

Lesson 01 Demo 02

JSP Tags

Objective: To explore various JSP tags within a web application using Eclipse IDE

Tools Required: Eclipse IDE

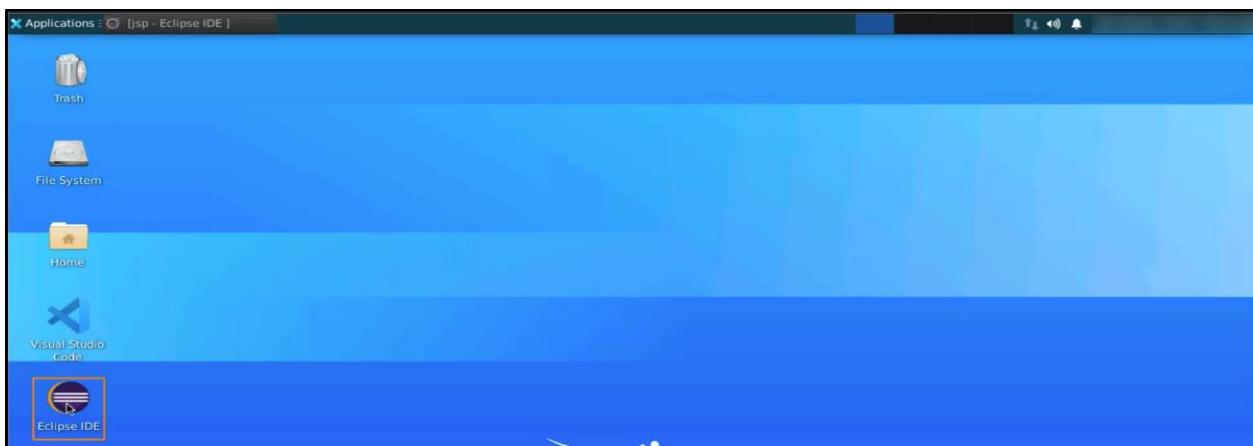
Prerequisites: None

Steps to be followed:

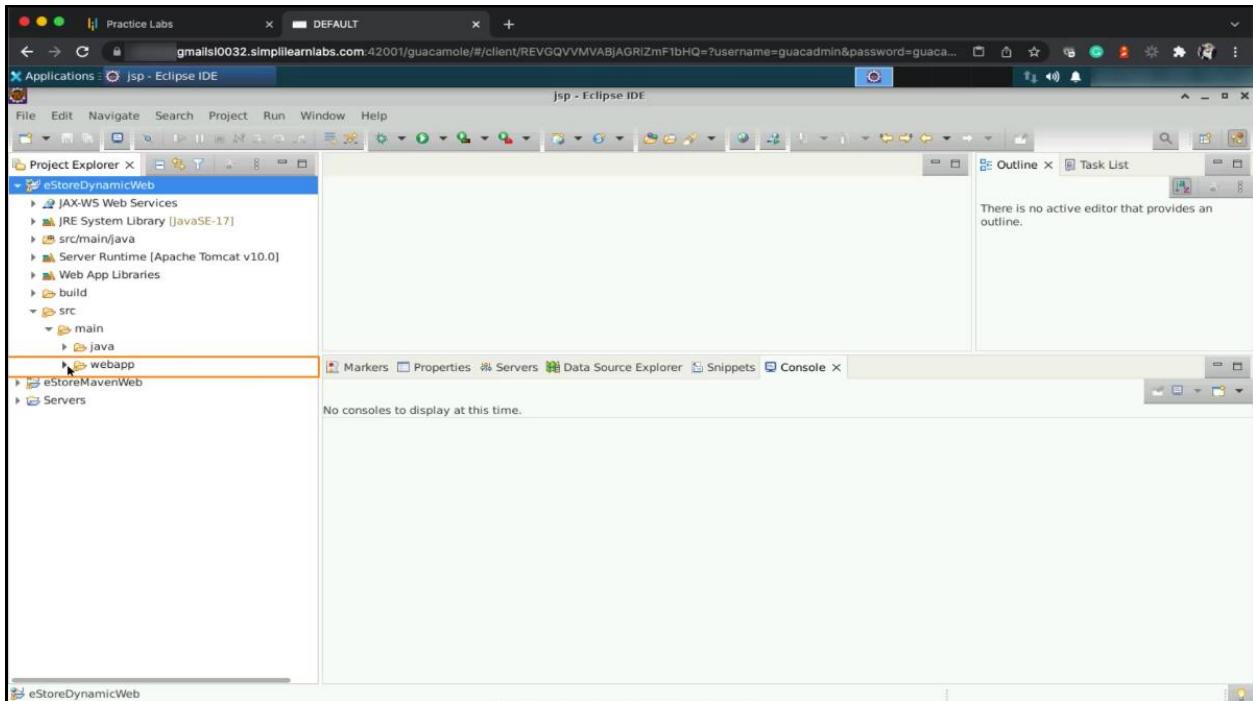
1. Create a new JSP file
2. Create an anchor tag to link tags.jsp file
3. Create a declarative tag
4. Copy the tags.jsp file to eStoreMavenWeb project

