Name : Ankur Katkamwar
Class : AIML-A
Roll No : 13
Subject : WAS

EXPERIMENT 06: **Develop and demonstrate PHP Script for the following problems:**

- **Write a PHP Script to find out the Sum of the Individual Digits.**
  Write a PHP Script to check whether the given number is Palindrome or not

sum.php

```php
<?php
$n = 323; // Example number
$sum = 0;


// Loop through the digits of the number
while ($n > 0) {
    $r = $n % 10; // Get the last digit
    $sum += $r; // Add the digit to sum
    $n = (int)($n / 10); // Remove the last digit
}


echo "Sum of individual digits is: $sum";
?>
```

palindrome.php

```php
<?php
$n = 323; // Example number
$t = $n; // Store the original number
$rev = 0;


// Reverse the number
while ($n > 0) {
    $r = $n % 10; // Get the last digit
    $rev = $rev * 10 + $r; // Build the reversed number
    $n = (int)($n / 10); // Remove the last digit
}
```

```php
echo "Reversed number is: $rev <br>";


if ($t == $rev) {

    echo "$t is a Palindrome";

} else {

    echo "$t is not a Palindrome";

}
?>
```
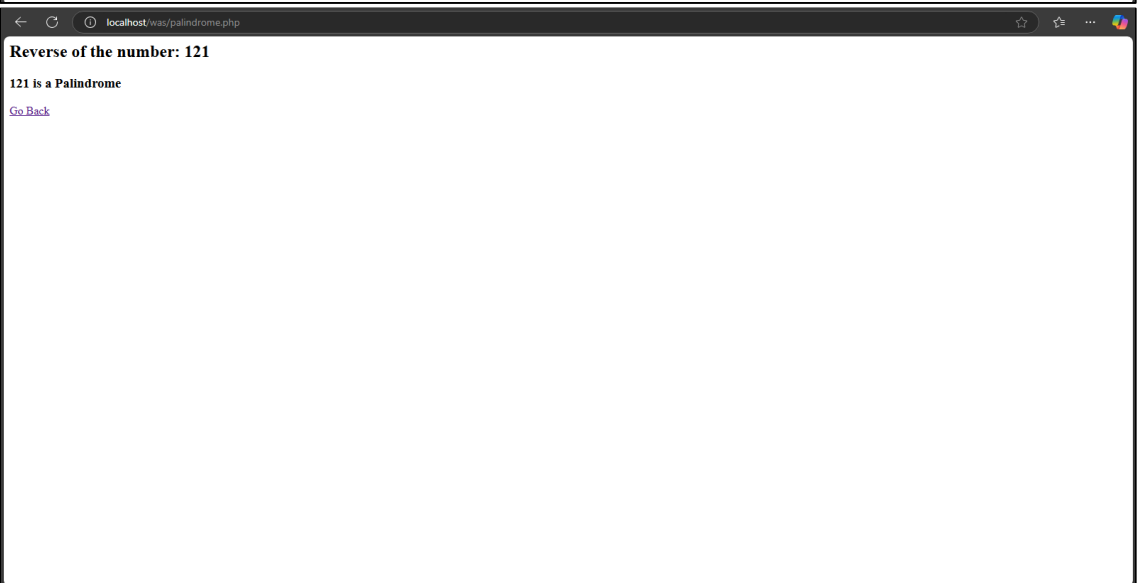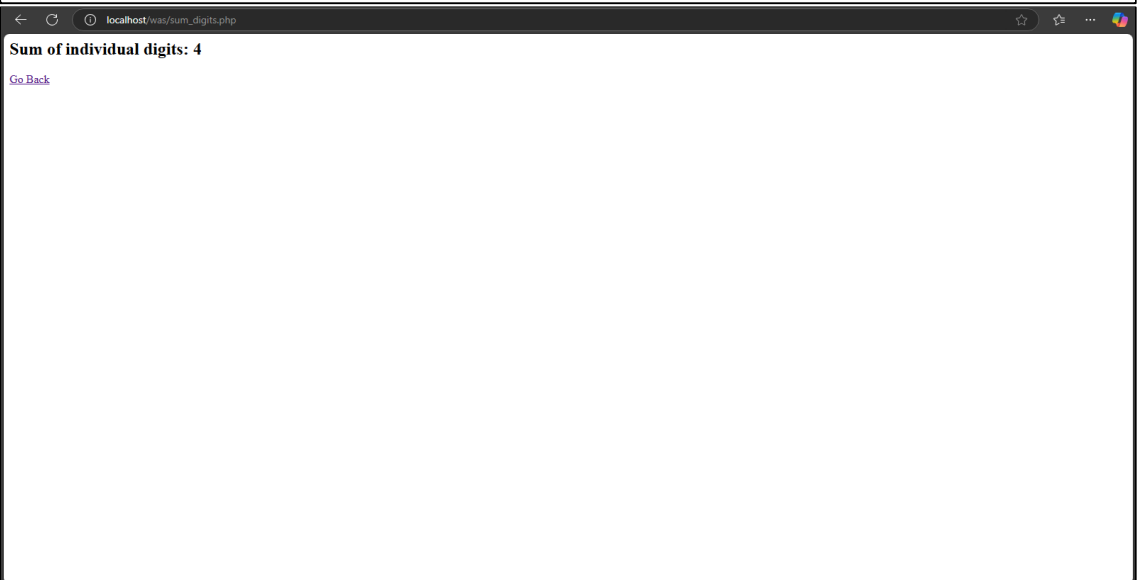
Enter a Number

