WT PROGRAMS

1. Write a HTML page including any required java script that takes a number from one text field in the range of 0 to 999 and shows it in another text field in words. if the number is out of range, it should show “out of range” and if it is not a number, it should show “not a number” message in the result box.

PROGRAM:

```
<html>
<head>
 <script>
   var dg = ['zero', 'one', 'two', 'three', 'four', 'five', 'six', 'seven', 'eight', 'nine'];
   var tn = ['ten', 'eleven', 'twelve', 'thirteen', 'fourteen', 'fifteen', 'sixteen',
'seventeen', 'eighteen', 'nineteen'];
   var tw = ['twenty', 'thirty', 'forty', 'fifty', 'sixty', 'seventy', 'eighty', 'ninety'];
   function change() {
    var numString = document.getElementById('anumber').value;
    var output = towords(numString);
    document.getElementById('aresult').value = output;
   }
   function towords(s) {
    s = s.toString();
    if (s != parseFloat(s))
     return 'not a number';
    var x = s.indexOf('.');
    if (x == -1)
     x = s.length;
    if (x > 3 || s[0] == '-')
     return 'out of range';
    var n = s.split('');
```

```
      var str = '';
      for (var i = 0; i < x; i++) {
        if ((x - i) % 3 == 2) {
          if (n[i] == '1') {
            str += tn[Number(n[i + 1])] + ' '; i++;
          }
          else if (n[i] != 0) {
            str += tw[n[i] - 2] + ' ';
          }    }
        else if (n[i] != 0) {
          str += dg[n[i]] + ' ';
          if ((x - i) % 3 == 0)
            str += 'hundred ';
        }    }
      return str;
    }
  </script>
</head>
<body>
  <form>
    enter a number<input type="text" id="anumber">
    <input type="button" value='convert to words' onClick="change()">
    <input type="text" size="40" id="aresult">
  </form>
</body>
</html>
```

2. Write a HTML page that has one input, which can take multi-line text and a submit button. Once the user clicks the submit button, it should show the number of characters, words and lines in the text entered using an alert message. Words are separated with white space and lines are separated with new line character.

PROGRAM:

```
<html>
<head>
<title> Count lines, words and Characters </title>
<script type="text/JavaScript">
function count()
{
var str=document.f1.ta.value;
var result='';
result+='The number of characters are '+str.length+'\n';
var words=str.split(' ');
result+='The number of words are '+words.length+'\n';
var lines=str.split('\n');
result+='The number of lines are '+lines.length;
alert(result);
}
</script>
</head>
<body>
<center> <h3> Count the no.of Lines, words and Characters </h3>
<form name='f1'>
<label> Enter your Text Here : </label>
<textarea rows='7' cols='70' name='ta'>
</textarea>
```

```
<input type="submit" value="submit" onclick="count()">
</form>
</center>
</body>
</html>
```

3. Write a HTML page that contains a selection box with a list of 5 countries. When user selects a country, its capital should be printed next to the list. Add CSS to customize the properties of the font of capital (color, bold, and font size).

PROGRAM:

```
<html>
<head>
  <title>Countries</title>
  <script type="text/JavaScript">
function showData(menu)
{
var country = menu.options[menu.selectedIndex].text;
var capital = menu.options[menu.selectedIndex].value;
document.getElementById("cou").innerHTML = "You have Selected : "+country;
document.getElementById("cap").innerHTML = "It's Capital is : "+capital;
}
</script>
</head>
<body>
  <center>
    <h1 style="color:blue;">Select any Country, it will display capital of the Country</h1>
    <form>
```

```
    <select name="Countries" onChange="showData(this);">
      <option value="">--Select a country--</option>
      <option value="New Delhi">India</option>
      <option value="moscow">Russia</option>
      <option value="Tokyo">Japan</option>
      <option value="Islamabad">pakistan</option>
      <option value="washington DC">USA</option>
    </select>aww      <h2 style="color:red;font-family:Lucida Handwriting;font-size:150%;" id="cou" type="text"> </h2>
    <h1 style="color:green;font-family:Times New Roman;font-size:200%;" id="cap" type="text"> </h1>
  </center>
  </form>
</body>
</html>
```

4. Write a XML file which will display the Book information which includes the following: Title of the book, Author Name, ISBN number, Publisher name, Edition, Price.

i. Write a Document Type Definition (DTD) to validate the above XML file.

ii. Write a XSD to validate the above XML file.

