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**CSM3023 WEB BASED APPLICATION DEVELOPMENT (K1)**

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**BACHELOR OF COMPUTER SCIENCE (MOBILE COMPUTING) WITH  
HONORS**

**SEMESTER 2 2023/2024**

**LAB 4 – JSP: Scriptlet, Expression & Standard Actions**

**Prepared by:**

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## Task 1:

### Coding:

#### customer.html

```
1 <!DOCTYPE html>
2 <!--
3 Click nbfe://nbhost/SystemFileSystem/Templates/Licenses/license-default.txt to change this license
4 Click nbfe://nbhost/SystemFileSystem/Templates/JSP\_Servlet/Html.html to edit this template
5 -->
6 <html>
7 <head>
8 <title>TODO supply a title</title>
9 <meta charset="UTF-8">
10 <meta name="viewport" content="width=device-width, initial-scale=1.0">
11 </head>
12 <body>
13 <h1>Use JSP Scriptlet and JSP Expression in application</h1><br>
14 <h2>Customer discount</h2><br>
15
16 <form action="processCustomer.jsp">
17 <label for="custCode">Customer Code</label>
18 <input type="text" id="custCode" name="custCode"><br>
19 <label for="qty">Quantity</label>
20 <input type="number" id="qty" name="qty"><br>
21 <label>Customer type</label>
22 <input type="radio" id="normal" name="custType" value="1">
23 <label for="normal">Normal</label>
24 <input type="radio" id="privilege" name="custType" value="2">
25 <label for="privilege">Privilege</label><br>
26
27 <button type="submit" value="Submit">Submit</button>
28 <button type="reset" value="Reset">Reset</button>
29 </form>
30 </body>
31 </html>
```

#### processCustomer.jsp

```
2 Document : processCustomer
3 Created on : 24 Apr 2024, 2:58:45 pm
4 Author : AGER
5
6 -->
7 <%page contentType="text/html" pageEncoding="UTF-8"%>
8 <!DOCTYPE html>
9 <html>
10 <head>
11 <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
12 <title>JSP Page</title>
13 </head>
14 <body>
15 <h1>Use JSP Scriptlet and JSP Expression in application</h1><br>
16
17 <%
18     final int price = 10;
19     //Using JSP Scriptlet...
20     String cust_no = request.getParameter("custCode");
21     int quantity1 = Integer.parseInt(request.getParameter("qty"));
22     String cust_type1 = request.getParameter("custType");
23
24     //Determine customer...
25     if(cust_type1.equals("1") && quantity1 > 100){
26         out.print("You're entitle " + "10%");<br>
27         <% out.print("Total amount is RM" + quantity1 * price*0.9);
28         }else if(cust_type1.equals("2") && quantity1 > 100){
29             out.print("You're entitle " + "25%");<br>
30             <% out.print("Total amount is RM" + quantity1 * price * 0.75);
31             }
32             out.print("You're not entitle discount..!");<br>
33             <% out.print("Total amount is RM" + quantity1 * price);
34         }
35     %>
36
37 </body>
38 </html>
```

### Output:

#### Use JSP Scriptlet and JSP Expression in application

##### Customer discount

Customer Code

Quantity

Customer type ☒ Normal ☐ Privilege

#### Use JSP Scriptlet and JSP EXpression in application

You're entitle 10%  
Total amount is RM1260.0

## Reflection

1. What you have learnt from this exercise?  
I have learnt how to apply JSP scriptlet and expression in web application.
2. Explain three (3) type of JSP scripting?  
JSP declaration, expression and scriptlet.

