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**UNIVERSITI MALAYSIA TERENGGANU**

**Faculty Of Computer Sciences and Mathematics**

**Web Based Application Development**

**CSM3023**

Lab Report 4

**Prepared for:**

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**Prepared by:**

Muhammad Imran Bin Abd Hamid (S66803)

Bachelor of Computer Science (Mobile Computing) with Honors.

Sem 2 2023/2024

Task 1: Using JSP Scripting

Code:

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| <!DOCTYPE html>  <!--  Click nbfs://nbhost/SystemFileSystem/Templates/Licenses/license-default.txt to change this license  Click nbfs://nbhost/SystemFileSystem/Templates/JSP\_Servlet/Html.html to edit this template  -->  <html>  <head>  <title>Using JSP Scripting</title>  <meta charset="UTF-8">  <meta name="viewport" content="width=device-width, initial-scale=1.0">  </head>  <body>  <h1>Use JSP Scriplet and JSP Expression in Application</h1>  <h2 style="color: purple;">Customer Discount</h2>  <div>  <form action="processCustomer.jsp" method="POST">  <div>  <label>Customer Code</label>:  <input type="text" name="cust\_code" placeholder="Key-in customer code" required>  </div><br>  <div>  <label>Quantity</label>:  <input type="text" name="quantity" placeholder="Key-in quantity" required>  </div><br>  <div>  <label>Customer type</label>:  <input type="radio" name="cust\_type" value="1" checked> Normal Customer &nbsp;  <input type="radio" name="cust\_type" value="2"> Privilege Customer  </div><br>  <div>  <button type="submit">Submit</button>  <button type="reset">Cancel</button>  </div>  </form>  </div><br>  <footer>&copy; 2024-Muhd Imran</footer>  </body>  </html> |

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| <%--  Document : processCustomer  Created on : 24 Apr 2024, 2:49:19 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>Using JSP Scripting</title>  </head>  <body>  <h1>Use JSP Scriplet and JSP Expression in Application</h1>  <%  final int price = 10;  String cust\_code = request.getParameter("cust\_code"); // Corrected variable name  int quantity = Integer.parseInt(request.getParameter("quantity")); // Corrected variable name  String cust\_type1 = request.getParameter("cust\_type"); // Corrected variable name    if (cust\_type1.equals("1") && quantity > 100) {  out.print("You're entitled to a 10% discount.");  out.print("<br>Total amount is RM " + (quantity \* price \* 0.9)); // Corrected math and variable  } else if (cust\_type1.equals("2") && quantity > 100) {  out.print("You're entitled to a 25% discount.");  out.print("<br>Total amount is RM " + (quantity \* price \* 0.75)); // Corrected math and variable  } else {  out.print("You're not entitled to a discount.");  out.print("<br>Total amount is RM " + (quantity \* price)); // Corrected variable  }  %>  </body>  </html> |

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Reflection:

1. Learn how to use JSP Scriplet and JSP Expression in Application

2. Declaration – Use to define variables, methods, or other class-level constructs that can be reused across multiple requests

Scriplet - Code blocks that contain executable Java code.

Expression - Used to insert the value of a Java variable or method call directly into the output HTML.

Task 2: Using JSP (Scripting, Declaration and Expression)

Code:

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| <!DOCTYPE html>  <!--  Click nbfs://nbhost/SystemFileSystem/Templates/Licenses/license-default.txt to change this license  Click nbfs://nbhost/SystemFileSystem/Templates/JSP\_Servlet/Html.html to edit this template  -->  <html>  <head>  <title>Currency Converter</title>  <meta charset="UTF-8">  <meta name="viewport" content="width=device-width, initial-scale=1.0">  </head>  <body>  <h1>Use JSP Declaration tag, JSP Scriplet and JSP Expression in Application</h1>  <h2 style="color: purple;">Currency Conversion</h2>  <div>  <form action="processCurrency.jsp" method="POST">  <div>  <label>Amount (RM)</label>:  <input type="text" name="amount" placeholder="in RM" required>  </div>  <div>  <label>Convert to</label>:  <select name="currency">  <option value="1">USD</option>  <option value="2">STG</option>  <option value="3">EURO</option>  </select>  </div>  <div>  <button type="submit">Submit</button>  <button type="reset">Cancel</button>  </div>  </form>  </div><br>  <footer>&copy; 2024-Muhd Imran</footer>  </body>  </html> |

