

```
<HTML>
<HEAD>
<TITLE>Database Lookup</TITLE>
</HEAD>
<BODY>
<H1>Database Lookup</H1>
<FORM ACTION="http://localhost:8080/SERVLET/Bookdb" METHOD="GET">
    Please enter the ID of the BOOK you want to find:
    <BR>
    <INPUT TYPE="TEXT" NAME="id">
    <BR>
    <INPUT TYPE="SUBMIT" value="Submit">
</FORM>
</BODY>
</HTML>
```

Servlet code

```
import java.io.*;
import java.util.*;
import javax.servlet.*;
import javax.servlet.http.*;
import java.sql.*;

public class Bookdb extends HttpServlet
{
    public void doGet(HttpServletRequest req, HttpServletResponse res) throws
    ServletException, IOException
    {
        try
        {
            PrintWriter out=res.getWriter();
            Class.forName("com.mysql.jdbc.Driver");
            Connection conn = DriverManager.getConnection
                ("jdbc:mysql://localhost:3306/library","root", "Jaisakthi");
            Statement stmt = conn.createStatement ();
            int bid=Integer.parseInt(req.getParameter("id"));
            ResultSet rs1=stmt.executeQuery(" select * from list where book_id = " + bid );
            out.println("<html><body ><center><h1>Book  Details</h1><br><br>
            <table border=1><tr><th>BOOKID</th><th>BOOK Name</th><th>Author
            Name</th></tr>");
```

```

while(rs1.next())
{
    out.println("<tr> ");
    out.print("<td> "+rs1.getInt(1)+"</td>");
    out.print("<td> "+rs1.getString(2)+"</td>");
    out.print("<td> "+rs1.getString(3)+"</td>");
    out.println("</tr> "); }
    out.println("</table></center></body></html> ");
    stmt.close();
    conn.close();
}
catch (Exception e)
{
    System.out.println("Error : "+e);
}
}
}
}

```

LIST- TABLE STRUCTURE:

FIELD	DATA TYPE
Book_id	number
book_name	text
author_name	text

Note:

To execute above code, we have to download **mysql-connector-j-8.2.0.jar** file from internet and paste it in the lib sub folder from the apache tomcat folder

JSP

Procedure:

1. Keep both client program and server program in the same location
2. Create a folder named JSP inside a webapps subfolder in apache directory.
3. Put both client and server program inside the JSP folder.
4. Go to browser type localhost:8080/JSP/client file or Server file name (both in the same document)

6.MARKLIST USING JSP

PROGRAM:

Client code:

```
<HTML>
<HEAD>
<TITLE>Database Lookup</TITLE>
</HEAD>

<BODY>
<H1>Database Lookup</H1>
<FORM action="basic.jsp" method="POST">
    Please enter the reg no of the student you want to find:
    <BR>
    <INPUT TYPE="TEXT" NAME="id">
    <BR>
    <INPUT TYPE="SUBMIT" value="Submit">
</FORM>
</BODY>
</HTML>
```

Server code :

```
<%@ page import="java.sql.*" %>
<%@ page import="java.io.*" %>
<%@ page import="java.util.*" %>

<% Class.forName("com.mysql.jdbc.Driver "); %>
<HTML>
```

```

<HEAD>
<TITLE>Fetching Data From a Database</TITLE>
</HEAD>
<BODY>
<H1>Fetching Data From a Database</H1>

<%
    Connection connection =
        DriverManager.getConnection("jdbc:mysql://localhost:3306/library","root",
            "Jaisakthi");

    Statement statement = connection.createStatement();

    int id = Integer.parseInt(request.getParameter("id"));

    ResultSet resultset =
        statement.executeQuery("select * from mark where regno = " + id );

    if(!resultset.next()) {
        out.println("Sorry, could not find that publisher. ");
    } else {
%>

<TABLE BORDER="1">
    <TR>
        <TH>REGNO</TH>
        <TH>Name</TH>
        <TH>MARK</TH>
    </TR>
    <TR>
        <TD> <%= resultset.getInt(1) %> </TD>
        <TD> <%= resultset.getString(2) %> </TD>
        <TD> <%= resultset.getInt(3) %> </TD>
    </TR>
</TABLE>
<BR>
<%
    }
%>
</BODY>
</HTML>

```

STUDENT TABLE STRUCTURE:

FIELD	DATA TYPE
Reg no	number
name	text
marks	number

8. XML-SCHEMA

PROGRAM:

XML file:

```
<?xml version="1.0"?>
<xs:customers xmlns:xs="http://www.w3.org/2001/schema_instance">
<xs:schema location="soft.xsd">
<xs:customercus_id="1001">
<xs:name>
<xs:firstname>Ganesh</xs:firstname>
<xs:lastname>Kumar</xs:lastname>
</xs:name>
<xs:title>Software Programmer</xs:title>
<xs:company>Microsoft</xs:company>
<xs:address>USA</xs:address>
<xs:phone>
<xs:business>345678</xs:business>
<xs:personal>6545315246</xs:personal>
<xs:home>4564564</xs:home>
</xs:phone>
<xs:email>gan_kuamar@yahoo.in</xs:email>
<xs:account>132</xs:account>
</xs:customer>
<xs:customercus_id="1002">
<xs:name>
<xs:firstname>Senthil</xs:firstname>
<xs:lastname>Ramkumar</xs:lastname>
</xs:name>
<xs:title>Control Designer</xs:title>
<xs:company>IBM</xs:company>
<xs:address>India,Bangalore</xs:address>
<xs:phone>
<xs:business>855654</xs:business>
<xs:personal>654556</xs:personal>
<xs:home>6546511</xs:home>
</xs:phone>
<xs:email>sen_ram@yahoo.in</xs:email>
<xs:account>132</xs:account>
</xs:customer>
</xs:schema>
</xs:customers>
```


XSD Schema Definition: soft.xsd

```
<?xml version="1.0"?>
<xsd:schema xmlns:xsd="http://www.w3.org/2001/schema">
<xsd:complexType name="customers">
<xsd:complexType name="customer">
<xsd:sequence>
<xsd:simpleType name="name">
<xsd:sequence>
<xsd:element name="firstname" type="xsd:string"/>
<xsd:element name="lastname" type="xsd:string"/>
</xsd:sequence>
</xsd:simpleType>
<xsd:element name="title"/>
<xsd:element name="company"/>
<xsd:element name="address"/>
<xsd:simpleType name="phone">
<xsd:sequence>
<xsd:element name="business"/>
<xsd:element name="personal"/>
<xsd:element name="home"/>
</xsd:sequence>
</xsd:simpleType>
<xsd:element name="email"/>
<xsd:element name="account"/>
</xsd:sequence>
<xsd:attribute name="cus_id type=xsd:ID"/>
</xsd:complexType>
</xsd:complexType>
</xsd:schema>
```

9. XSL USING XML

PROGRAM:

Sys.xml:

```
<?xml version="1.0"?>
<?xml-stylesheet type="text/xsl" href="system.xsl"?>
<systemcon>
<com><processor>Pentium</processor>
<version>4</version><speed>2.4ghz</speed>
<rate>2350</rate></com>
<com><processor>Pentium</processor>
<version>4</version><speed>2.4ghz</speed>
<rate>2770</rate></com>
<com><processor>Pentium</processor>
<version>4</version><speed>3.02ghz</speed>
<rate>3420</rate></com>
<com><processor>Pentium</processor>
<version>4</version><speed>3.4ghz</speed>
<rate>12350</rate></com>
</systemcon>
```

System.xsl:

```
<?xml version="1.0" ?>
<xsl:stylesheet version="1.0"
    xmlns:xsl="http://www.w3.org/1999/XSL/Transform">
<xsl:template match="/">
<html><body>
<h2>Systemconfig</h2>
<table border="1"><tr>
<th>Processor</th>
<th>Version</th>
<th>Speed</th>
<th>Rate</th>
</tr>
<xsl:for-each select="systemcon/com">
```

```
<tr>
<td><xsl:value-of select="processor"/></td>
<td><xsl:value-of select="version"/></td>
<td><xsl:value-of select="speed"/></td>
<td><xsl:value-of select="rate"/></td>
</tr>
</xsl:for-each>
</table>
</body>
</html>
</xsl:template>
</xsl:stylesheet>
```