Step 1: Create a new JSP file

- 1.1 Open the Eclipse IDE in your lab



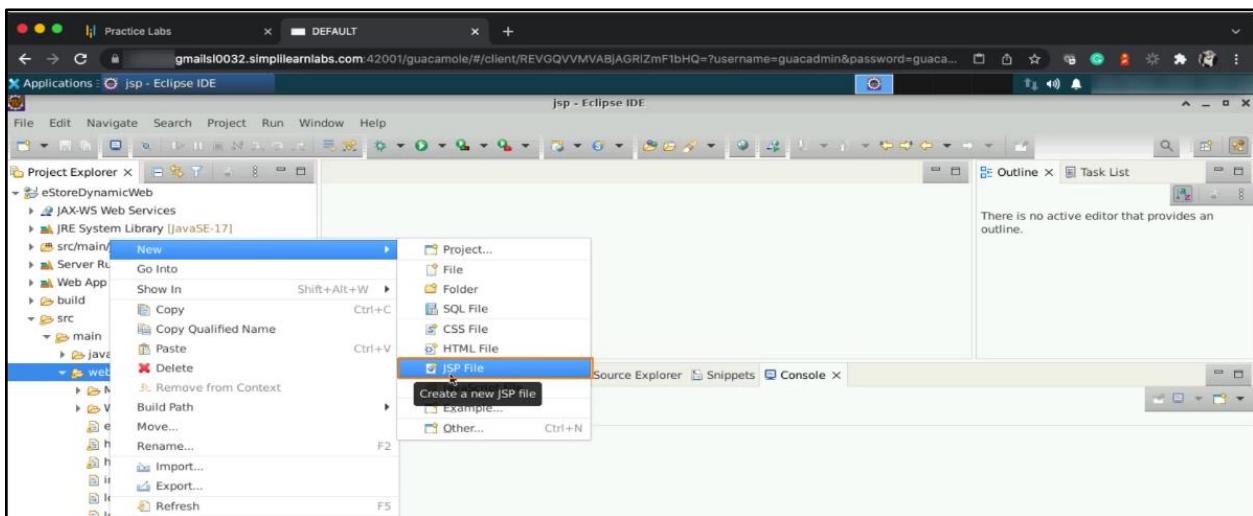
1.2 In the **eStoreDynamicWeb** project, navigate to the **webapp** folder



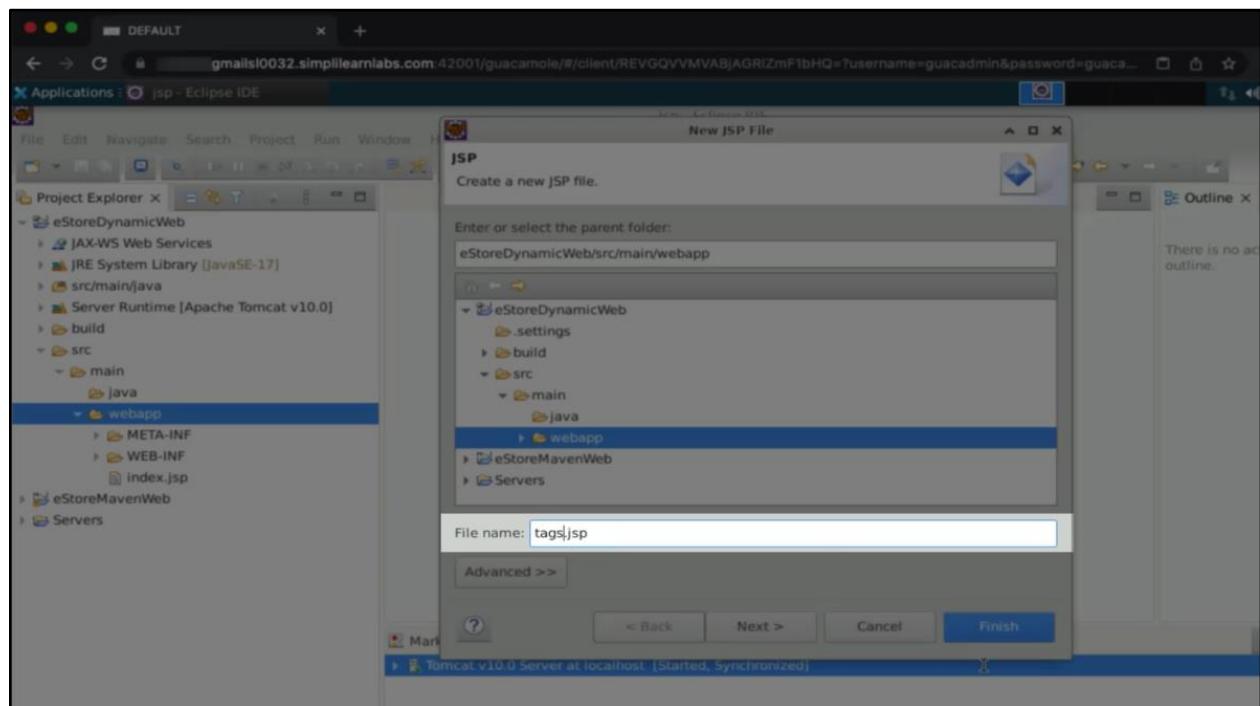
Note: Please refer to the previous demo on how to create the **eStoreDynamicWeb** project