121

Find Sum of Digits   Check Palindrome

Sum of individual digits: 4

Go Back

Reverse of the number: 121

121 is a Palindrome

Go Back

Name : Ankur Katkamwar
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EXPERIMENT 07: Write a XML program to validate student details (Rno, Name, college & branch) using DTD
student1.xml

```xml
<?xml version="1.0"?>

<!-- student1.xml -->

<students>
   <student>
     <name>
       <firstname>James</firstname>
       <lastname>Smith</lastname>
     </name>
     <address>
       <street>101 South Street</street>
       <city>Halifax</city>
       <email>james@dal.ca</email>
       <phone>4940001</phone>
     </address>
   </student>

   <student>
     <name>
       <firstname>Tom</firstname>
       <lastname>White</lastname>
     </name>
     <address>
       <street>202 Victoria Road</street>
       <city>Dartmouth</city>
       <email>tom@dal.ca</email>
       <phone>4940002</phone>
     </address>
   </student>
</students>
```

student2.xml

```xml
<?xml version="1.0"?>
<!-- students2.xml for the DTD -->
<!DOCTYPE students SYSTEM "students.dtd">
<students>
  <student>
    <name>
      <firstname>James</firstname>
      <lastname>Smith</lastname>
    </name>
    <address>
      <street>101 South Street</street>
      <city>Halifax</city>
      <email>james@dal.ca</email>
      <phone>4940001</phone>
    </address>
    <college>Dalhousie University</college>
    <branch>Computer Science</branch>
  </student>

  <student>
    <name>
      <firstname>Tom</firstname>
      <lastname>White</lastname>
    </name>
    <address>
      <street>202 Victoria Road</street>
      <city>Dartmouth</city>
      <email>tom@dal.ca</email>
      <phone>4940002</phone>
    </address>
    <college>Dalhousie University</college>
    <branch>Electrical Engineering</branch>
  </student>
</students>
```