PROGRAM:

i) DTD VALIDATION

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE bookstore[
<!ELEMENT bookstore (book+)>
<!ELEMENT book (title,author,ISBN,publisher,edition,price)>
<!ELEMENT title (#PCDATA)>
<!ELEMENT author (#PCDATA)>
<!ELEMENT ISBN (#PCDATA)>
```

```
<!ELEMENT publisher (#PCDATA)>
<!ELEMENT edition (#PCDATA)>
<!ELEMENT price (#PCDATA)>
]>
<!--b)bookstore.xml-->

<bookstore >
        <book>
                <title>web programming</title>
                <author>chrisbates</author>
                <ISBN>123-456-789</ISBN>
                <publisher>wiley</publisher>
                <edition>3</edition>
                <price>350</price>
        </book>
        <book>
                <title>internet worldwideweb</title>
                <author>ditel&amp;amp;ditel</author>
                <ISBN>123-456-781</ISBN>
                <publisher>person</publisher>
                <edition>3</edition>
                <price>450</price>
        </book>
</bookstore>
```

ii) XSD VALIDATION

<!--a. Write a XSD to validate the XML file which will display the Book information which includes the following: Title of the book, Author Name, ISBN number, Publisher name, Edition, Price.-->

(i)XML Schema (bookstore.xsd)

```
<?xml version="1.0" encoding="UTF-8"?>
<xs:schema>
  <xs:element name="bookstore">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="book" maxOccurs="unbounded">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="title" type="xs:string"></xs:element>
              <xs:element name="author" type="xs:string"></xs:element>
              <xs:element name="ISBN" type="xs:string"></xs:element>
              <xs:element name="publisher" type="xs:string"></xs:element>
              <xs:element name="edition" type="xs:int"></xs:element>
              <xs:element name="price" type="xs:decimal"></xs:element>
            </xs:sequence>
          </xs:complexType>


        </xs:element>


      </xs:sequence>
    </xs:complexType>
```

```
  </xs:element>
</xs:schema>
```

(ii)Bookstore.xml

```
<bookstore xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:noNamespaceSchemaLocation="C:\Documents and
Settings\Administrator\My Documents\bookstore.xsd">
  <book>
    <title>web programming</title>
    <author>chrisbates</author>
    <ISBN>123-456-789</ISBN>
    <publisher>wiley</publisher>
    <edition>3</edition>
    <price>350</price>
  </book>
  <book>
    <title>internet worldwideweb</title>
    <author>ditel&amp;amp;ditel</author>
    <ISBN>123-456-781</ISBN>
    <publisher>person</publisher>
    <edition>3</edition>
    <price>450</price>
  </book>
</bookstore>
```

5. Write a Servlet for User validation web application, where the user submits a login name and password to the server. The name and password are checked against the data already available in Database and if the data matches, a successful login page is returned. Otherwise, a failure message is shown to the user.

PROGRAM:

FirstServlet.java

```
import java.io.*;

import javax.servlet.*;

import javax.servlet.http.*;

public class FirstServlet extends HttpServlet {

public void doPost(HttpServletRequest request, HttpServletResponse response)
throws

ServletException, IOException {

response.setContentType("text/html");

PrintWriter out = response.getWriter();

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

String p=request.getParameter("userpass");

try {

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

Connection conn =
DriverManager.getConnection(“jdbc:mysql://localhost/mydb”, “root”,
“Gcet@123”);

Statement stmt = conn.createStatement();

String sql= "SELECT * FROM user WHERE name=n and pass=p";

ResultSet rs = stmt.executeQuery(sql);

if(rs.next()){

out.println("Welcome "+n);

} else{

out.println("Sorry username or password error");
```

```
RequestDispatcher rd=request.getRequestDispatcher("/index.html");
rd.include(request,response);
}
rs.close();
stmt.close();
conn.close();
} catch(Exception e){
e.printStackTrace();
}
out.close();
}
}
```

Web.xml