1.3 Follow the path below to create a new JSP file:

New->JSP File



1.4 Name the JSP file as **tags.jsp** and click **Finish**



This is how the page will look:

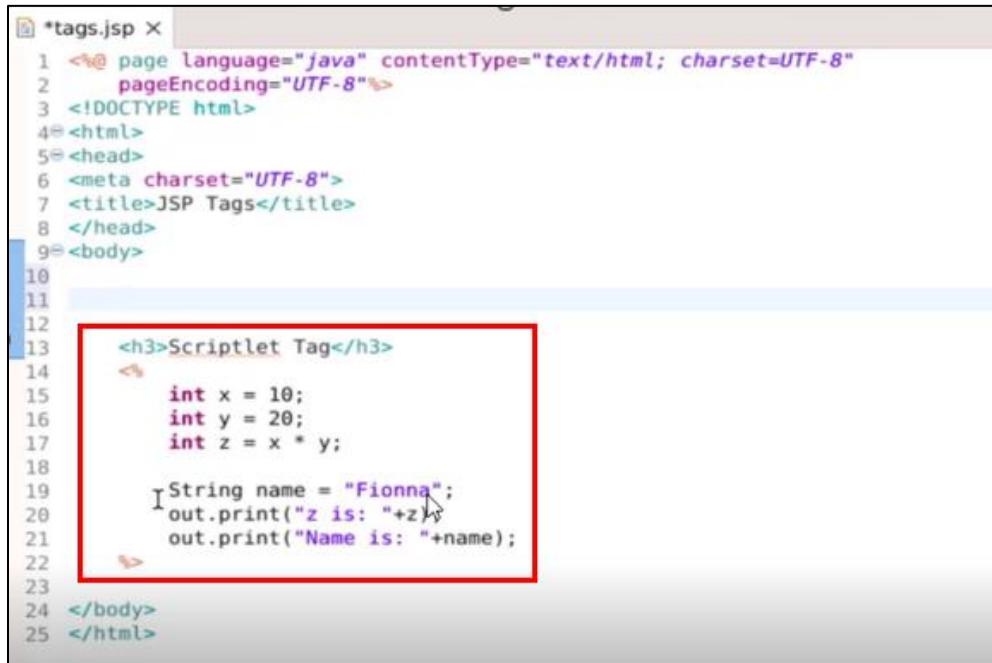
A screenshot of the Eclipse IDE code editor. The window title is 'Applications : jsp - eStoreDynamicWeb...'. The code editor displays the 'tags.jsp' file. The content of the file is as follows:

```
1 <%@ page language="java" contentType="text/html; charset=UTF-8"
2     pageEncoding="UTF-8"%>
3 <!DOCTYPE html>
4 <html>
5 <head>
6 <meta charset="UTF-8">
7 <title>Insert title here</title>
8 </head>
9 <body>
10
11 </body>
12 </html>
```

The code editor has a toolbar with various icons above it. The status bar at the bottom shows 'jsp - eStoreDynamicWeb/src/main/webapp/tags.jsp - Eclipse IDE'.

