**IT LAB PROGRAMS 11-20**

**11. Design an XML document to store information about a student in a college and display it.**

**Xml file**

<?xml version="1.0" encoding="UTF-8"?>

<?xml-stylesheet type="text/css" href="style.css"?>

<STUDENT\_DATA>

<STUDENT>

<USN>USN: 1111111</USN>

<NAME>NAME: Anurag</NAME>

<COLLEGE>COLLEGE: Presidency</COLLEGE>

<EMAIL>E-MAIL: anurag@email.com</EMAIL>

</STUDENT>

<STUDENT>

<USN>USN: 2222222</USN>

<NAME>NAME: Kevin</NAME>

<COLLEGE>COLLEGE: USC</COLLEGE>

<EMAIL>E-MAIL: kevin@email.com</EMAIL>

</STUDENT>

</STUDENT\_DATA>

**CSS FILE**

\*{

display: block;

font-size: 20px;

}

USN{

color: blue;

font-size: 30px;

margin-top: 20px;

}

**12. Design signup form to validate username, password, and phone numbers etc using Java script.**

**HTML FILE**

<!DOCTYPE html>

<html lang="en">

<head>

<title>Form</title>

</head>

<body>

<script>

function validateForm(){

var name = document.getElementById("name").value;

var password = document.getElementById("password").value;

var phoneno = document.getElementById("phoneno").value;

if(name==null || name==""){

alert("name cant be empyt");

return false;

}

if(password.length < 6){

alert("password must be 6 character long");

return false

}

if(phoneno.length != 10){

alert("phone number must be 10 digits");

return false

}

document.getElementById("output").innerHTML = "You are valid user";

}

</script>

<form>

Name: <input type="text" id="name"><br>

Password: <input type="password" id="password"><br>

Phone Number: <input type="text" id="phoneno"><br>

<input type="button" onclick="validateForm()" value="submit">

<h1 id="output"></h1>

</form>

</body>

</html>

**13. Write a JavaScript program to determine whether a given year is a leap year.**

**HTML FILE**

<!DOCTYPE html>

<html lang="en">

<head>

<title>JavaScript to check leap year</title>

</head>

<body>

Enter Year: <input type="text" id="year">

<input type="button" id="button" value="check" onclick="leapYear()">

<h2 id="output"></h2>

<script>

function leapYear(){

var year = document.getElementById("year").value;

var result = (year % 400 == 0) || ((year % 4 == 0) && (year % 100 != 0));

if(result == true){

document.getElementById("output").innerHTML = "It is a leap year";

}

else{

document.getElementById("output").innerHTML = "It is a not leap year";

}

}

</script>

</body>

</html>

**14. Write a JavaScript program to convert temperatures to and from celsius, Fahrenheit**

**HTML FILE**

<!DOCTYPE html>

<html lang="en">

<head>

<title>Document</title>

</head>

<body>

<h2>JS Celcius to Farahnit</h2>

<p>Enter number</p>

<input type="number" id="c" onkeyup="convert('c')"> Degree Celcius<br>

<input type="number" id="f" onkeyup="convert('f')"> Degree Farahnit<br>

<p><b>Note: </b> math.round() is used to return</p>

<script>

function convert(degree){

var x;

if(degree == 'c'){

x = document.getElementById("c").value \* 9/5 + 32;

document.getElementById("f").value = x;

}

else{

x = (document.getElementById("f").value-32) \* 5/9;

document.getElementById("c").value = x;

}

}

</script>

</body>

</html>

**15. Write a JavaScript program to use pi value as global variable and print the area of circle.**

**HTML FILE**

<!DOCTYPE html>

<html lang="en">

<body>

<h1>Area Of A Circle</h1>

Enter the Radius: <input type="text" name="text" id="radius">

<input type="button" value="calculate" onclick="calculate()">

<script>

var pi = 3.14;

function calculate(){

var radius = document.getElementById("radius").value;

alert("The Area of the circle is " + (radius\*radius\*pi));

}

</script>

</body>

</html>

**16. Write servlet application to print current date & time.**

**SERVLET FILE**

import java.io.IOException;

import java.io.PrintWriter;

import javax.servlet.ServletException;

import javax.servlet.annotation.WebServlet;

import javax.servlet.http.\*;