```
<web-app>
<servlet>
<servlet-name> FirstServlet </servlet-name>
<servlet-class> FirstServlet </servlet-class>
</servlet>
<servlet-mapping>
<servlet-name> FirstServlet </servlet-name>
<url-pattern>/ servlet1</ url-pattern >
</servlet-mapping>
</web-app>
```

6. Modify the above Program to an xml file instead of database.

PROGRAM:

FirstServlet.java

```
Import javax.servlet.http.*;
public class SecondServlet extends HttpServlet {
public void doPost(HttpServletRequest request, HttpServletResponse response)
throws
ServletException, IOException {
response.setContentType("text/html");
PrintWriter out = response.getWriter();
String n=request.getParameter("username");
String p=request.getParameter("userpass");
ServletConfig config = getServletConfig();
String name = config.getInitParameter(“username”);
String pass = config.getInitParameter("password");
if(n.equals(name)&&p.equals(pass)){
out.println("Welcome "+n);
} else{
out.println("Sorry username or password error");
RequestDispatcher rd=request.getRequestDispatcher("/index.html");
rd.include(request,response);
}
out.close();
}
}
```

Web.xml

```
<web-app>
<servlet>
<servlet-name>SecondServlet</servlet-name>
```

<servlet-class>SecondServlet</servlet-class>

<init-param>

<param-name>username</param-name>

<param-value>admin</param-value>

</init-param>

<init-param>

<param-name>password</param-name>

<param-value>123456</param-value>

</init-param>

<servlet>

<servlet-mapping>

<servlet-name>SecondServlet</servlet-name>

<url-pattern>/servlet2</ url-pattern >

</servlet-mapping>

</web-app>

7. Write a Servlet for a simple calculator web application that takes two numbers and an operator (+, -, /, *, %) from an HTML page and returns the result page with the operation performed on the operands.

PROGRAM:

Calc.java

import java.io.*;

import javax.servlet.*;

import javax.servlet.http.*;

public class Calculator extends HttpServlet{

public void doGet(HttpServletRequest request, HttpServletResponse response) throws ServletException,

IOException{

```
try{
response.setContentType("text/html");
PrintWriter out= response.getWriter();
int a1= Integer.parseInt(request.getParameter("n1"));
int a2= Integer.parseInt(request.getParameter("n2"));
String op = request.getParameter("r1");
if(op.equals(“add”))
out.println("<h1>Addition is </h1>"+(a1+a2));
else if (op.equals(“sub”))
out.println("<h1>Subtraction is </h1>"+(a1-a2));
else if (op.equals(“mul”))
out.println("<h1>Multiplication is </h1>"+(a1*a2));
else if (op.equals(“div”))
out.println("<h1>Division</h1>"+(a1/a2));
else
out.println(“Please select the operator”);
}
catch(Exception e){
e.printStackTrace();
}
}
}
```

Web.xml

```
<web-app>
<servlet>
<servlet-name>Servlet3</servlet-name>
```

<servlet-class>Calculator</servlet-class>

</servlet>

<servlet-mapping>

<servlet-name>Servlet3</servlet-name>

<url-pattern>/cal</url-pattern>

</servlet-mapping>

<welcome-file-list>

<welcome-file>index.html</welcome-file>

</welcome-file-list>

</web-app>

8. Write a Servlet for web application that lists all cookies stored in the browser on clicking “List Cookies” button. Assume cookies if necessary.

PROGRAM:

FirstServlet.java

```
import javax.servlet.http.*;
public class FirstServlet extends HttpServlet {
public void doPost(HttpServletRequest request, HttpServletResponse response){
try{
response.setContentType("text/html");
PrintWriter out = response.getWriter();
String n=request.getParameter("userName");
out.print("Welcome "+n);
Cookie ck=new Cookie("uname",n);
response.addCookie(ck);
out.print("<form action='servlet2'>");
out.print("<input type='submit' value='go'>");
```

```
out.print("</form>");
out.close();
}catch(Exception e){System.out.println(e);}
}
}
```

SecondServlet.java