students.dtd

```
<?xml version="1.0"?>
<!-- students.dtd - A Document Type Definition for the students.xml -->
<!ELEMENT students (student+)>
<!ELEMENT student (name, address, college, branch)>
<!ELEMENT name (firstname, lastname)>
<!ELEMENT firstname (#PCDATA)>
<!ELEMENT lastname (#PCDATA)>
<!ELEMENT address (street, city, email, phone)>
<!ELEMENT street (#PCDATA)>
<!ELEMENT city (#PCDATA)>
<!ELEMENT email (#PCDATA)>
<!ELEMENT phone (#PCDATA)>
<!ELEMENT college (#PCDATA)>
<!ELEMENT branch (#PCDATA)>
```
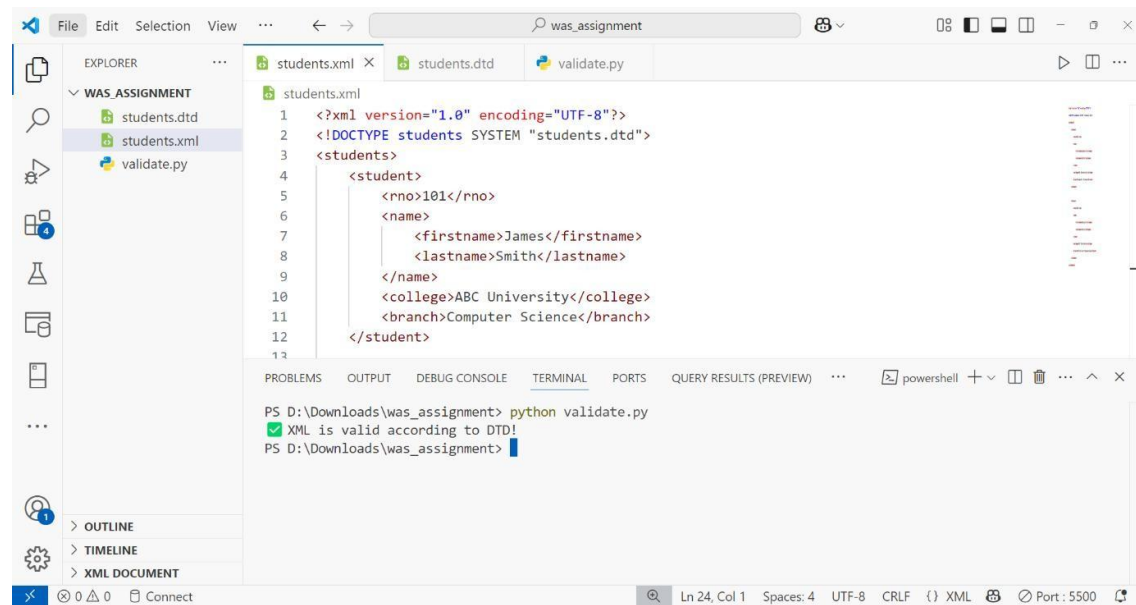
Name : Ankur Katkamwar

Class : AIML-A

Roll No : 13

Subject : WAS

EXPERIMENT 08: Implement the web applications using (a) PHP b) Servlets c) JSP

(a) PHP Program to Display Current Date, Time, and Day

date.php

```php
<?php
// Set the default timezone
date_default_timezone_set("Asia/Calcutta");

// Display the current date in day/month/year format
echo "Date: ";
echo date("d/m/y");

echo "<br>";

// Display the current time in hours:minutes:seconds AM/PM format
echo "Time: ";
echo date("H:i:s A", time());

echo "<br>";

// Get the current day of the week
$day = date("l");
echo "Day: ";
echo $day;
?>
```
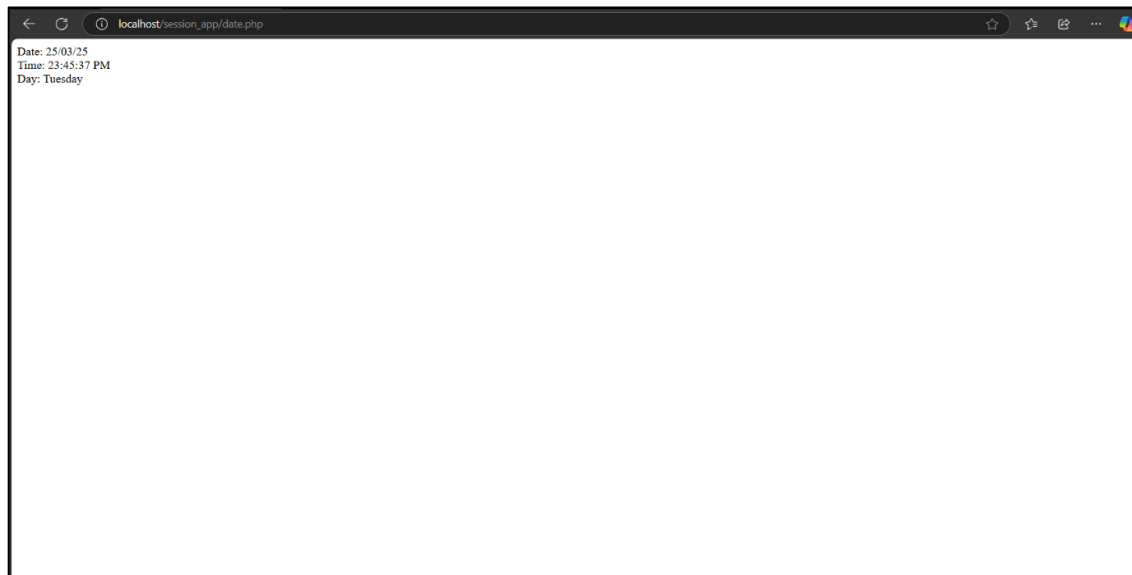