@WebServlet("/DateTime")

public class DateTime extends HttpServlet {

private static final long serialVersionUID = 1L;

protected void doGet(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException {

response.setContentType("text/html");

PrintWriter pw = response.getWriter();

java.util.Date date = new java.util.Date();

pw.println("<h2>Current Date and Time" + date.toString() + "</h2>");

pw.close();

}

}

**17. Write a servlet code to demonstrate session tracking.**

**FIRST SERVLET FILE**

import java.io.IOException;

import java.io.PrintWriter;

import javax.servlet.ServletException;

import javax.servlet.annotation.WebServlet;

import javax.servlet.http.Cookie;

import javax.servlet.http.HttpServlet;

import javax.servlet.http.HttpServletRequest;

import javax.servlet.http.HttpServletResponse;

@WebServlet("/FirstServlet")

public class FirstServlet extends HttpServlet {

private static final long serialVersionUID = 1L;

protected void doPost(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException {

response.setContentType("text/html");

PrintWriter out = response.getWriter();

String n = request.getParameter("uname");

out.print("Welcome " + n);

Cookie ck = new Cookie("uname", n);

response.addCookie(ck);

out.println("<h1> This is 1st Servlet</h1>");

out.println("<form action='SecondServlet'>");

out.println("<input type='submit' value='go'>");

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

out.close();

}

}

**SECOND SERVLET FILE**

import java.io.IOException;

import java.io.PrintWriter;

import javax.servlet.ServletException;

import javax.servlet.annotation.WebServlet;

import javax.servlet.http.Cookie;

import javax.servlet.http.HttpServlet;

import javax.servlet.http.HttpServletRequest;

import javax.servlet.http.HttpServletResponse;

@WebServlet("/SecondServlet")

public class SecondServlet extends HttpServlet {

private static final long serialVersionUID = 1L;

protected void doGet(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException {

response.setContentType("text/html");

PrintWriter out = response.getWriter();

out.println("<h1> This is second<h1>");

Cookie ck[] = request.getCookies();

out.print("Hello " + ck[0].getValue());

out.close();

}

}

**HTML FILE**

<!DOCTYPE html>

<html>

<head>

<meta charset="ISO-8859-1">

<title>Insert title here</title>

</head>

<body>

<form action="FirstServlet" method="post">

Name:<input type="text" name="uname"><br>

<input type="submit">

</form>

</body>

</html>

**18. Write a Java Program to Implement Helloworld program using servlets.**

**SERVLET FILE**

import java.io.IOException;

import java.io.PrintWriter;

import javax.servlet.ServletException;

import javax.servlet.annotation.WebServlet;

import javax.servlet.http.HttpServlet;

import javax.servlet.http.HttpServletRequest;

import javax.servlet.http.HttpServletResponse;

@WebServlet("/Hello")

public class Hello extends HttpServlet {

protected void doGet(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException {

response.setContentType("text/html");

PrintWriter out = response.getWriter();

out.println("Hello world");

out.close();

}

}

**19. Write a JSP Program using Expression, Scriplet and Directive.**

**JSP FILE**

<%@page import="java.time.Month" %>

<!DOCTYPE html>

<html>

<head>

<title>Scripting Tags</title>

</head>

<body>

convert a string to upper case:

<% new String("HelloWorld").toUpperCase(); %>

<%

for(Month month:Month.values()){

out.println("<br>"+month);

}

%>

<%!

int cube(int n){

return n\*n\*n;

}

%>

<% out.println("<br> Cube of 3 is: " + cube(3));

%>

</body>

</html>

**20. Write a JSP program to demonstrate database connectivity.**

**JSP FILE**

<%@page import = "java.sql.\*" %>

<%@page import = "java.io.\*" %>

<html>

<head>

<title>Connection with mysql database</title>

</head>

<body>

<h1>Connection Status</h1>

<%

try{

String connectionUrl = "jdbc:mysql://localhost:3306/test";

Connection connect = null;

Class.forName("com.mysql.jdbc.Driver").newInstance();

connect = DriverManager.getConnection(connectionUrl, "root", "");

if(!connect.isClosed()){

out.println("Successfully connected to " + "MySQL server using TCP/IP...");

connect.close();

}

}

catch(Exception ex){

out.println("Unable to connect to Database");

}

%>

</body>

</html>