```
import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;
public class SecondServlet extends HttpServlet {
public void doPost(HttpServletRequest request, HttpServletResponse
response){
try{
response.setContentType("text/html");
PrintWriter out = response.getWriter();
Cookie ck[]=request.getCookies();
out.print("Hello "+ck[0].getValue());
out.close();
}catch(Exception e){System.out.println(e);}
}
}
```

Web.xml

```
<web-app>
<servlet>
<servlet-name>s1</servlet-name>
<servlet-class>FirstServlet</servlet-class>
</servlet>
```

<servlet-mapping>

<servlet-name>s1</servlet-name>

<url-pattern>/servlet1</url-pattern>

</servlet-mapping>

<servlet>

<servlet-name>s2</servlet-name>

<servlet-class>SecondServlet</servlet-class>

</servlet>

<servlet-mapping>

<servlet-name>s2</servlet-name>

<url-pattern>/servlet2</url-pattern>

</servlet-mapping>

</web-app>

9. Write JSP for User validation web application, where the user submits a login name and password to the server. The name and password are checked against the data already available in Database and if the data matches, a successful login page is returned. Otherwise, a failure message is shown to the user.

PROGRAM:

Login.html

<form action=" Loginprocess.jsp" method="post">

Name:<input type="text" name="username"/>

Password:<input type="password" name="userpass"/>

<input type="submit" value="login"/>

</form>

Uservalid.jsp

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

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

```
<html>
<body>
<%
String n=request.getParameter("username");
String p=request.getParameter("userpass");
try {
String URL = "jdbc:mysql://localhost:3306/mydb";
Connection conn = null;
Class.forName("com.mysql.jdbc.Driver").newInstance();
conn = DriverManager.getConnection(URL, "root", "Gcet@123");
if(!conn.isClosed())
out.println("Successfully connected to MySQL");
Statement stmt = conn.createStatement();
String sql= "SELECT * FROM user WHERE name=n and pass=p";
ResultSet rs = stmt.executeQuery(sql);
if(rs.next())
out.println("Welcome "+n);
else
out.println("Sorry username or password error");
rs.close();
stmt.close();
conn.close();
}
catch(Exception ex){
out.println("Unable to connect to database.");
}
%>
```

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

10. Write JSP for a simple calculator web application that takes two numbers and an operator (+,-,/,*,%) from an HTML page and returns the result page with the operation performed on the operands.

PROGRAM:

index.html

```
<html>
<head>
<title>Basic Calculator</title>
</head>
<body>
<form action="calculator.jsp" method="get">
Number1:<input type="text" name="num1"><br>
Number2:= <input type="text" name="num2"><br>
<input type="radio" name="r1" value="add" />addition<br />
<input type="radio" name="r1" value="sub" />subtraction <br />
<input type="radio" name="r1" value="mul" />multiplication<br />
<input type="radio" name="r1" value="div" />division<br />
<input type="submit" value="Calculate" />
</form>
</body>
</html>
```

Calculator.jsp

```
<html>
<head>
```

```
<title>Calculator</title>
</head>
<body>
<%@page language="java" %>
<%
int n1= Integer.parseInt(request.getParameter("num1"));
int n2= Integer.parseInt(request.getParameter("num2"));
String op = request.getParameter("r1");
if(op.equals(“add”))
out.println("<h1>Addition is </h1>"+(n1+n2));
else if (op.equals(“sub”))
out.println("<h1>Subtraction is </h1>"+(n1-n2));
else if (op.equals(“mul”))
out.println("<h1>Multiplication is </h1> "+(n1*n2));
else if (op.equals(“div”))
out.println("<h1>Division</h1>"+(n1/n2));
else
out.println(“Please select the operator”);
%>
</body>
</html>
```

11. Write JSP for a web application that lists all cookies stored in the browser on clicking “List Cookies” button. Assume cookies if necessary.

PROGRAM:

Cookie.html