Step 2: Create an anchor tag to link tags.jsp file

2.1 Add an **h3** tag and code to print the name and multiple of two numbers

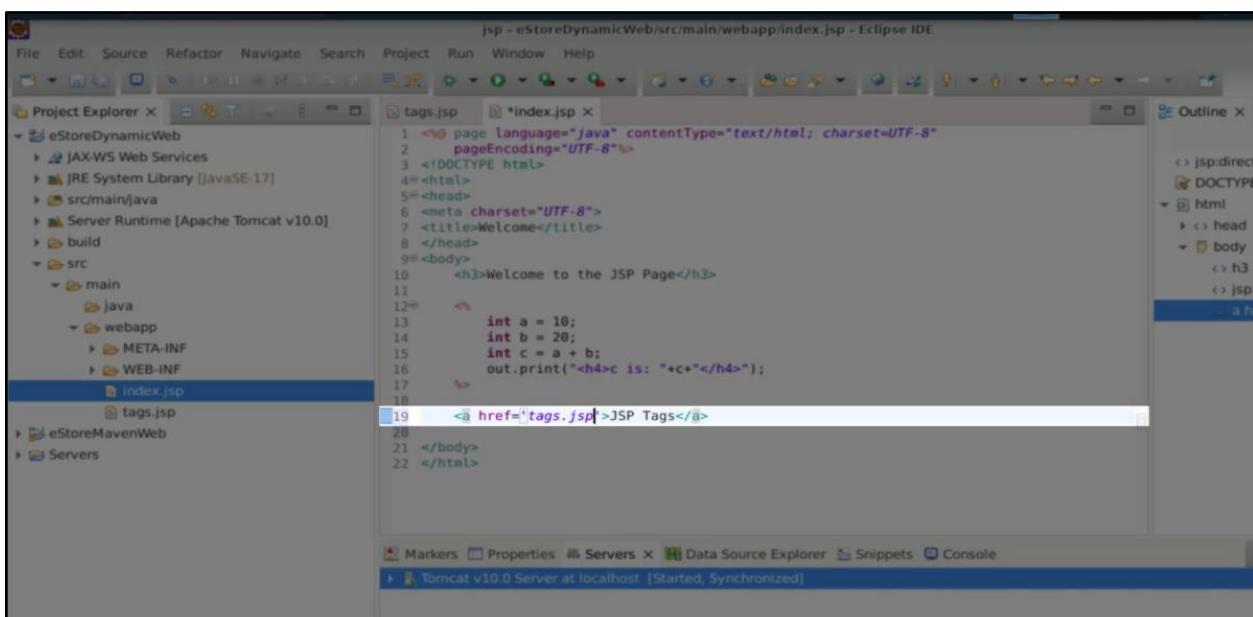


```

1 <%@ page language="java" contentType="text/html; charset=UTF-8"
2     pageEncoding="UTF-8"%>
3 <!DOCTYPE html>
4<html>
5<head>
6 <meta charset="UTF-8">
7 <title>JSP Tags</title>
8 </head>
9<body>
10
11
12
13 <h3>Scriptlet Tag</h3>
14 <%
15     int x = 10;
16     int y = 20;
17     int z = x * y;
18
19     String name = "Fionna";
20     out.print("z is: "+z);
21     out.print("Name is: "+name);
22 %>
23
24 </body>
25 </html>