Date: 25/03/25
Time: 23:45:37 PM
Day: Tuesday

(b) A web application that takes name and age from an HTML page. If the age is less than 18, it should send a page with "Hello <name>, you are not authorized to visit the site" message, where <name> should be replaced with the entered name. Otherwise it should send "Welcome <name> to this site" message.

1. index.html (HTML Form)

```html
<html>
<head>
 <title>VoterApp</title>
</head>
<body>
 <form action="http://localhost:8080/CheckAge/check" method="get">
  <fieldset style="width:20%; background-color:#80ffcc">
   <table>
    <tr>
     <td>Name</td>
     <td><input type="text" name="name"></td>
    </tr>
    <tr>
     <td>Age</td>
     <td><input type="text" name="age"></td>
    </tr>
    <tr>
     <td></td>
     <td><input type="submit" value="Check Eligibility"></td>
    </tr>
   </table>
  </fieldset>
 </form>
</body>
</html>
```

2. VoterSrv.java (Servlet Code)

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

public class VoterSrv extends HttpServlet {

  public void service(HttpServletRequest req, HttpServletResponse res) throws IOException, ServletException {
    // Set response content type
    res.setContentType("text/html");

    // Get PrintWriter object
    PrintWriter pw = res.getWriter();

    // Read form data from the request
    String name = req.getParameter("name");
    int age = Integer.parseInt(req.getParameter("age"));

    // Check if the age is 18 or above
    if (age >= 18) {
```

```
        pw.println("<font color='green' size='4'>Welcome " + name + " to this site</font>");
    } else {
        pw.println("<font color='red' size='4'>Hello " + name + ", you are not authorized to visit the
site</font>");
    }

    // Add hyperlink to go back to the index page
    pw.println("<br><br><a href='index.html'>back</a>");

    // Close the stream
    pw.close();
  }
}
```

3. web.xml (Web Configuration File)

```
<web-app>
  <servlet>
     <servlet-name>abc</servlet-name>
     <servlet-class>VoterSrv</servlet-class>
  </servlet>