```
<html>
<body>
```

```
<h3>Cookie Example</h3>
<form method="get" action="ListCookies.jsp">
Enter Name <input type="text" name="name"><br>po
Enter Age <input type="text" name="age"><br>
<input type="submit" value="Add Cookie" name="add">
<input type="submit" value="List Cookies" name="list">
</form>
</body>
</html>
```

ListCookies.jsp

```
<html>
<body>
<%
String str1 = request.getParameter("name");
String str2 = request.getParameter("age");
String str3 = request.getParameter("add");
String str4 = request.getParameter("list");
if(str3 != null){
Cookie c1 = new Cookie(str1, str2);
response.addCookie(c1);
}
else if(str4 != null){
Cookie clientCookies[] = request.getCookies();
for( int i = 0; i < clientCookies.length; i++){
out.print("<b>" + clientCookies[i].getName() + " : " +
clientCookies[i].getValue() +
"</b><br>");
```

}}

%>

</body>

</html>

12. Write JSP for a web application that takes name and age from an HTML page. If the age is less than 18, it should be send a page with “Hello <name >, you are not authorized to visit this site” message, where < name> should be replaced with the entered name. Otherwise, it should send “Welcome <name> to this site” message.

PROGRAM:

Age.html

<html>

<body>

<form action="age.jsp">

Username:<input type="text" name="username">

Age:<input type="text" name="age" >

<input type="submit" name="submit">

</form>

</body>

</html>

Age.jsp

<%

String name=request.getParameter("username");

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

if(age < 18){

out.println(“Hello ”+name+ “ you are not authorized to visit this site”);

} else{

out.println("Welcome " + name + “ to this site”);

}

%>

13. Write PHP code for user validation web application, where the user submits a login name and password to the server. The name and password are checked against the data already available in Database and if the data matches, a successful login page is returned. Otherwise a failure message is shown to the user.

PROGRAM:

Index.html

```
<html>
<body>
<div>
<form action="login.php" method="POST">
<p>LOGIN FORM</p><br />
<p>USERNAME:</p>
<input type="text" name="uname" ><br />
<p>PASSWORD:</p>
<input type="password" name="pass" ><br />
<input type="submit" name="submit" value="Login"><br />
</form>
</div>
</body>
</html>
```

Login.php

```
<?php
$uname=$_POST["uname"];
$pass=$_POST["pass"];
$con=mysqli_connect("localhost","root","","test1");
if(!$con){
die('Could not connect: '.mysqli_connect_error());
}
echo 'Connected successfully<br/>';
$query="select * from users where USERNAME='$uname' and
PASSWORD='$pass'";
$records=mysqli_query($con,$query);
if(mysqli_num_rows($records)>=1)
{
header("Location: success.html");
}
else{
```

```
echo "wrong";
}

?>
```

14. Write PHP code for a simple calculator web application that takes two numbers and an operator (+,-,/,*,%) from an HTML page and returns the result page with the operation performed on the operands.

PROGRAM:

Calc.html

```
<html>
<body>
<form action="calc.php" method="POST" >
<p>Enter First Number:</p>
<input type="text" name="op1"/><br />
<p>Enter Second Number:</p>
<input type="text" name="op2"/><br />
<p>Enter Operator:</p>
<input type="text" name="operator"/><br />
<input type="submit" value="Submit" name="submit" />
</form>
</body>
</html>
```

Calc.php

```
<?php
if(isset($_POST["submit"]) && isset($_POST["op1"]) &&
isset($_POST["op2"]) &&
isset($_POST["operator"])){
$op1=(int)$_POST["op1"];
$op2=(int)$_POST["op2"];
$operator=$_POST["operator"];
if($operator=="+"){
echo "Addition of ".$op1." and ".$op2." is ".($op1+$op2);
}else if($operator=="-"){
echo "Subtraction of ".$op1." and ".$op2." is ".($op1-$op2);
}else if($operator=="*"){
echo "Multiplication of ".$op1." and ".$op2." is ".($op1*$op2);
}else if($operator=="/"){
if($op2!=0){
echo "Division of ".$op1." and ".$op2." is ".($op1/$op2);
}else{
echo "second number cannot be zero";
```