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| <%--  Document : processCurrency  Created on : 24 Apr 2024, 3:54:43 pm  Author : MUHAMMAD IMRAN BIN ABD HAMID  --%>  <%@page import="java.text.DecimalFormat"%>  <%@page contentType="text/html" pageEncoding="UTF-8"%>  <!DOCTYPE html>  <html>  <head>  <title>Process Currency - JSP</title>  <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">  </head>  <body>  <h1>Use JSP Declaration tag, JSP Scriplet and JSP Expression in Application</h1>  <h2>Currency Conversion</h2>  <div>  <%  String currency = request.getParameter("currency");  int amount = Integer.parseInt(request.getParameter("amount"));  %>  <%!  final double USD = 3.92;  final double STG = 5.96;  final double EURO = 4.47;    private DecimalFormat df = new DecimalFormat("0.00");    private double calculateRate(String currency, int amount)  {  double currencyChange = 0;  if(currency.contains("1")) {  currencyChange = (amount / USD);  }  if(currency.contains("2")) {  currencyChange = (amount / STG);  }  if(currency.contains("3")) {  currencyChange = (amount / EURO);  }  return Double.parseDouble(df.format(currencyChange));  }  private String currencyName(String currency)  {  String currName = "";  if(currency.contains("1")) {  currName = "Amount in USD is $";  }  if(currency.contains("2")) {  currName = "Amount in Pound STG is &pound;";  }  if(currency.contains("3")) {  currName = "Amount in EURO is &euro;";  }  return currName;  }  %>  <%  out.print("Amount in Ringgit Malaysia is RM" + amount + "<br>");  out.print(currencyName(currency) + calculateRate(currency, amount));  %>  </div><br>  <footer>&copy; 2024-Muhd Imran</footer>  </body>  </html> |

Output:

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Reflection:

1. Use JSP Declaration tag, Scriplet and JSP Expression in Application for currency conversion.

Task 3: Using JSP Standard Action (Include and Param)

Code:

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| <%--  Document : jspParameter  Created on : 24 Apr 2024, 4:39:37 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>Using JSP Standard Action</title>  </head>  <body>  <h1>Using jsp:include and jsp:param to display information on JSP page</h1>  <%  String sCode = "CSM3023";  String sSubject = "Web Programming 2";  String sCredit = "3(2+1)";  %>  <jsp:include page="subjectInfo.jsp" flush="true">  <jsp:param name="code" value="<%=sCode%>"/>  <jsp:param name="subject" value="<%=sSubject%>"/>  <jsp:param name="credit" value="<%=sCredit%>"/>  </jsp:include>  </body>  </html> |

|  |
| --- |
| <%--  Document : subjectInfo  Created on : 24 Apr 2024, 4:45:50 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>Using JSP Standard Action</title>  </head>  <body>  <h1>Calling subjectInfo.jsp</h1>  <P>Code = <%=request.getParameter("code")%></p>  <P>Subject = <%=request.getParameter("subject")%></p>  <P>Credit = <%=request.getParameter("credit")%></p>  </body>  </html> |

Output:

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Reflection:

1. Using JSP Standard Action (Include and Param)

2. <jsp:useBean>

<jsp:setProperty>

Task 4: Using JSP Standard Action (Forward)

Code:

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| --- |
| <%--  Document : forward  Created on : 26 Apr 2024, 7:24:02 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>Using JSP Standard Action (forward)</title>  </head>  <body>  <h2>Using JSP'S forward to display user info.</h2>  <jsp:forward page="forwardInfo.jsp">  <jsp:param name = "U\_name" value="Found Abdulameer"/>  <jsp:param name = "Email" value="founddaug@gmail.com"/>  <jsp:param name = "Nationality" value="Iraqi"/>  <jsp:param name = "Background" value="Developer"/>  </jsp:forward>  </body>  </html> |

|  |
| --- |
| <%--  Document : forwardInfo  Created on : 26 Apr 2024, 7:32:53 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>&lt;Forward\_Action Example in JSP&gt;</title>  </head>  <body>  <% String name = request.getParameter("U\_name");%>  <% String Email = request.getParameter("Email");%>  <% String Nationality = request.getParameter("Nationality");%>  <% String Background = request.getParameter("Background");%>  <% if (name !=null) {%>  <b><br><br><h2 align="center">  <%=name%><br>  <%=Email%><br>  <%=Nationality%><br>  <%=Background%><br><br>    <% out.print("Today is:"+ java.util.Calendar.getInstance().getTime());%>  </h2></b></br>  <%}%>  </body>  </html> |

Output:

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Reflection:

1. Learn using JSP Standard Action (Forward)

2. <jsp:plugin>

<jsp:element>

Task 5: Use Java Scriptlet To Construct Business Logic

Code:

|  |
| --- |
| <%--  Document : insuranceQuotation  Created on : 26 Apr 2024, 9:11:23 pm  Author : MUHAMMAD IMRAN BIN ABD HAMID  --%>  <%@page contentType="text/html" pageEncoding="UTF-8"%>  <!DOCTYPE html>  <html>  <head>  <title>Insurance Quotation - JSP</title>  <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">  </head>  <body>  <h1>Insurance Quotation</h1>  <div>  <fieldset>  <legend>Insurance Calculation</legend>  <form action="processInsuranceQuo.jsp" method="POST">  <div>  <label>IC No</label>:  <input type="text" name="icno" placeholder="E.g. 821210-05-3478" required>  </div>  <div>  <label>Name</label>:  <input type="text" name="name" placeholder="enter name" required>  </div>  <div>  <label>Market price</label>:  <input type="number" name="price" placeholder="price" required>  </div>  <div>  <label>Coverage type</label>:  <select name="coverageType">  <option value="1">Third Party</option>  <option value="2">Comprehensive</option>  </select>  </div>  <div>  <label>No claims discount (NCD)</label>:  <select name="discount">  <option value="1">10%</option>  <option value="2">25%</option>  <option value="3">35%</option>  <option value="4">55%</option>  </select>  </div>  <div>  <button type="submit">Submit</button>  <button type="reset">Cancel</button>  </div>  </form>  </fieldset>  </div>  <footer>&copy; 2024-Muhd Imran</footer>  </body>  </html> |

