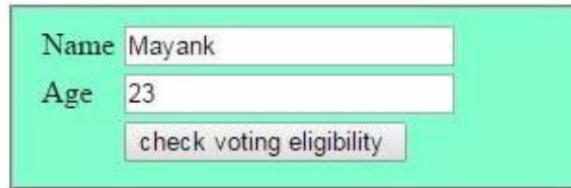


Advanced Java Lab - PART A Program No 5 to 8

PA5.

Write a Servlet program that accepts the age and name and displays if the user is eligible for voting or not

Output:



Index.html

```
<!doctype html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <title>VoterApp</title>
</head>
<body>
  <form action="VoterCheck" method="post">
    <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 voting
eligibility"></td></tr>
      </table>
    </fieldset>
  </form>
</body>
</html>
```

VoterCheck.java

```
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("/VoterCheck")
public class VoterCheck 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 name = request.getParameter("name");
    String ageParam = request.getParameter("age");

    try {
        int age = Integer.parseInt(ageParam);
        String message = "";
        if (age >= 18) {
            message = "Congratulations, " + name + "! You are eligible to vote.";
        } else {
            message = "Sorry, " + name + ". You are not eligible to vote yet.";
        }

        out.println("<html>");
        out.println("<head>");
        out.println("<title>Voting Eligibility Check</title>");
        out.println("</head>");
        out.println("<body>");
        out.println("<h2>Voting Eligibility Check</h2>");
        out.println("<p>" + message + "</p>");
        out.println("</body>");
        out.println("</html>");
    } catch (NumberFormatException e) {
        out.println("<html>");
        out.println("<head>");
        out.println("<title>Error</title>");
        out.println("</head>");
        out.println("<body>");
        out.println("<h2>Error</h2>");
        out.println("<p>Invalid age value: " + ageParam + "</p>");
        out.println("</body>");
        out.println("</html>");
    }
}

```

6. Write a JSP program to print first 10 Fibonacci and 10 prime numbers

```

<%@ page language="java" contentType="text/html; charset=UTF-8"
    pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>Fibonacci and Prime Numbers</title>

```

```

</head>
<body>
  <h2>First 10 Fibonacci Numbers</h2>
  <%
    int n1 = 0, n2 = 1, n3, i, count = 10;
    out.println(n1 + " " + n2);

    for (i = 2; i < count; ++i) {
      n3 = n1 + n2;
      out.println(" " + n3);
      n1 = n2;
      n2 = n3;
    }
  %>
  <h2>First 10 Prime Numbers</h2>
  <%
    int num = 1;
    int countPrimes = 0;

    while (countPrimes < 10) {
      boolean isPrime = true;

      for (i = 2; i <= Math.sqrt(num); i++) {
        if (num % i == 0) {
          isPrime = false;
          break;
        }
      }

      if (isPrime && num > 1) {
        out.println(num + " ");
        countPrimes++;
      }
      num++;
    }
  %>
</body>
</html>

```

7. Write a JSP Program to design a shopping cart to add items, remove item and to display items from the cart using Sessions

Shoping.jsp

```

<%@ page language="java" contentType="text/html; charset=UTF-8"
    pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>Shopping Cart</title>
</head>

```

```

<body>
  <h2>Shopping Cart</h2>
  <form action="CartController" method="post">
    <label for="item">Add Item:</label>
    <input type="text" id="item" name="item">
    <input type="submit" value="Add to Cart">
    <input type="hidden" name="action" value="add">
  </form>
  <form action="CartController" method="post">
    <label for="removeItem">Remove Item:</label>
    <select id="removeItem" name="removeItem">
      <option value="">Select Item</option>
      <%
        String[] cartItems = (String[]) session.getAttribute("cartItems");
        if (cartItems != null) {
          for (String item : cartItems) {
            out.println("<option value=\"" + item + "\">" + item + "</option>");
          }
        }
      %>
    </select>
    <input type="submit" value="Remove from Cart">
    <input type="hidden" name="action" value="remove">
  </form>
  <h3>Items in Cart:</h3>
  <%
    if (cartItems != null && cartItems.length > 0) {
      for (String item : cartItems) {
        out.println("<p>" + item + "</p>");
      }
    } else {
      out.println("<p>No items in the cart</p>");
    }
  %>
</body>
</html>

```

CartController.java

```

import java.io.IOException;

import javax.servlet.ServletException;
import javax.servlet.annotation.WebServlet;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
import javax.servlet.http.HttpSession;

@WebServlet("/CartController")
public class CartController extends HttpServlet {
    private static final long serialVersionUID = 1L;

    protected void doPost(HttpServletRequest request, HttpServletResponse response)

```

```

        throws ServletException, IOException {
String action = request.getParameter("action");

HttpSession session = request.getSession();
String[] cartItems = (String[]) session.getAttribute("cartItems");

if ("add".equals(action)) {
    String newItem = request.getParameter("item");
    if (cartItems == null) {
        cartItems = new String[] {newItem};
    } else {
        String[] newCart = new String[cartItems.length + 1];
        System.arraycopy(cartItems, 0, newCart, 0, cartItems.length);
        newCart[cartItems.length] = newItem;
        cartItems = newCart;
    }
    session.setAttribute("cartItems", cartItems);
} else if ("remove".equals(action)) {
    String itemToRemove = request.getParameter("removeItem");
    if (cartItems != null) {
        String[] newCart = new String[cartItems.length - 1];
        int newIndex = 0;
        for (String item : cartItems) {
            if (!item.equals(itemToRemove)) {
                newCart[newIndex] = item;
                newIndex++;
            }
        }
        cartItems = newCart;
        session.setAttribute("cartItems", cartItems);
    }
}

response.sendRedirect("Shopping.jsp");
}
}

```

8. Write a java Servlet program to Download a file and display it on the screen(A link has to be provided in HTML, when the link is clicked corresponding file has to be displayed on screen).

```

<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>File Display Example</title>
</head>
<body>
    <h2>Click the link to view the file contents:</h2>
    <a href="FileDownloadServlet?filename=file.txt">View File</a>
</body>

```

</html>

FileDownloadServlet.java

```
package com.ex8;

import java.io.*;
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("/FileDownloadServlet")
public class FileDownloadServlet 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();

        // Display HTML page with a link to download the file
        out.println("<html><head><title>File Display Example</title></head><body>");
        out.println("<h2>Click the link to view the file contents:</h2>");
        out.println("<a href='\"FileDisplayServlet?filename=file.txt\"'>View File</a>");
        out.println("</body></html>");

        // Check if a filename is provided in the request
        String fileName = request.getParameter("filename");
        if (fileName != null && !fileName.isEmpty()) {
            // Path to the file to be displayed
            String filePath = "D:/JEE/" + fileName;

            // Display file contents
            try (BufferedReader reader = new BufferedReader(new FileReader(filePath))) {
                out.println("<h2>File Contents:</h2>");
                String line;
                while ((line = reader.readLine()) != null) {
                    out.println(line + "<br>");
                }
            } catch (FileNotFoundException e) {
                out.println("<p>File not found.</p>");
            }
        }
    }
}
```