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**UNIVERSITI MALAYSIA TERENGGANU**

**Faculty Of Computer Sciences and Mathematics**

**Web Based Application Development**

**CSM3023**

Lab Report 3

**Prepared for:**

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Bachelor of Computer Science (Mobile Computing) with Honors.

Sem 2 2023/2024

**Task 1: Passing Data from Main JSP’s Page to Other JSP’s Page**

Code:

|  |
| --- |
| <%--  Document : memberRegister  Created on : 17 Apr 2024, 2:41:27 pm  Author : MUHAMMAD IMRAN BIN ABD HAMID  --%>  <%@page contentType="text/html" pageEncoding="UTF-8"%>  <!DOCTYPE html>  <html>  <head>  <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">  <title>JSP Page</title>  </head>  <body>  <h1>Passing data from main JSP's Page to other JSP'S page</h1>  <form id = "memberFrm" action="memberProcessing.jsp" method="post" onsubmit="return chechICNo()">  <fieldset>  <legend>Member Registration</legend>  <label for="icno">Ic No \*</label>  <input type="text" id="icno" name="my\_icno" size="15" placeholder="E.g 921012101245"></br>    <label for="name">Name</label>  <input type="text" id="name" name="my\_name" size="45" placeholder="Key-in your name"></br>    <p><input type="submit" id="btnSubmit" value="Submit"/>  <input typpe="reset" id="btnCancel" value="Cancel">  </p>  </fieldset>  </form>  </body>  </html> |

Output:

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Code:

|  |
| --- |
| <%--  Document : memberProcessing  Created on : 17 Apr 2024, 3:01:20 pm  Author : MUHAMMAD IMRAN BIN ABD HAMID  --%>  <%@page contentType="text/html" pageEncoding="UTF-8"%>  <!DOCTYPE html>  <html>  <head>  <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">  <title>Lab 3-Task 1</title>  </head>  <body>  <h1>Passing data from main JSP's page to other JSP's page</h1>  <fieldset>  <%  String myIC = null;  String myName = null;    myIC = request.getParameter("my\_icno");  myName = request.getParameter("my\_name");  %>    <p>Thank you for registering in this event ...!</p>  <p>This is your details</p>  <p>IC No : <%=myIC%></p>  <p>Name : <%=myName%></p>  </fieldset>  </body>  </html> |

Output:

A screenshot of a computer

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Reflection:

1. How do you want to submit specific information from one form to next form?

In a JavaServer Pages (JSP) environment, it can pass data from one form to another using a combination of JSP, HTML forms, and JavaScript.

2. What happened if the field name you specify in request.getParameter(“field\_name”) in second page is different from the field name you defined in first page?

Can’t retrieve the data because the parameter names not match between the form submission and the retrieval code.

**Task 2: Using Mathematics Operations in JSP**

|  |
| --- |
| <%--  Document : Calculator  Created on : 17 Apr 2024, 3:16:41 pm  Author : MUHAMMAD IMRAN BIN ABD HAMID  --%>  <%@page contentType="text/html" pageEncoding="UTF-8"%>  <!DOCTYPE html>  <html>  <head>  <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">  <title>JSP Page</title>  </head>  <body bgcolor="#a00FFF" text="gold">  <center>  <h2>Basic calculator program in jsp</h2>  <form method="get" name="f1">  <input method="text" size="20" name="eperand1" value=""/>    <select name= op size =1>  <option value= "0" >+</option>  <option value= "1" >-</option>  <option value= "2" >\*</option>  <option value= "3" >/</option>  <option value= "4" >%</option>  </select>    <input type="text" size="20" name="operand2" value=""/>  <p><br><br><br><br>  <input type="submit" value="Calculate"/>    </form>  </body>  </html> |

Output:

A screenshot of a computer

Description automatically generated

Code:

|  |
| --- |
| <%--  Document : Calculator  Created on : 17 Apr 2024, 3:16:41 pm  Author : MUHAMMAD IMRAN BIN ABD HAMID  --%>  <%@page contentType="text/html" pageEncoding="UTF-8"%>  <!DOCTYPE html>  <html>  <head>  <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">  <title>JSP Page</title>  </head>  <body bgcolor="#a00FFF" text="gold">    <%  String num1 = "0", num2 = "0";  int result = 0;  String op = "+";    char opchar = op.charAt(0);  if (request.getParameter("op") !=null){  op = request.getParameter("op");  opchar = op.charAt(0);    num1 = request.getParameter("operand1");  num2 = request.getParameter("operand2");    switch(opchar){  case '0': result = Integer.parseInt(num1) + Integer.parseInt(num2);  break;  case '1': result = Integer.parseInt(num1) - Integer.parseInt(num2);  break;  case '2': result = Integer.parseInt(num1) \* Integer.parseInt(num2);  break;  case '3': result = Integer.parseInt(num1) / Integer.parseInt(num2);  break;  case '4': result = Integer.parseInt(num1) % Integer.parseInt(num2);  break;  }  }  %>    <center>  <h2>Basic calculator program in jsp</h2>  <form method="get" name="f1">  <input method="text" size="20" name="operand1" value="<%= num1 %>"/>    <select name = "op" size = "1">  <option value= "0" >+</option>  <option value= "1" >-</option>  <option value= "2" >\*</option>  <option value= "3" >/</option>  <option value= "4" >%</option>  </select>    <input type="text" size="20" name="operand2" value="<%= num2 %>"/>  <p><br><br><br><br>  <input type= submit value = Calculate/>    </form>  Result = <%= result + "" %>  </body>  </html> |