10.AJAX PROGRAM

PROGRAM:

ajax.html

```
<!DOCTYPE html>
<html>
<head>
<script>
function loadXMLDoc()
{
var xmlhttp;
if (window.XMLHttpRequest)
{// code for IE7+, Firefox, Chrome, Opera, Safari
xmlhttp=new XMLHttpRequest();
}
else
{// code for IE6, IE5
xmlhttp=new ActiveXObject("Microsoft.XMLHTTP");
}
xmlhttp.onreadystatechange=function()
{
if (xmlhttp.readyState==4 && xmlhttp.status==200)
{
document.getElementById("myDiv").innerHTML=xmlhttp.responseText;
}
}
xmlhttp.open("GET","ajax_info.txt",true);
xmlhttp.send();
}
</script>
</head>
<body>
<div id="myDiv"><h2>Let AJAX change this text</h2></div>
<button type="button" onclick="loadXMLDoc()">Change Content</button>
</body>
</html>
```

ajax_info.txt

AJAX is not a new programming language.
AJAX is a technique for creating fast and dynamic web pages.

Procedure:

1. Keep both HTML input file and the text file both in the location of client code existing place (inside SERVLET Folder) in apache directory.
2. Go to browser type localhost:8080/SERVLET/client file

11. PHP Client Server Program

Procedure:

Step 1: First of all, open the Apache Friends website and download XAMPP for Windows, and install it.

Step 2: Start the XAMPP Program Control Panel. Click on the “Start” button next to the “Apache” to start your Apache Web Server. Also, start “MySQL” if your PHP programs depend on a MySQL database to run.

Step 3: Place your PHP files in the “htdocs” folder located under the “XAMPP” folder on your drive (i.e. C/D/E etc). The initial path is “your_drive_letter:\xampp\htdocs” for your Web server. Make sure that your PHP files are saved as a “.php” file extension.

Step 4: Open up any web browser and enter “localhost/filename”. This will open the file stored under the “htdocs” folder on your computer. It will be executed.

11.a) PHP PROGRAM TO CALCULATE FACTORIAL OF A NUMBER USING CLIENT SERVER AS A SINGLE FILE

```
<html>
<head>
<title>Factorial Program using loop in PHP</title>
</head>
<body>
<form method="post">
    Enter the Number:<br>
    <input type="number" name="number" id="number">
    <input type="submit" name="submit" value="Submit" />
</form>
<?php
    if($_POST){
        $fact = 1;
        //getting value from input text box 'number'
        $number = $_POST['number'];
        echo "Factorial of $number:<br><br>";
        //start loop
        for ($i = 1; $i <= $number; $i++){
            $fact = $fact * $i;
        }
        echo $fact . "<br>";
    }
?>
</body>
</html>
```

11. b) PHP PROGRAM TO CALCULATE FACTORIAL OF A NUMBER USING CLIENT SERVER SEPARATE FILE

Client File : inputfact.html

```
<html>
<head>
<title>Factorial Program using loop in PHP</title>
</head>
<body>
<form action="factresponse.php" method="post">
    Enter the Number:<br>
    <input type="number" name="number" id="number">
    <input type="submit" name="submit" value="Submit" />
</form>
</body>
</html>
```

Server File: factresponse.php

```
<?php
    if($_POST){
        $fact = 1;
        //getting value from input text box 'number'
        $number = $_POST['number'];
        echo "Factorial of $number:<br><br>";
        //start loop
        for ($i = 1; $i <= $number; $i++){
            $fact = $fact * $i;
        }
        echo $fact . "<br>";
    }
?>
```


11. c) PHP PROGRAM TO RETRIEVE STUDENT DETAILS FROM MYSQL DTABASE

Client Code: inputdb.html

```
<html>
<head>
<title>Database connection in PHP</title>
</head>
<body>
<form action="dbserver.php" method="post">
    Enter the Reg Number:<br>
    <input type="number" name="reg" id="number">
    <input type="submit" name="submit" value="Submit">
</form>
</body>
</html>
```

SERVER CODE: dbserver.php

```
<?php
$servername = "localhost";
$username = "root";
$password = "";
$dbname="jai";
if ($_POST)
{
$conn = new mysqli($servername, $username, $password, $dbname);
$sql = "SELECT * FROM student WHERE regno =".$_POST["reg"];
$result = $conn->query($sql);
while($row = $result->fetch_assoc()) {
    echo "Reg Number: " . $row["regno"]. " - Name: " . $row["name"]. " -Gender: " .
$row["gender"]."- Age: " . $row["age"]. "<br>";
}
```

```
}  
}  
?>
```

Table Structure:

name Varchar(20)

rollno int

gender varchar(1)

age int