



UNIVERSITI MALAYSIA TERENGGANU

CSM3023 – WEB BASED APPLICATION DEVELOPMENT

BACHELOR OF COMPUTER SCIENCE (MOBILE COMPUTING) WITH HONORS

LAB 5

SEMESTER II 2023/2024

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TASK 1

Message1

```
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<%@page language="java"%>
<%@page info="Using JSP Standard Action to call JavaBeans"%>
<%@page import="java.util.Date, lab5.com.Message"%>
<!DOCTYPE html>
<html>
  <head>
    <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
    <title>JSP Page</title>
  </head>
  <body>
    <h1>Using JSP Scriptlet to call JavaBeans</h1>
    <%
      Message objMsg = new Message();
      objMsg.setMsg("Welcome to CSF3107 course...!");

      out.println("<p>" + objMsg.getMsg() + "</p>");
      out.println("<p>Current date is " + new java.util.Date() + "</p>");
    %>

  </body>
</html>
```

```
- */
public class Message {
    private String msg;

    public String getMsg() {
        return msg;
    }

    public void setMsg(String msg) {
        this.msg = msg;
    }

}
```

Using JSP Scriptlet to call JavaBeans

Welcome to CSF3107 course...!

Current date is Wed May 08 15:30:12 MYT 2024

Reflection

1. What you have learnt from this exercise?

I know how to call javabeans in the jsp scriptlet

2. Explain the differences when calling JavaBeans using JSP Standard Action and Java Scriptlet.

Javabeans → keeps java code separate from html, making page more organized

Java Scriptlet → embedded java code in the <% %> tag, making it more messy and difficult to undersatnd

TASK 2

registerTraining.jsp

```
<html>  
  <head>  
    <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">  
    <title>JSP Page</title>  
  
  </head>  
  <body>  
    <h1><i>Register IT Training</i></h1>  
    <form action="processTraining.jsp" method="post">  
      <fieldset>  
        <legend>Training Registration</legend>  
  
        <div class="input-space">  
          <label for="icno">IC No: </label>  
          <input type="text" name="icno" placeholder="E.G 911210-05-1234"><br><br>  
        </div>  
  
        <div class="input-space">  
          <label for="name">Name: </label>&nbsp;  <br>  
          <input type="text" name="name" placeholder="Enter Your Name..."><br><br>  
        </div>  
  
        <div class="input-space">  
          <label for="training">Type of Training: </label>&nbsp;  <br>  
          <select name="training">  
            <option value="1">C++ training</option>  
            <option value="2">Java for beginner</option>  
            <option value="3">HTML5</option>  
            <option value="4">Java JEE</option>  
            <option value="5">Android Programming</option>  
            <option value="6">Student</option><br><br>  
          </select><br><br>  
  
          <label for="name">No of Pax </label>  
          <input type="number" name="pax" placeholder="No of pax"><br><br>  
  
          <label>Student: </label>  
          <input type="radio" name="stud" value="yes">  
          <label>Yes</label>  
          <input type="radio" name="stud" value="no">  
          <label>No</label><br><br>  
  
          <input type="submit" name="Submit">  
  
        </div>  
      </fieldset>  
    </form>  
  </body>  
</html>
```

processTraining.jsp

```
<body>
<%
    String icno = request.getParameter("icno");
    String name = request.getParameter("name");
    String type = request.getParameter("training");
    int pax = Integer.parseInt(request.getParameter("pax"));
    boolean stud = request.getParameter("stud").equals("yes");
    double total=0;
    String student, train =null;

    Register regis = new Register(icno, name, type, pax, stud);

    total = regis.calculation();

    if(regis.isStud()){
        student = "Yes";
    }
    else{
        student = "No";
    }

    switch(type){
        case "1":
            train = "C++ training";
            break;
        case "2":
            train = "Java for beginner";
            break;
        case "3":
            train = "HTML5";
            break;
        case "4":
            train = "Java EEE";
            break;
        case "5":
            train = "Android Programming";
            break;
    }
%>

<h1><b>Training Registration Acknowledgement</b></h1>
<h3>IC No: <%= regis.getIcno()%></h3>
<h3>Type of Training: <%= train%></h3>
<h3>Number of Pax: <%= regis.getPax()%>person/s</h3>
<h3>Student: <%= student%></h3>
<h3>Amount Due: RM <%= total%></h3>
</body>
</html>
```

Register IT Training

Training Registration

IC No:

010328020144

Name:

MARLIANTI BT MUF PIARI

Type of Training:

C++ training

No of Pax

5

Student:

☒ Yes ☐ No

Submit

Training Registration Acknowledgement

IC No: 010328020144

Type of Training: C++ training

Number of Pax: 5person/s

Student: Yes

Amount Due: RM 13500.0

Reflection

1. What you have learnt from this exercise?
I learned how to pass value using javabeans to java scriplet
2. Describe the steps how you construct Register JavaBeans?
I declare the variable then make setter and getter then I create method calculation

TASK 4 (1)

```
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<%@taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c"%>
<!DOCTYPE html>
<html>
  <head>
    <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
    <title>Using JSTL tag library</title>
  </head>
  <body>
    <h1>Use JSTL's features</h1>
    <c:set var="message" value="Welcome to CSF3107 - Web Programming courses..!"/>
    <p><c:out value="{message}"/></p>
  </body>
</html>
```

Use JSTL's features

Welcome to CSF3107 - Web Programming courses..!

TASK 4(2)

```
<form action="processUser.jsp" method="post">
<fieldset>
  <legend>User Details</legend>
  <div class="form-group">
    <label for="name">Name:</label>
    <input type="text" id="name" name="name" placeholder="Enter first name">
  </div>
  <div class="form-group">
    <label for="surname">Surname:</label>
    <input type="text" id="surname" name="surname" placeholder="Enter last name">
  </div>
  <div class="form-group">
    <label for="password">Password:</label>
    <input type="password" id="password" name="password" placeholder="Enter password">
  </div>
  <div class="form-group">
    <label>Gender:</label>
    <input type="radio" name="gender" value="male">
    <label>Male</label>
    <input type="radio" name="gender" value="female">
    <label>Female</label>
  </div>
  <div class="form-group">
    <label>Type of User:</label>
    <select name="type">
      <option value="beginner">Beginner</option>
      <option value="intermediate">Intermediate</option>
      <option value="advanced">Advanced</option>
    </select>
  </div>
  <div class="form-group">
    <label>Preferred Language:</label>
    <input type="checkbox" name="lang" value="malay">
    <label>Malay</label>
    <input type="checkbox" name="lang" value="eng">
    <label>English</label>
    <input type="checkbox" name="lang" value="mandarin">
    <label>Mandarin</label>
    <input type="checkbox" name="lang" value="tamil">
    <label>Tamil</label>
  </div>
  <input type="submit" name="Submit">
</fieldset>
</form>

</body>
</html>
```



```

</neau>
<body>
  <h1>Retrieve info using c:out</h1>

  <p>First Name: <c:out value="{param.name}"/></p>
  <p>Surname: <c:out value="{param.surname}"/></p>
  <p>Gender: <c:out value="{param.gender}"/></p>
  <p>Preferred Language: <c:out value="{param.lang}"/></p>
</body>
</html>

```

User Details

Name:

Surname:

Password:

Gender: ☒ Male ☐ Gender

Type of User:

Preferred Language: ☒ Malay ☐ English ☐ Mandarin ☐ Tamil

Retrieve info using c:out

First Name: MARLIANTI

Surname: PIARLIS

Gender: male

Preferred Language: Malay

TASK 4 (3)

```
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<%@taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c"%>
<%@taglib prefix="fmt" uri="http://java.sun.com/jsp/jstl/fmt" %>

<!DOCTYPE html>
<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
<title>JSP Page</title>
</head>
<body>
<h1>Using JSTL formatting tag for formatting</h1>

<c:set var="total" value="2880.4638"/>

<p>Number to be formatted is <c:out value="${total}"/></p>
<p>Format number as currency with currency code : <fmt:formatNumber type="currency" currencyCode="MYR" value="${total}"/></p>
<p>Formatting number to the nearest 2 integer digit : <fmt:formatNumber type="number" maxFractionDigits="2" value="${total}"/></p>
<p>Formatting number by grouping : <fmt:formatNumber type="number" groupingUsed="true" value="${total}"/></p>
<p>Formatting number to 3 decimal places: <fmt:formatNumber type="number" maxFractionDigits="3" value="${total}"/></p>
<p>Formatting number as percentage: <fmt:formatNumber type="percent" maxFractionDigits="2" value="${total}"/></p>
</body>
</html>
```

Using JSTL formatting tag for formatting

Number to be formatted is 2880.4638

Format number as currency with currency code : MYR2,880.46

Formatting number to the nearest 2 integer digit : 2,880.46

Formatting number by grouping : 2,880.464

Formatting number to 3 decimal places: 2,880.464

Formatting number as percentage: 288,046.38%

Reflection

1. What the purpose of using JSTL's tag library?
The purpose is to simplify the creation of JSP page make it reusable tag, clearer and understandable
2. List FIVE(5) categories of JSTL library.
 - Core tag
 - Formatting tag
 - SQL tag
 - XML tag
 - Function tag