Output:

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A screenshot of a calculator program

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A screenshot of a calculator program

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A purple background with white text

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A purple background with white text and black numbers

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Reflection:

1. How do you want to submit specific information from one form to next form?

Passing parameters via URL parameters

2. What happened if the field name you specify in request.getParameter(“field\_name”) in second page is different from the field name you defined in first page?

Can’t retrieve the data because the parameter names not match between the form submission and the retrieval code.

**Task 4: Perform Calculation of Car Loan**

Code:

|  |
| --- |
| <!DOCTYPE html>  <html lang="en">  <head>  <meta charset="UTF-8">  <meta name="viewport" content="width=device-width, initial-scale=1.0">  <title>Car Loan Calculator</title>  </head>  <body>  <h1>Perform Car Loan Calculation</h1>  <form action="processCalculateCarLoan.jsp" method="POST">  <fieldset>  <legend>Loan Calculation</legend>  <label>Loan Amount:\*</label>  <input type="number" name="amount" placeholder="amount" required>  <br>  <label>Period:</label>  <select name="period">  <option value="3">3 Years</option>  <option value="4">4 years</option>  <option value="5">5 Years</option>  <option value="7">7 Years</option>  </select>  <br>  <button type="submit">Submit</button>  <button type="reset">Reset</button>  </fieldset>  </form>  </body>  <br/>  <footer>&copy2024-Muhd Imran</footer>  </html> |

|  |
| --- |
| <%--  Document : processCalculateCarLoan  Created on : 19 Apr 2024, 3:41:57 pm  Author : MUHAMMAD IMRAN BIN ABD HAMID  --%>  <%@page contentType="text/html" pageEncoding="UTF-8"%>  <!DOCTYPE html>  <html>  <head>  <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">  <title>Process Calculation</title>  </head>  <body>  <%  String LAmount = request.getParameter("amount");  String period = request.getParameter("period");  double interest = 0;    if(Integer.parseInt(period) > 5) {  interest = Integer.parseInt(LAmount) \* Integer.parseInt(period) \* 0.045;  }  else {  interest = Integer.parseInt(LAmount) \* Integer.parseInt(period) \* 0.028;  }  double result = Integer.parseInt(LAmount) + interest;  %>  <h1>Perform Car Loan Calculation</h1>  <div>  <fieldset>  <legend>Details of car loan</legend>  <div>  <label>Loan Request</label>: <%= LAmount %>  </div>  <div>  <label>Period of payment</label>: <%= period %>  </div>  <div>  Total Loan + (interest) : <%= result %>  </div>  </fieldset>  </div>  </body>  <br/>  <footer>&copy2024-Muhd Imran</footer>  </html> |

Output:

A screenshot of a computer

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Reflection:

1. How you want to retrieve data from previous page?

String LAmount = request.getParameter("amount");

String period = request.getParameter("period");

2. Where the construction of logic occur for calculating Total Loan ( + interest) ?

|  |
| --- |
| double interest = 0;  if(Integer.parseInt(period) > 5) {  interest = Integer.parseInt(LAmount) \* Integer.parseInt(period) \* 0.045;  }  else {  interest = Integer.parseInt(LAmount) \* Integer.parseInt(period) \* 0.028;  }  double result = Integer.parseInt(LAmount) + interest; |