## Task 2:

### Coding:

#### currencyConversion.html

```
8      <title>ringgit</title>
9      <meta charset="UTF-8">
10     <meta name="viewport" content="width=device-width, initial-scale=1.0">
11    </head>
12    <body>
13      <h1>Use JSP Declaration tag, JSP Scriptlet and JSP Expression in application</h1><br>
14      <h3>Currency Conversion</h3><br>
15      <form action="processCurrency.jsp">
16        <table>
17          <tr>
18            <td>
19              <label for="amount">Amount (in RM)</label>
20              <input type="text" id="amount" name="amount" placeholder="(in RM)">
21            </td>
22          </tr>
23          <tr>
24            <td>
25              <label for="currency">Convert to</label>
26              <select id="currency" name="currency">
27                <option value="1">USD</option>
28                <option value="2">Pound Sterling</option>
29                <option value="3">Euro</option>
30              </select>
31            </td>
32          </tr>
33          <tr>
34            <td>
35              <button type="submit" value="Submit">Submit</button>
36              <button type="reset" value="Reset">Cancel</button>
37            </td>
38          </tr>
39        </table>
40      </form>
41    </body>
42  </html>
```

#### processCurrency.jsp

```
7  <%%page contentType="text/html" pageEncoding="UTF-8"%>
8  <!DOCTYPE html>
9  <html>
10   <head>
11     <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
12     <title>JSP Page</title>
13   </head>
14   <body>
15     <h1>Use JSP Declaration tag, JSP Scriptlet and JSP Expression in application</h1>
16
17     <%
18       //Define constant...
19       final double USD = 4.75;
20       final double STG = 5.94;
21       final double EURO = 5.09;
22
23       //Define method to perform currency exchange..
24       private double calculateRate(String currency, int amount){
25         double currencyChange=0.00f;
26         switch(currency){
27           case "1":
28             currencyChange = (double)(amount * USD);
29             break;
30           case "2":
31             currencyChange = (double)(amount * STG);
32             break;
33           case "3":
34             currencyChange = (double)(amount * EURO);
35             break;
36         }
37         return currencyChange;
38       }
39     >%
40
41     <%
42       int amount1 = Integer.parseInt(request.getParameter("amount"));
43       String currencyType = request.getParameter("currency");
44       double result = calculateRate(currencyType, amount1);
45       String currencyName = "";
46       switch(currencyType){
47         case "1":
48           currencyName = "USD";
49           break;
50         case "2":
51           currencyName = "STG";
52           break;
53         case "3":
54           currencyName = "EURO";
55           break;
56       }
57     >%
58
59     <p>Amount in Ringgit Malaysia is <%=amount1%></p>
60     <p>Amount in <%=currencyName%> is <%=String.format("%.2f", result)%></p>
61   </body>
62 </html>
```

Output:

## Use JSP Declaration tag,JSP Scriptlet and JSP Expression in application

### Currency Conversion

Amount(in RM)

Convert to

## Use JSP Declaration tag,JSP Scriptlet and JSP Expression in application

Amount in Ringgit Malaysia is 10000

Amount in EURO is 50900.00

### Reflection

1. What have you learn from this exercise?

I have learnt how to use JSP declaration tag to declare variable and function, JSP Expression and JSP Scriptlet.

### Task 3:

### Coding:

### jspParameter

```
1  <!--
2  Document : jspParameter8
3  Created on : 26 Apr 2024, 2:12:10 pm
4  Author : ACER
5  -->
6
7  <%%page contentType="text/html" pageEncoding="UTF-8"%>
8  <!DOCTYPE html>
9  <html>
10 <head>
11 <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
12 <title>Using JSP Standard Action</title>
13 </head>
14 <body>
15 <h1>Using jsp:include and jsp:param to display information on JSP page</h1>
16
17 <%
18     String sCode = "CSF3107";
19     String sSubject = "Web Programming 2";
20     String sCredit = "3(2+1)";
21 %>
22
23 <!-- Call subjectInfo.jsp page & passing course information to respective parameters -->
24 <jsp:include page="subjectInfo.jsp" flush="true">
25     <jsp:param name="code" value="<%=sCode%}" />
26     <jsp:param name="subject" value="<%=sSubject%}" />
27     <jsp:param name="credit" value="<%=sCredit%}" />
28 </jsp:include>
29
30 </body>
31 </html>
```