  <servlet-mapping>
     <servlet-name>abc</servlet-name>
     <url-pattern>/check</url-pattern>
  </servlet-mapping>
</web-app>
```

Name Tanmay
Age 18
Check Eligibility

Welcome Tanmay to this site

back

(c) JSP Application to Print the Current Date and Time
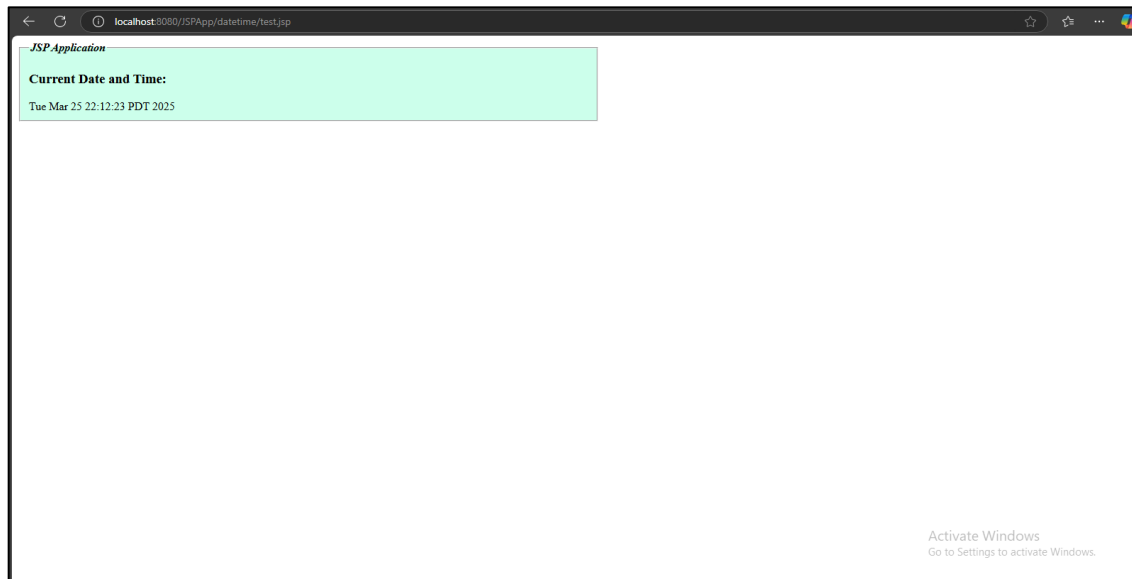
test.jsp

```
<html>
<head>
    <title>JSP Application</title>
</head>
<body>
    <form>
        <fieldset style="width:50%; background-color: #ccffeb;">
            <legend><b><i>JSP Application</i></b></legend>
            <h3>Current Date and Time is:</h3>
            <%
                // Get the current date and time
                java.util.Date d = new java.util.Date();

                // Print the current date and time
                out.println(d.toString());
            %>
        </fieldset>
    </form>
</body>
</html>
```

Name : Ankur Katkamwar

Class : AIML-A

Roll No : 13

Subject : WAS

EXPERIMENT 09: Implement the web applications with Database using (a) PHP, (b) Servlets and (c) JSP.

1.PHP Code: db.php

This PHP file sets up the database and inserts a user record for validation.

```php
<html>
<body>
<?php
$servername = "localhost";
$username = "root";
$password = "TIGER";

// Create connection
$conn = new mysqli($servername, $username, $password);

// Check connection
if ($conn->connect_error) {
    die("Connection failed: " . $conn->connect_error);
}
echo "Connected successfully <br>";

// Create database
$sql = "CREATE DATABASE reg";
if (mysqli_query($conn, $sql)) {
    echo "Database created successfully<br>";
} else {
    echo "Error creating database: " . mysqli_error($conn);
}

$servername = "localhost";
$dbname = "reg";
$conn = mysqli_connect($servername, $username, $password, $dbname);

// Check connection
if (!$conn) {
    die("Connection failed: " . mysqli_connect_error());
}
echo "Connected to database successfully <br>";

// SQL to create table
$sql = "CREATE TABLE Guests (
    name VARCHAR(30) NOT NULL,
    pwd VARCHAR(30) NOT NULL
)";
if (mysqli_query($conn, $sql)) {
    echo "Table MyGuests created successfully<br>";
} else {
    echo "Error creating table: " . mysqli_error($conn);
}

// Insert data into table
```

```php
$sql = "INSERT INTO Guests (name, pwd) VALUES ('cse', '5')"; if
(mysqli_query($conn, $sql)) {
     echo "New record created successfully<br>";
   } else {
     echo "Error: " . $sql . "<br>" . mysqli_error($conn);
   }

   // Close connection
   mysqli_close($conn);
   ?>
   </body>
   </html>
```

1. HTML Login Form: Login.html

The HTML form where the user submits their login credentials (username and password).

```html
<html>
<head>
   <title>Login Page</title>
</head>
<body>
   <center>
     <h1>Login Page</h1>
     <form  action="loginform.php"  method="post">
       <table>
         <tr>
           <td><label>Name:</label></td>
           <td><input type="text" name="uname" /></td>
         </tr>
         <tr>
           <td><label>Password:</label></td>
           <td><input  type="password"  name="upwd"  /></td>
         </tr>
         <tr>
           <td><input  type="submit"  value="Submit"  /></td>
           <td><input type="reset" value="Reset" /></td>
         </tr>
       </table>
     </form>
   </center>
</body>
</html>
```

2. PHP Login Validation: loginform.php

This PHP file checks the submitted username and password against the database.