TASK 5

```
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<%@taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c" %>
<%@taglib uri="http://java.sun.com/jsp/jstl/fmt" prefix="fmt" %>
<!DOCTYPE html>
<html>
  <head>
    <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
    <title>JSP Page</title>
  </head>
  <body>
    <h1>Using JSTL formatting tag for formatting</h1>
    <c:set var="now" value="<%=new java.util.Date() %%" />

    <p>
      Time (fmt:formatDate type="time"):
      <strong>
        <fmt:formatDate type="time" value="{now}" />
      </strong>
    </p>
    <p>
      Date (fmt:formatDate type="date"):
      <strong>
        <fmt:formatDate type="date" value="{now}" />
      </strong>
    </p>
    <p>
      Date, Time Short (fmt:formatDate type="both" dateStyle="short"):
      <strong>
        <fmt:formatDate type="both" dateStyle="short" timeStyle="short" value="{now}" />
      </strong>
    </p>
    <p>
      Date, Time Medium (fmt:formatDate type="both" dateStyle="medium" timeStyle="medium"):
      <strong>
        <fmt:formatDate type="both" dateStyle="medium" timeStyle="medium" value="{now}" />
      </strong>
    </p>

    <p>
      Date, Time (dd-MM-yyyy HH:mm:ss):
      <strong>
        <fmt:formatDate pattern="dd-MM-yyyy HH:mm:ss" value="{now}" />
      </strong>
    </p>
    <p>
      Now String (dd-MM-yyyy HH:mm):
      <strong>
        <c:out value="{nowString}" />
      </strong>
    </p>
  </body>
</html>
```

Using JSTL formatting tag for formatting

Time (fmt:formatDate type="time"): **12:37:18 AM**

Date (fmt:formatDate type="date"): **May 17, 2024**

Date, Time Short (fmt:formatDate type="both" dateStyle="short"): **5/17/24, 12:37 AM**

Date, Time Medium (fmt:formatDate type="both" dateStyle="medium" timeStyle="medium"): **May 17, 2024, 12:37:18 AM**

Date, Time Long (fmt:formatDate type="both" dateStyle="long" timeStyle="long"): **May 17, 2024 at 12:37:18 AM MYT**

Date, Time (dd-MM-yyyy HH:mm:ss): **17-05-2024 00:37:18**

Now String (dd-MM-yyyy HH:mm):

Reflection

1. What you have learnt from this exercise?

I learned how to write formatDate and make a output about date and time using taglib formatting

EXERCISE 1

```
<html>
  <head>
    <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
    <title>JSP Page</title>
  </head>
  <body>
    <h2>Circle Calculator</h2>
    <form action="circleResult.jsp" method="post">
      <label for="radius">Enter the radius of the circle:</label>
      <input type="number" id="radius" name="radius" required step="any">
      <br>
      <input type="submit" value="Calculate">
    </form>
  </body>
</html>
```

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
    pageEncoding="UTF-8"%>
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c" %>
<%@ taglib uri="http://java.sun.com/jsp/jstl/fmt" prefix="fmt" %>
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>Circle Result</title>
</head>
<body>
  <h2>Circle Result</h2>
  <c:set var="radius" value="${param.radius}" />

  <c:set var="area" value="${3.141 * radius * radius}" />
  <c:set var="perimeter" value="${2 * 3.141 * radius}" />

  <!-- Format the results to 3 decimal places -->
  <p>Area: <fmt:formatNumber value="${area}" type="number" pattern="0.000" /></p>
  <p>Perimeter: <fmt:formatNumber value="${perimeter}" type="number" pattern="0.000" /></p>
</body>
</html>
```

Circle Calculator

Enter the radius of the circle:

Circle Result

Area: 7852.500

Perimeter: 314.100

EXERCISE 2

```
[ <head>
    <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
    <title>JSP Page</title>
- </head>
[ <body>
    <h1>Result Stock Translation</h1>

    <c:set var="shares" value="{800}"/>

    <c:set var="amount" value="{shares * 10.5}"/>
    <c:set var="comm" value="{amount * 0.05}"/>
    <c:set var="total" value="{amount + comm}"/>

    <p>Number of shares: <fmt:formatNumber value="{amount}"/></p>
    <p>Amount of commission: RM<fmt:formatNumber value="{comm}"/></p>
    <p>Total amount paid: RM<fmt:formatNumber value="{total}"/></p>
- </body>
- </html>
```

Result Stock Translation

Number of shares: 8,400

Amount of commission: RM420

Total amount paid: RM8,820