|  |
| --- |
| <%--  Document : processInsuranceQuo  Created on : 26 Apr 2024, 9:30:21 pm  Author : MUHAMMAD IMRAN BIN ABD HAMID  --%>  <%@page import="java.text.DecimalFormat"%>  <%@page contentType="text/html" pageEncoding="UTF-8"%>  <!DOCTYPE html>  <html>  <head>  <title>Insurance Quotation - JSP</title>  <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">  </head>  <body>  <%  String icno = request.getParameter("icno");  String name = request.getParameter("name");  int price = Integer.parseInt(request.getParameter("price"));  String ct = request.getParameter("coverageType");  String dc = request.getParameter("discount");  double insurance = 0;  double gst = 0;  double total = 0;    DecimalFormat df = new DecimalFormat("0.00");    //Third Party  if(ct.equals("1") && dc.equals("1"))  insurance = (3.3/100) \* price;  if(ct.equals("1") && dc.equals("2"))  insurance = (2.5/100) \* price;  if(ct.equals("1") && dc.equals("3"))  insurance = (1.8/100) \* price;  if(ct.equals("1") && dc.equals("4"))  insurance = (1.2/100) \* price;    //Comprehensive  if(ct.equals("2") && dc.equals("1"))  insurance = (3.8/100) \* price;  if(ct.equals("2") && dc.equals("2"))  insurance = (3.0/100) \* price;  if(ct.equals("2") && dc.equals("3"))  insurance = (2.4/100) \* price;  if(ct.equals("2") && dc.equals("4"))  insurance = (1.8/100) \* price;    //GST  gst = 0.06 \* insurance;  //Total  total = gst + insurance;  %>  <h1>Insurance Quotation</h1>  <div>  <fieldset>  <legend>Details of Insurance Quotation</legend>  <div>  <label>IC No</label>: <label><%= icno %></label>  </div>  <div>  <label>Customer name</label>: <label><%= name %></label>  </div>  <div>  <label>Market price</label>: <label><%= price %></label>  </div>  <div>  <label>Coverage type</label>: <label><%= ct %></label>  </div>  <div>  <label>No claim discount (NCD)</label>: <label><%= dc %></label>  </div>  <div>  <label>Insurance amount</label>:  <label><%= df.format(insurance) %></label>  </div>  <div>  <label>6% GST</label>:  <label><%= df.format(gst) %></label>  </div>  <div>  <label>Final amount (+ 6% GST)</label>:  <label><%= df.format(total) %></label>  </div>  </fieldset>  </div>  <footer>&copy; 2024-Muhd Imran</footer>  </body>  </html> |

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Reflection:

1. Learn to use Java Scriptlet to Construct Business Logic

2. Java variable, java type conversion, java conditional statement, mathematical operation, java object and libraries, java expression in JSP.

Exercise:

Code:

|  |
| --- |
| <%--  Document : bmi  Created on : 26 Apr 2024, 10:28:31 pm  Author : MUHAMMAD IMRAN BIN ABD HAMID  --%>  <%@page contentType="text/html" pageEncoding="UTF-8"%>  <!DOCTYPE html>  <html>  <head>  <title>Calculate BMI</title>  <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">  </head>  <body>  <h1>Calculate BMI</h1>  <div>  <form action="calculateBMI.jsp" method="POST">  <div>  <label>Weight (kg)</label>:  <input type="text" name="weight" placeholder="Enter weight" required>  </div>  <div>  <label>Height (m)</label>:  <input type="text" name="height" placeholder="Enter height" required>  </div>  <div>  <button type="submit">Calculate</button>  </div>  </form>  </div>  <footer>&copy; 2024-Muhd Imran</footer>  </body>  </html> |

|  |
| --- |
| <%@ page import="java.text.DecimalFormat" %>  <%@ page contentType="text/html" pageEncoding="UTF-8" %>  <!DOCTYPE html>  <html>  <head>  <title>Calculate BMI</title>  <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">  </head>  <body>  <%  double weight = Double.parseDouble(request.getParameter("weight"));  double height = Double.parseDouble(request.getParameter("height"));  double bmi = 0.00;  String msg = "";    bmi = weight / (height \* height); // Corrected formula    if (bmi < 18.5) {  msg = "Underweight";  } else if (bmi < 25) {  msg = "Optimal";  } else {  msg = "Overweight";  }    DecimalFormat df = new DecimalFormat("0.00");  %>  <h1>Result</h1>  <div>  Your BMI is <%= df.format(bmi) %>. You are <%= msg %>.  </div>  <% request.getRequestDispatcher("bmi.jsp").include(request, response); %> <!-- Optional, if needed -->  </body>  </html> |

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