```php
<html>
<head>
   <title>Registration page</title>
</head>
<body>
<?php
$name = $_POST["uname"];
```

```php
$pwd = $_POST["upwd"];

// Connect to MySQL database
$conn = mysql_connect("localhost", "root", "TIGER") or die("mysql_error()");
mysql_select_db("reg") or die("mysql_error()");

// Query to check user credentials
$query = mysql_query("SELECT * FROM guests WHERE name='$name'");

while ($row = mysql_fetch_array($query)) {
    $duser = $row['name'];
    $dpwd = $row['pwd'];
}

if ($pwd == $dpwd && $name == $duser) {
    echo "Welcome $name, branch";
} else {
    echo "Invalid user";
}
?>
</body>
</html>
```

3. Java Servlet: DBExample.java

This Java Servlet connects to the MySQL database, retrieves records from the Emp table, and displays them.

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

public class DBExample extends HttpServlet {
    public void doGet(HttpServletRequest request, HttpServletResponse response) throws ServletException,
IOException {
        String JDBC_DRIVER = "com.mysql.jdbc.Driver";
        String DB_URL = "jdbc:mysql://localhost/csec";
        String USER = "root";
        String PASS = "TIGER";

        // Set response content type
        response.setContentType("text/html");
        PrintWriter out = response.getWriter();
        out.println("<html><body><h1>Welcome to MRCET</h1>\n");

        try {
            // Register JDBC driver
            Class.forName("com.mysql.jdbc.Driver");

            // Open a connection
            Connection conn = DriverManager.getConnection(DB_URL, USER, PASS);

            // Execute a query
            Statement stmt = conn.createStatement();
            String sql = "SELECT * FROM Emp";
            ResultSet rs = stmt.executeQuery(sql);
```

```
      // Extract data from result set
      while (rs.next()) {
        out.println("ID: " + rs.getString(1));
        out.println("Age: " + rs.getString(2));
        out.println("First Name: " + rs.getString(3) + "<br>");
      }

      // Clean-up environment
      rs.close();
      stmt.close();
      conn.close();
    } catch (SQLException se) {
      // Handle errors for JDBC
      out.println(se.getMessage());
    } catch (Exception e) {
      // Handle errors for Class.forName
      out.println(e.getMessage());
    }

    out.println("</body></html>");
  }
}
```

4. Web XML Configuration: web.xml

This configuration file maps the servlet to a URL pattern (/db).

```xml
<?xml  version="1.0"  encoding="UTF-8"?>
<web-app>
  <servlet>
    <servlet-name>DBExample</servlet-name>
    <servlet-class>DBExample</servlet-class>
  </servlet>

  <servlet-mapping>
    <servlet-name>DBExample</servlet-name>
    <url-pattern>/db</url-pattern>
  </servlet-mapping>
</web-app>
```

5. JSP Database Connection: JSPExample.jsp

This JSP page connects to the MySQL database and displays records from the emp table.

```jsp
<%@  page  language="java"  contentType="text/html; charset=ISO-8859-1"  pageEncoding="ISO-8859-1"%>
<%@ page import="java.sql.*" %>
<html>
<head>
  <title>JSP Database Connection</title>
</head>
<body>
  <h2>Employee  List</h2>
  <%
    try {
```

```
        Class.forName("com.mysql.jdbc.Driver");
        Connection con = DriverManager.getConnection("jdbc:mysql://localhost:3306/sonoo", "root", "root");
        Statement stmt = con.createStatement();
        ResultSet rs = stmt.executeQuery("SELECT * FROM emp");

        while (rs.next()) {
            out.println(rs.getInt(1) + " " + rs.getString(2) + " " + rs.getString(3) + "<br>");
        }

        con.close();
    } catch (Exception e) {
        out.println(e);
    }
  %>
</body>
</html>
```