## subjectInfo.jsp

```
1 <!--
2 Document : subjectInfo
3 Created on : 26 Apr 2024, 2:18:57 pm
4 Author : ACER
5 -->
6
7 <%@page contentType="text/html" pageEncoding="UTF-8"%>
8 <!DOCTYPE html>
9 <html>
10 <head>
11 <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
12 <title>Using JSP Standard Action</title>
13 </head>
14 <body>
15 <h1>Calling subjectInfo.jsp page</h1>
16 <p>Code = <%=request.getParameter("code")%></p>
17 <p>Subject = <%=request.getParameter("subject")%></p>
18 <p>Credit = <%=request.getParameter("credit")%></p>
19 </body>
20 </html>
```

Output:

**Using jsp:include and jsp:param to display information on JSP page**

**Calling subjectInfo.jsp page**

Code = CSF3107

Subject = Web Programming 2

Credit = 3(2+1)

Reflection

1. What you have learnt from this exercise?

I have learnt how to use jsp:include to call method than pass information using jsp:param.

2. List TWO (2) other JSP Standard Action Tag  
jsp:forward & jsp:useBean

Task 4:

Coding:

forward.jsp

```
1 <!--
2 Document : forward
3 Created on : 26 Apr 2024, 2:28:17 pm
4 Author : ACER
5 -->
6
7 <%@page contentType="text/html" pageEncoding="UTF-8"%>
8 <!DOCTYPE html>
9 <html>
10 <head>
11 <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
12 <title>Using JSP Standard Action(forward)</title>
13 </head>
14 <body>
15 <h2>Using jsp:forward to display user info.</h2>
16 <jsp:forward page="forwardInfo.jsp">
17 <jsp:param name="U_Name" value="Fouad Abdulameer"/>
18 <jsp:param name="Email" value="fouadaug@gmail.com"/>
19 <jsp:param name="Nationality" value="Iraqi"/>
20 <jsp:param name="Background" value="Developer"/>
21 </jsp:forward>
22 </body>
23 </html>
```

## forwardInfo.jsp

```
1 <%--
2 Document : forwardInfo
3 Created on : 26 Apr 2024, 2:32:51 pm
4 Author : ACER
5 --%>
6
7 <%%page contentType="text/html" pageEncoding="UTF-8"%>
8 <!DOCTYPE html>
9 <html>
10 <head>
11 <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
12 <title>&lt;Forwarded_Action Example in JSP&gt;</title>
13 </head>
14 <body>
15 <% String name = request.getParameter("U_Name"); %>
16 <% String Email = request.getParameter("Email"); %>
17 <% String Nationality = request.getParameter("Nationality"); %>
18 <% String Background = request.getParameter("Background"); %>
19 <% if (name != null) { %>
20 <b><br><br><h2 align="center">
21
22 <%=name%><br>
23 <%=Email%><br>
24 <%=Nationality%><br>
25 <%=Background%><br>
26
27 <% out.print("Today is:" + java.util.Calendar.getInstance().getTime()); %>
28 </h2></b></br>
29 <%= %>
30 </body>
31 </html>
```

Output:

**Fouad Abdulameer**  
**fouadaug@gmail.com**  
**Iraqi**  
**Developer**  
**Today is:Sat Apr 27 16:35:17 MYT 2024**

## Reflection

1. What you have learnt from this exercise?  
I have learnt how to use JSP Standard Action Tag JSP:forward to call targeted method than use JSP:param to forward information.
2. List TWO(2) More JSP Standard Action Tag
  - 1.jspsetProperty
  - 2.jspgetProperty

