



CSM3023 WEB BASEDAPPLICATIONDEVELOPMENT (K1)

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

SEMESTER 2 2023/2024

LAB 4 – JSP: Scriptlet, Expression &Standard Actions

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Task 1:

Coding:

customer.html

```
customer.html x processCustomer.jsp x currencyConversion.html x processCurrency.jsp x jspParameter.jsp x subjectInfo.jsp x forward.jsp x forwardInfo.jsp x
Source History
1 <!DOCTYPE html>
2 <!--
3 Click nfhs://nfbhost/SystemFileSystem/Template/licenses/license-default.txt to change this license
4 Click nfhs://nfbhost/SystemFileSystem/Template/JSP\_Servlet/Html.html to edit this template
5 -->
6 <html>
7 <head>
8 <title>Using JSP Scripting</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>
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.html

```
customer.html x processCustomer.jsp x currencyConversion.html x processCurrency.jsp x jspParameter.jsp x subjectInfo.jsp x forward.jsp x
Source History
4 Author : user
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_no1 = 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     }else if(cust_type1.equals("2") && quantity1 > 100){
28         out.print("You're entitle " + "25%");%> <br>
29     }else{
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 </body>
37 </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 RM1350.0

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.jsp

```

1 <!DOCTYPE html>
2 <!--
3 Click http://localhost/SystemFndSystem/Templates/licenses/licenses-default.txt to change this license
4 Click http://localhost/SystemFndSystem/Templates/FFF\_Server/fff.html to edit this template
5 -->
6 <html>
7 <head>
8 <title>Arif</title>
9 <meta charset="UTF-8">
10 <meta name="viewport" content="width=device-width, initial-scale=1.0">
11 </head>
12 <body>
13 <!--The FFF Declaration two,FFF Scriptes and FFF Expression in application/</hi><br>
14 <h3>Currency Conversion</h3><br>
15 <form action="processCurrency.jsp">
16 <table>
17 <tr>
18 <td>
19 <input type="text" id="amount" name="amount" placeholder="(in RM)">
20 </td>
21 <td>
22 <select id="currency" name="currency">
23 <option value="1">USD</option>
24 <option value="2">Pound Sterling</option>
25 <option value="3">Euro</option>
26 </select>
27 </td>
28 <td>
29 <button type="submit" value="#submit">Submit</button>
30 <button type="reset" value="#reset">Reset/Cancel</button>
31 </td>
32 </tr>
33 </table>
34 </form>
35 </body>
36 </html>

```

processCurrency.jsp

```

1  <!--
2  Document : processCurrency
3  Created on : 18 May 2024, 1:47:33 am
4  Author : user
5  -->
6
7
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 <!-- Use JSP Declaration tag, JSP Scripts and JSP Expression in application -->
16 <!--
17 //Define constant...
18 final double USD = 4.75;
19 final double SGD = 5.94;
20 final double EURO = 5.09;
21
22 //Define method to perform currency exchange..
23 private double calculateRate(String currency, int amount){
24     double currencyChange=0.00f;
25     switch(currency){
26         case "1":
27             currencyChange = (double)(amount * USD);
28             break;
29         case "2":
30             currencyChange = (double)(amount * SGD);
31             break;
32         case "3":
33             currencyChange = (double)(amount * EURO);
34             break;
35     }
36     return currencyChange;
37 }
38
39 <!--
40 <!--
41 <!--
42 int amount = Integer.parseInt(request.getParameter("amount"));
43 String currencyType = request.getParameter("currency");
44 double result = calculateRate(currencyType, amount);
45 String currencyName = "";
46 switch(currencyType){
47     case "1":
48         currencyName = "USD";
49         break;
50     case "2":
51         currencyName = "SGD";
52         break;
53     case "3":
54         currencyName = "EURO";
55         break;
56 }
57 <!--
58 <!-- Amount in Ringgit Malaysia is <%=amount%> -->
59 <!-- Amount in <%=currencyName%> is <%=String.format("%.2f", result)%> -->
60 </body>
61 </html>

```

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

Currency Conversion

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

Amount in Ringgit Malaysia is 1000

Amount in STG is 5940.00

1. What have you learn from this exercise?

Task 3:

jspParam.jsp

```
Source History jsp:processCustomer.jsp jsp:currencyConversion.jsp jsp:processCurrency.jsp jsp:parameter.jsp jsp:subjectInfo.jsp jsp:forward.jsp jsp:forwardInfo.jsp jsp:insuranceQuotation.jsp jsp:processInsuranceClaim.jsp
1 Document : jsp:parameter
2 Created on : 18 May 2024, 1:49:56 am
3 Author : user
4
5 -->
6
7 <@jsp 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 <!-- Using jsp:include and jsp:param to display information on jsp page</body>
16
17 <@>
18 String sCode = "CRF107";
19 String sSubject = "Web Programming 2";
20 String sCredit = "3(2+1)";
21
22 <!-- Call subjectInfo.jsp page & passing course information to respective parameters -->
23 <jsp:include page="subjectInfo.jsp" flush="true">
24 <jsp:param name="code" value="sCode">
25 <jsp:param name="subject" value="sSubject">
26 <jsp:param name="credit" value="sCredit">
27
28 </jsp:include>
29
30 </body>
31 </html>
```

subjectInfo.jsp

```
customer.html x processCustomer.jsp x currencyConversion.html x processCurrency.jsp x jspParameter.jsp x subjectInfo.jsp x forward.jsp x forwardInfo.jsp x insuranceQuotation.jsp x processInsuranceQuo...
Source History
1 <!--
2 Document : subjectInfo
3 Created on : 18 May 2024, 1:50:55 am
4 Author : user
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>
21
```