**Task 5:** **Using JSP Page Directive to Call Java API**

Code:

|  |
| --- |
| <%--  Document : ArrayList  Created on : 19 Apr 2024, 3:55:03 pm  Author : MUHAMMAD IMRAN BIN ABD HAMID  --%>  <%@page contentType="text/html" pageEncoding="UTF-8"%>  <%@page import="java.util.ArrayList"%>  <!DOCTYPE html>  <html>  <head>  <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">  <title>Use Java ArrayList</title>  </head>  <body>  <h1>Use JSP Page Directive</h1>  <%  // Create ArrayList object  ArrayList<String> studentList = new ArrayList<>();    studentList.add("Mohammad Azam");  studentList.add("Peter Chong");  studentList.add("Rahimah Mansor");  studentList.add("Sri Devi");  studentList.add("Ng Hue Ween");  studentList.add("S. Nagarajan");    out.println("<p><font color=\"blue\">The number of records in ArrayList are " + studentList.size() + "</font></p>");    for (int i = 0; i < studentList.size(); i++) {  out.println("<p><font color=\"blue\">Record " + (i + 1) + " is </font><font color=\"blue\">" + studentList.get(i) + "</font></p>");  }  %>  <br/>  <footer>&copy; 2024-Muhd Imran</footer>  </body>  </html> |

Output:

A screenshot of a computer

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Reflection:

1. What you have learnt from this exercise?

Using JSP Page Directive to Call Java API

2. Write a sample syntax how you want to use java Math object in JSP?

<%-- Calculating square root --%>

<% double number = 16; %>

<p>Square root of <%= number %> is <%= Math.sqrt(number) %></p>

3. List and write a sample syntax for THREE (3) of JSP page directive

Page import:

|  |
| --- |
| <%@page import="java.util.Date"%>  <%@page import="java.util.ArrayList"%> |

Page contentType:

|  |
| --- |
| <%@page contentType="text/html; charset=UTF-8"%> |

Page language:

|  |
| --- |
| <%@page language="java"%> |

**Task 6: Use JSP Include directive for JSP Page**

Code:

|  |
| --- |
| <%--  Document : mainPage  Created on : 19 Apr 2024, 4:49:16 pm  Author : MUHAMMAD IMRAN BIN ABD HAMID  --%>  <%@page contentType="text/html" pageEncoding="UTF-8"%>  <!DOCTYPE html>  <html>  <head>  <title>Use Include Directive - JSP</title>  <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">  </head>  <body>  <div>  <%@ include file="headerPage.jsp" %>  <h2>Using JSP Include Directive</h2>  <p style="color: red;">  Java Server Page (JSP) is a technology for controlling the content<br>  or appearance of Web pages through the use of servlets, small programs<br>  that are specified in the Web pages and run on the Web server to modify<br>  the web page before it sent to the user who requested it.  </p>  <%@ include file="footerPage.jsp" %>  </div>  </body>  </html> |
| <%--  Document : headerPage  Created on : 19 Apr 2024, 4:50:11 pm  Author : MUHAMMAD IMRAN BIN ABD HAMID  --%>  <%@page contentType="text/html" pageEncoding="UTF-8"%>  <!DOCTYPE html>  <html>  <head>  <title>Header Page - JSP</title>  <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">  <style>  .header-container {  background-color: yellow;  text-align: right;  padding: 10px;  }  </style>  </head>  <body>  <div class="header-container">  <h1>ABC Sdn Bhd</h1>  </div>  </body>  </html> |

|  |
| --- |
| <%--  Document : footerPage  Created on : 19 Apr 2024, 4:55:06 pm  Author : MUHAMMAD IMRAN BIN ABD HAMID  --%>  <%@page contentType="text/html" pageEncoding="UTF-8"%>  <!DOCTYPE html>  <html>  <head>  <title>Footer Page - JSP</title>  <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">  <style>  .footer-container {  background-color: yellow;  text-align: right;  padding: 10px;  }  </style>  </head>  <body>  <div class="footer-container">  <p>&copy;2024 - Muhd Imran</p>  </div>  </body>  </html> |

Output:

A screenshot of a computer

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Reflection:

1. What you have learnt from this exercise?

Using JSP include Directive

2. Write a syntax how you want to include common.html file that located at a directory known as master.

|  |
| --- |
| <%@ include file="/master/common.html" %> |

**Exercise**

1. Write a JSP’s page to convert temperatures to Fahrenheit temperatures and via versa. The formula is given as:

F = (9/5)C + 32

Your program should ask the user to enter a temperature in Celsius, and then display the temperature converted to Fahrenheit.

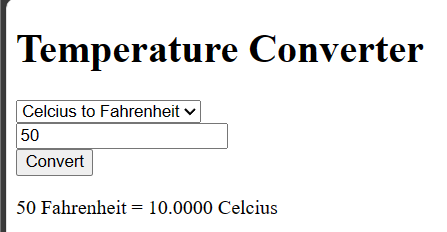
Code:

|  |
| --- |
| <%--  Document : Exercise1  Created on : 19 Apr 2024, 5:28:48 pm  Author : MUHAMMAD IMRAN BIN ABD HAMID  --%>  <%@page contentType="text/html" pageEncoding="UTF-8"%>  <!DOCTYPE html>  <html>  <head>  <title>Temperature Converter - JSP</title>  <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">  </head>  <body>  <%  String num1 = "0";  double result = 0;  String op = "Celcius";  String msg = "";    java.util.Formatter myFormat = new java.util.Formatter();    char opchar = op.charAt(0);  if(request.getParameter("op") != null) {  op = request.getParameter("op");  opchar = op.charAt(0);    num1 = request.getParameter("celc");  switch(opchar) {  case '0': result = (Double.parseDouble(num1) \* 9/5) + 32;  msg = num1 + " Celcius = " + result + " Fahrenheit";  break;  case '1': result = (Double.parseDouble(num1) - 32) \* 5/9;  msg = num1 + " Fahrenheit = "  + myFormat.format("%.4f", result) + " Celcius";  break;  }  }  %>  <h1>Temperature Converter</h1>  <div class="kotak">  <form action="Exercise1.jsp" method="POST">  <div class="form-group">  <select name="op">  <option value="0">Celcius to Fahrenheit</option>  <option value="1">Fahrenheit to Celcius</option>  </select>  </div>  <div class="form-group">  <input type="text" name="celc" placeholder="Enter temperature" value="0">  </div>  <div class="form-group">  <button type="submit">Convert</button>  </div>  </form>  <p><% out.print(msg); %></p>  </div>  </body>  </html> |

Output:

A screenshot of a computer

Description automatically generated



2. Write a JSP’s form that asks for the length and width of two rectangles. The program should tell the user which rectangle has the greater area, or if the areas are the same. [Note: All result must be in 2 decimal places].

|  |
| --- |
| <%--  Document : Exercise2  Created on : 19 Apr 2024, 5:42:55 pm  Author : MUHAMMAD IMRAN BIN ABD HAMID  --%>  <%@page contentType="text/html" pageEncoding="UTF-8"%>  <!DOCTYPE html>  <html>  <head>  <title>Calculate Area of Rectangle - JSP</title>  <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">  </head>  <body>  <h1>Calculate Rectangle Area</h1>  <div>  <form action="ex2p2.jsp" method="POST">  <fieldset>  <legend>Rectangle 1</legend>  <div class="form-group">  <label>Width</label>:  <input type="text" name="width\_r1" value="0" required>  </div>  <div class="form-group">  <label>Height</label>:  <input type="text" name="height\_r1" value="0" required>  </div>  </fieldset>  <fieldset>  <legend>Rectangle 2</legend>  <div class="form-group">  <label>Width</label>:  <input type="text" name="width\_r2" value="0" required>  </div>  <div class="form-group">  <label>Height</label>:  <input type="text" name="height\_r2" value="0" required>  </div>  </fieldset>  <div class="form-group">  <button type="submit">Calculate</button>  </div>  </form>  <p></p>  </div>  </body>  </html> |

|  |
| --- |
| <%--  Document : ex2p2  Created on : 19 Apr 2024, 5:52:52 pm  Author : MUHAMMAD IMRAN BIN ABD HAMID  --%>  <%@page contentType="text/html" pageEncoding="UTF-8"%>  <!DOCTYPE html>  <html>  <head>  <title>Calculate Area of Rectangle - JSP</title>  <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">  </head>  <body>  <div>  <fieldset>  <legend>Result</legend>  <%  String num1 = "0", num2 = "0", num3 = "0", num4 = "0";  double rect1 = 0, rect2 = 0;  String result, msg = "";  java.util.Formatter myFormat = new java.util.Formatter();  java.util.Formatter myFormat1 = new java.util.Formatter();  num1 = request.getParameter("width\_r1");  num2 = request.getParameter("height\_r1");  num3 = request.getParameter("width\_r2");  num4 = request.getParameter("height\_r2");    rect1 = Double.parseDouble(num1) \* Double.parseDouble(num2);  rect2 = Double.parseDouble(num3) \* Double.parseDouble(num4);    result = "<div class='form-group'>"  + "<label>Area of rectangle 1</label> : " + myFormat.format("%.2f", rect1)  + "</div><div class='form-group'>"  + "<label>Area of rectangle 2</label> : " + myFormat1.format("%.2f", rect2)  + "</div>";    if(rect1 > rect2) {  msg = result + "<p>Therefore, area of Rectangle 1 is greater than Rectangle 2</p>";  }  else if(rect1 == rect2) {  msg = result + "<p>Therefore, area of Rectangle 1 is equal to Rectangle 2</p>";  }  else {  msg = result + "<p>Therefore, area of Rectangle 2 is greater than Rectangle 1</p>";  }  %>  <%= msg %>  </fieldset>  </div>  <% request.getRequestDispatcher("Exercise2.jsp").include(request, response); %>  </body>  </html> |

Output:

A rectangle area with text

Description automatically generated