## Task 5:

## Coding:

### insuranceQuotation.jsp

```
1 <!--
2 Document : insuranceQuotation
3 Created on : 26 Apr 2024, 4:06:59 pm
4 Author : ACER
5 -->
6
7 <!--page contentType="text/html" pageEncoding="UTF-8"%>
8 <!DOCTYPE html>
9 <html>
10 <head>
11 <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
12 <title>ZURICH INSURANCE</title>
13 <style>
14 <td>
15 padding: 5px;
16 </td>
17 </style>
18 </head>
19 <body>
20 <h1>Insurance Quotation</h1>
21 <fieldset>
22 <legend>Insurance Calculation</legend>
23 <form action="processInsuranceQuo.jsp">
24 <table>
25 <tr>
26 <td>
27 <label for="icNo">ICNo*</label>
28 </td>
29 <td>
30 <input type="text" id="icNo" name="icNo" placeholder="E.g 821210-05-3478" required>
31 </td>
32 </tr>
33 <tr>
34 <td>
35 <label for="name">Name*</label>
36 </td>
37 <td>
38 <input type="text" id="name" name="name" placeholder="Enter name" required>
39 </td>
40 </tr>
41 <tr>
42 <td>
43 <label for="market">Market Price*</label>
44 </td>
45 <td>
46 <input type="text" id="market" name="market" placeholder="Price" required>
47 </td>
48 </tr>
49 <tr>
50 <td>
51 <label for="type">Coverage Type</label>
52 </td>
53 <td>
54 <select id="type" name="type">
55 <option value="1">Third Party</option>
56 <option value="2">Comprehensive</option>
57 </select>
58 </td>
59 </tr>
60 <tr>
61 <td>
62 <label for="ncd">No claims discount (NCD)</label>
63 </td>
64 <td>
65 <select id="ncd" name="ncd">
66 <option value="10%">10%</option>
67 <option value="25%">25%</option>
68 <option value="35%">35%</option>
69 <option value="55%">55%</option>
70 </select>
71 </td>
72 </tr>
73 <tr>
74 <td>
75 <button type="submit" value="Submit">Submit</button>
76 <button type="reset" value="Reset">Cancel</button>
77 </td>
78 </tr>
79 </table>
80 </form>
81 </fieldset>
82 </body>
83 </html>
```

## processInsuranceQuo.jsp

```
1 <!--
2 Document : processInsuranceQuo
3 Created on : 26 Apr 2024, 7:30:13 pm
4 Author : ACER
5 -->
6
7 <%%page contentType="text/html" pageEncoding="UTF-8"%>
8 <!DOCTYPE html>
9 <html>
10 <head>
11 <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
12 <title>2IGRICH INSURANCE</title>
13 </head>
14 <body>
15 <%
16     final double gst = 0.06;
17
18     private double calcInsurance(String cover, String NCD, int market){
19         double insurance = 0.0;
20         if(cover.equals("Comprehensive")){
21             switch(NCD){
22                 case "55%":
23                     insurance = 0.018 * market;
24                     break;
25                 case "35%":
26                     insurance = 0.024 * market;
27                     break;
28                 case "25%":
29                     insurance = 0.030 * market;
30                     break;
31                 case "10%":
32                     insurance = 0.038 * market;
33                     break;
34             }
35         }else{
36             switch(NCD){
37                 case "55%":
38                     insurance = 0.012 * market;
39                     break;
40                 case "35%":
41                     insurance = 0.018 * market;
42                     break;
43                 case "25%":
44                     insurance = 0.025 * market;
45                     break;
46                 case "10%":
47                     insurance = 0.033 * market;
48                     break;
49             }
50         }
51         return insurance;
52     }
53 >%
54 <%
55     String icNo = request.getParameter("icNo");
56     String custName = request.getParameter("name");
57     int market_price = Integer.parseInt(request.getParameter("market"));
58     String cover_type = request.getParameter("type");
59
60     String coverage = "";
61     switch(cover_type){
62         case "1":
63             coverage = "Third Party";
64             break;
65         case "2":
66             coverage = "Comprehensive";
67             break;
68     }
69
70     String Ncd = request.getParameter("ncd");
71     double ins_amount = calcInsurance(coverage, Ncd, market_price);
72     double gst_charge = ins_amount * gst;
73     double final_amount = ins_amount + gst_charge;
74 >%
75 <fieldset>
76 <legend>Details of Insurance Quotation</legend>
77 <p>IC No: <%=icNo%></p>
78 <p>Customer Name: <%=custName%></p>
79 <p>Market Price: <%=market_price%></p>
80 <p>Coverage Type: <%=coverage%></p>
81 <p>No claim discount (NCD) = <%=Ncd%></p>
82 <p>Insurance amount: <%=String.format("%.2f", ins_amount)%></p>
83 <p>6% GST: <%=String.format("%.2f", gst_charge)%></p>
84 <p>Final amount (with 6% GST): <%=String.format("%.2f", final_amount)%></p>
85 </fieldset>
86 </body>
87 </html>
```