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

```
customer.html x processCustomer.jsp x currencyConversion.html x processCurrency.jsp x jspParameter.jsp x subjectInfo.jsp x forward.jsp x forwardInfo.jsp x ins
Source History
1 <!--
2 Document : forward
3 Created on : 18 May 2024, 1:52:38 am
4 Author : user
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>
24
```

forwardInfo.jsp

```

1  <!--
2      Document    : forwardInfo
3      Created on  : 18 May 2024, 1:53:28 am
4      Author     : user
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>
32

```

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

```
Source History processCurrency.jsp x jspParameter.jsp x subjectInfo.jsp x forward.jsp x forwardInfo.jsp x insuranceQuotation.jsp x processInsuranceQuo.jsp x bmiCalculator.jsp x process...

1 <!--
2 Document : InsuranceQuotation
3 Created on : 18 May 2024, 1:54:57 am
4 Author : user
5 -->
6
7 <!DOCTYPE html>
8
9 <html>
10 <head>
11 <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
12 <title>INSURANCE</title>
13 <style>
14 td{
15 padding: 5px;
16 }
17 </style>
18 </head>
19 <body>
20 <h3>Insurance Quotation</h3>
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

```
.ml processCurrency.jsp x jspParameter.jsp x subjectInfo.jsp x forward.jsp x forwardInfo.jsp x insuranceQuotation.jsp x processInsuranceQuo.jsp x bmiCalculator.jsp x ps
Source History
1 <!--
2 Document : processInsuranceQuo
3 Created on : 18 May 2024, 1:57:39 am
4 Author : user
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>LIFE INSURANCE</title>
13 </head>
14 <body>
15 <%
16 final double gst = 0.06;
17
18 private double calcInsurance(String cover, String MCD, int market){
19     double insurance = 0.0;
20     if(cover.equals("Comprehensive")){
21         switch(MCD){
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         }
36         else{
37             switch(MCD){
38                 case "55%":
39                     insurance = 0.012 * market;
40                     break;
41                 case "35%":
42                     insurance = 0.018 * market;
43                     break;
44                 case "25%":
45                     insurance = 0.025 * market;
46                     break;
47                 case "10%":
48                     insurance = 0.033 * market;
49                     break;
50             }
51         }
52     }
53     return insurance;
54 }
55
56 String icNo = request.getParameter("icNo");
57 String custName = request.getParameter("name");
58 int market_price = Integer.parseInt(request.getParameter("market"));
59 String cover_type = request.getParameter("type");
60
61 String coverage = "";
62 switch(cover_type){
63     case "1":
64         coverage = "Third Party";
65         break;
66     case "2":
67         coverage = "Comprehensive";
68         break;
69 }
70
71 String Mcd = request.getParameter("mcd");
72 double ins_amount = calcInsurance(coverage, Mcd, market_price);
73 double gst_charge = ins_amount * gst;
74 double final_amount = ins_amount + gst_charge;
75
76 <%
77 <legend>Details of Insurance Quotation</legend>
78 <p>IC No: <%=icNo%></p>
79 <p>Customer Name: <%=custName%></p>
80 <p>Market Price: <%=market_price%></p>
81 <p>Coverage Type: <%=coverage%></p>
82 <p>No claim discount (MCD) = <%=Mcd%></p>
83 <p>Insurance amount: <%=String.format("%.2f", ins_amount)%></p>
84 <p>6% GST: <%=String.format("%.2f", gst_charge)%></p>
85 <p>Final amount (with 6% GST): <%=String.format("%.2f", final_amount)%></p>
86 </fieldset>
87 </body>
88 </html>
```


Output :

Details of Insurance Quotation

IC No: 041120-01-0865

Customer Name: RyoukiTenkai

Market Price: 40000

Coverage Type: Comprehensive

No claim discount (NCD) = 35%

Insurance amount: 960.00

6% GST: 57.60

Final amount(with 6% GST): 1017.60

Insurance Quotation

Insurance Calculation

ICNo*

041120-01-0865

Name*

RyoukiTenkai

Market Price*

40000

Coverage Type

Comprehensive

No claims discount (NCD)

35%

Submit

Cancel

Reflection

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

Exercise:

Coding

bmiCalculator.jsp

```

1  <!--
2  Document : bmiCalculator
3  Created on : 18 May 2024, 1:59:37 am
4  Author : user
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         <legend>BMI Analyzer</legend>
16         <form action="processBmiCalculator.jsp">
17             <table>
18                 <tr>
19                     <td>
20                         <label for="height">Enter your height in(m):</label>
21                     </td>
22                     <td>
23                         <input type="text" id="height" name="height" placeholder="e.g. 1.7" required>
24                     </td>
25                 </tr>
26                 <tr>
27                     <td>
28                         <label for="weight">Enter your weight in(kg):</label>
29                     </td>
30                     <td>
31                         <input type="text" id="weight" name="weight" placeholder="e.g 60" required>
32                     </td>
33                 </tr>
34                 <tr>
35                     <td>
36                         <button type="submit" value="Submit">Submit</button>
37                         <button type="reset" value="Reset">Cancel</button>
38                     </td>
39                 </tr>
40             </table>
41         </form>
42     </body>
43 </html>
44
45
```

processBmiCalculator.jsp

```
1 <!--
2 Document : processBmiCalculator
3 Created on : 18 May 2024, 2:00:20 am
4 Author : user
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):

Submit

Cancel

Your BMI result

Height: 1.7

Weight: 110.0

BMI: 38.06

Your bmi is overweight!