```
}
} else if($operator=="%"){

echo "Remainder of ".$op1." and ".$op2." is ".($op1%$op2);
}
} ?>
```

15. Write PHP Code Validate the following fields of registration page.
i) Name (it should contains alphabets and length at least 6 characters)
ii) Password(it should not be less than 6 characters)
iii) Email id (it should not contains any invalid character and must follow the standard pattern name@domain.com)
iv) Phone number (it should contain 10 digits only)
PASSWORD:
Validation.php

```
<center><h2>Validation Form</h2>
<form method="get">
Name: <input type="text" name="uname"><br>
Password: <input type="text" name="pass"><br>
Email ID: <input type="text" name="email"><br>
Phone Number: <input type="text" name="phone"><br>
<input type="submit" name="submit" value="Validate">
</form>
<?php
if(isset($_POST['submit'])) {
$uname = $_POST['uname'];
$pass = $_POST['pass'];
$email = $_POST['email'];
$phone = $_POST['phone'];
$flag = 1;
if(!$uname) echo "Name not entered!<br>";
else {
if(ctype_alpha($uname)==0) {
echo "Name contains numeric characters<br>";
$flag=0;
}
else if(strlen($uname)<6) {
echo "Name is less than 6 characters<br>";
$flag=0;
}
}
if(!$pass)
echo "Password not entered!<br>";
```

```
else {
if(strlen($pass)<6) {
echo "Password is less than 6 characters<br>";
$flag=0;
}
}
if(!$email)
echo "Email not entered!<br>";
else {
if (!filter_var($email, FILTER_VALIDATE_EMAIL)) {
echo "Email address is Incorrect<br>";
$flag=0;
}
}
if(!$phone)
echo "Phone number not entered!<br>";
else {
if(ctype_digit($phone)==0) {
echo "Phone Number cannot contain alphabets<br>";
$flag=0;
}
else if(strlen($phone)!=10) {
echo "Phone Number is not 10 digits long<br>";
$flag=0;
}
}
if($flag)
echo "All fields are validated!";
}
?>
</center>
```

16. A web application for implementation using PHP. The user is first served login page which takes user's name and password. After submitting the details, the server checks these values against the data from a database and takes the following decisions

If name and password match serves a welcome page with user's full name If name matches and password doesn't match, then server "password mismatch" page If name is not found in the full name, it stores, the login name, password and full name in the database.(hint: Use session for storing the submitted login name and password)

PASSWORD:

LoginValidation.php

```
<?php
$con = mysqli_connect("localhost","root","Gcet@123","test");
if(!$con)
die(mysqli_error($con));
if(isset($_POST['submit'])) {
$uname = $_POST['user'];
$pwd = $_POST['pass'];
if($uname and $pwd) {
$res = mysqli_query($con,"select * from users where username='$uname' and
password = '$pwd'");
if(mysqli_num_rows($res)>0) {
$row = mysqli_fetch_assoc($res);
echo '<h1>Welcome '.$row['name'].'</h1>';
exit;
}
$res = mysqli_query($con,"select * from users where username='$uname'");
if(mysqli_num_rows($res)>0) {
echo '<center><h3>Password Mismatch!<h3></center>';
}
else {
echo '<center>User is not available.<h2>Registration Form</h2><form
method="post">Full Name: <input type="text" name="name"><br>Username:
<input
type="text" name="user"><br>Password: <input type="password"
name="pass"><br>Retype
Password: <input type="password" name="pass1"><br><input type="submit"
name="register"
value="Register"></form></center>';
exit;
}
}
}
if(isset($_POST['register'])) {
$uname = $_POST['user'];
$name = $_POST['name'];
$pwd = $_POST['pass'];
$pwd1 = $_POST['pass1'];
if($uname and $name and $pwd and $pwd1)
if(strcmp($pwd,$pwd1)!=0) echo "Passwords are not matched!";
else {
```

```
$res = mysqli_query($con,"insert into users values('$uname','$pwd','$name')");
echo 'Inserted Successfully';
}
}
?>
<center><h2>Sign In</h2><form method="post">
Username: <input type="text" name="user"><br>
Password: <input type="password" name="pass"><br>
<input type="submit" name="submit" value="Login">
</form></center>
```