Output:

### Insurance Quotation

Insurance Calculation	
ICNo*	<input type="text" value="6500324114353"/>
Name*	<input type="text" value="Faiz"/>
Market Price*	<input type="text" value="9000"/>
Coverage Type	<input type="text" value="Comprehensive"/>
No claims discount (NCD)	<input type="text" value="10%"/>
<input type="button" value="Submit"/> <input type="button" value="Cancel"/>	

Details of Insurance Quotation
IC No: 6500324114353
Customer Name: Faiz
Market Price: 9000
Coverage Type: Comprehensive
No claim discount (NCD) = 10%
Insurance amount: 0.00
6% GST: 0.00
Final amount(with 6% GST): 0.00

### Reflection

1. What you have learnt from this exercise?  
I have learnt how to use Java Scriplet.
2. List all Java features you used in Java Scriptlet.  
Variable, data type, operator and control statement.

Exercise:

Coding:

## bmiCalculator.jsp

```
1 <!--
2 Document : bmiCalculator
3 Created on : 27 Apr 2024, 8:25:26 am
4 Author : ACER
5 -->
6
7 <%@page contentType="text/html" pageEncoding="UTF-8"%>
8 <!DOCTYPE html>
9 <html>
10 <head>
11 <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
12 <title>BMI Analyzer</title>
13 </head>
14 <body>
15 <fieldset>
16 <legend>BMI Analyzer</legend>
17 <form action="processBmiCalculator.jsp">
18 <table>
19 <tr>
20 <td>
21 <label for="height">Enter your height in(m):</label>
22 </td>
23 <td>
24 <input type="text" id="height" name="height" placeholder="e.g. 1.7" required>
25 </td>
26 </tr>
27 <tr>
28 <td>
29 <label for="weight">Enter your weight in(kg):</label>
30 </td>
31 <td>
32 <input type="text" id="weight" name="weight" placeholder="e.g 60" required>
33 </td>
34 </tr>
35 <tr>
36 <td colspan="2">
37 <button type="submit" value="Submit">Submit</button>
38 <button type="reset" value="Reset">Cancel</button>
39 </td>
40 </tr>
41 </table>
42 </form>
43 </fieldset>
44 </body>
45 </html>
```

## processBmiCalculator.jsp

```
1 <!--
2 Document : processBmiCalculator
3 Created on : 27 Apr 2024, 8:26:27 am
4 Author : ACER
5 -->
6
7 <%@page contentType="text/html" pageEncoding="UTF-8"%>
8 <!DOCTYPE html>
9 <html>
10 <head>
11 <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
12 <title>BMI Analyzer</title>
13 </head>
14 <body>
15 <%
16 double u_height = Double.parseDouble(request.getParameter("height"));
17 double u_weight = Double.parseDouble(request.getParameter("weight"));
18 double bmi = u_weight / (u_height * u_height);
19
20 String category = "";
21 if(bmi > 25){
22 category = "overweight";
23 }
24 else if(bmi > 18.5 && bmi <= 25){
25 category = "optimal";
26 }
27 else{
28 category = "underweight";
29 }
30 %>
31 <fieldset>
32 <legend>Your BMI result</legend>
33 <p>Height: <%=u_height%></p>
34 <p>Weight: <%=u_weight%></p>
35 <p>BMI: <%=String.format("%.2f", bmi)%></p>
36 <p>Your bmi is <%=category%>!</p>
37 </fieldset>
38 </body>
39 </html>
```

Output:

BMI Analyzer

Enter your height in(m):

Enter your weight in(kg):

Your BMI result

Height: 174.0

Weight: 60.0

BMI: 0.00

Your bmi is underweight!