```

2.2 Now, go to the **index.jsp** file and create an anchor tag and link it to the **tags.jsp** file



```

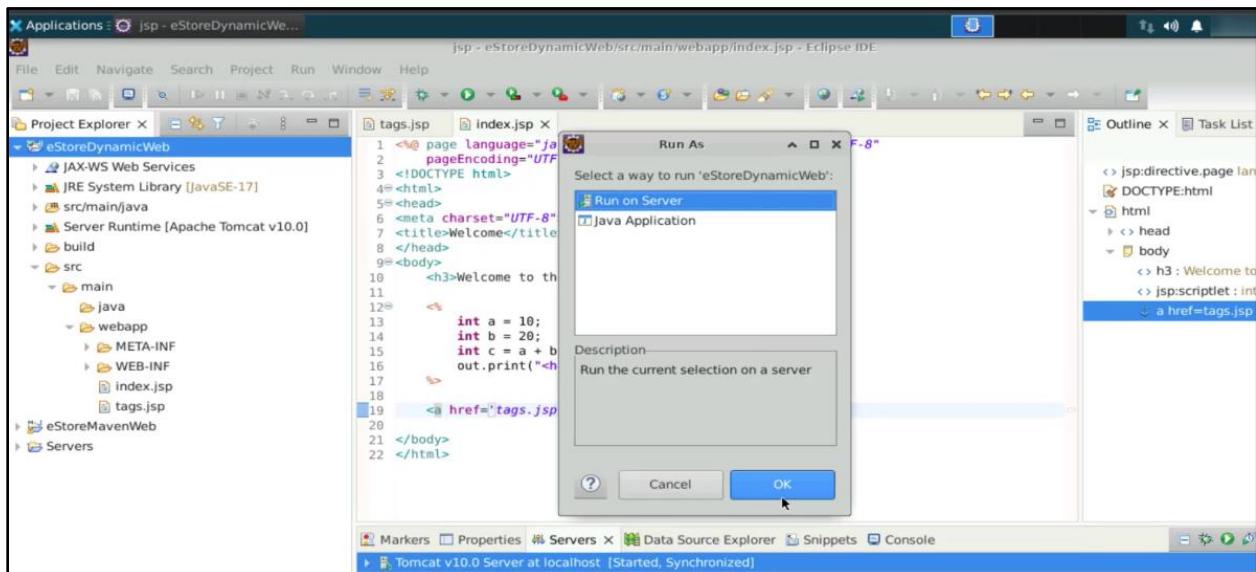
File Edit Source Refactor Navigate Search Project Run Window Help
Project Explorer tags.jsp *index.jsp Outline
eStoreDynamicWeb
  JAX-WS Web Services
  JRE System Library [JavaSE-17]
  src/main/java
  Server Runtime [Apache Tomcat v10.0]
  build
  src
    main
      java
      webapp
        META-INF
        WEB-INF
          index.jsp
          tags.jsp
  eStoreMavenWeb
  Servers

tags.jsp
1 <%@ page language="java" contentType="text/html; charset=UTF-8"
2     pageEncoding="UTF-8"%>
3 <!DOCTYPE html>
4<html>
5<head>
6 <meta charset="UTF-8">
7 <title>Welcome</title>
8 </head>
9<body>
10   <h3>Welcome to the JSP Page</h3>
11
12 <%
13     int a = 10;
14     int b = 20;
15     int c = a + b;
16     out.print("<h4>c is: "+c+"</h4>");
17 %>
18
19   <a href="tags.jsp">JSP Tags</a>
20
21 </body>
22 </html>

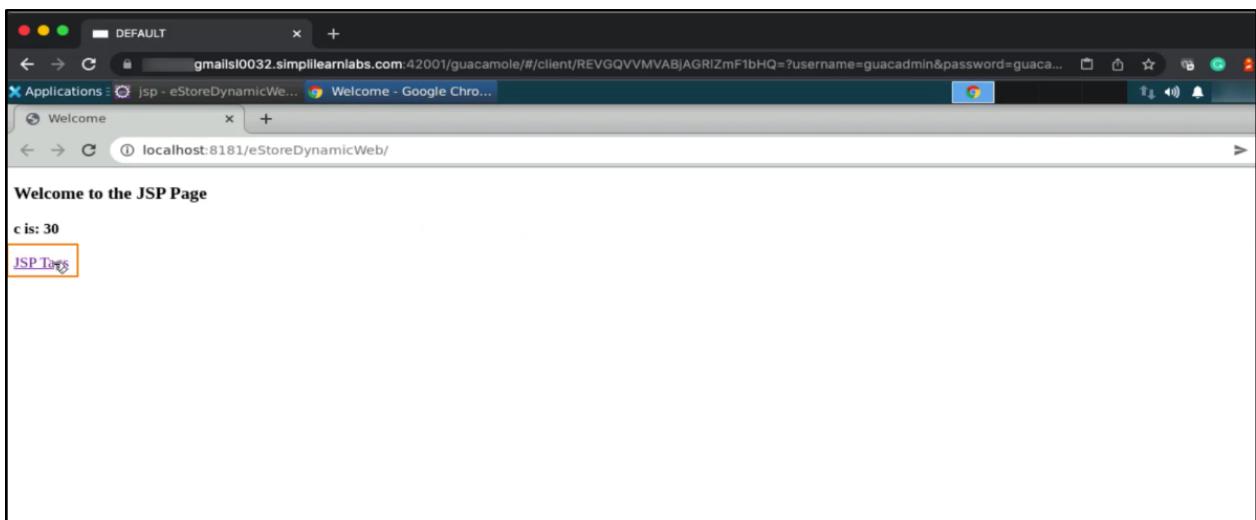
Markers Properties Servers Data Source Explorer Snippets Console
Tomcat v10.0 Server at localhost. [Started, Synchronized]

```

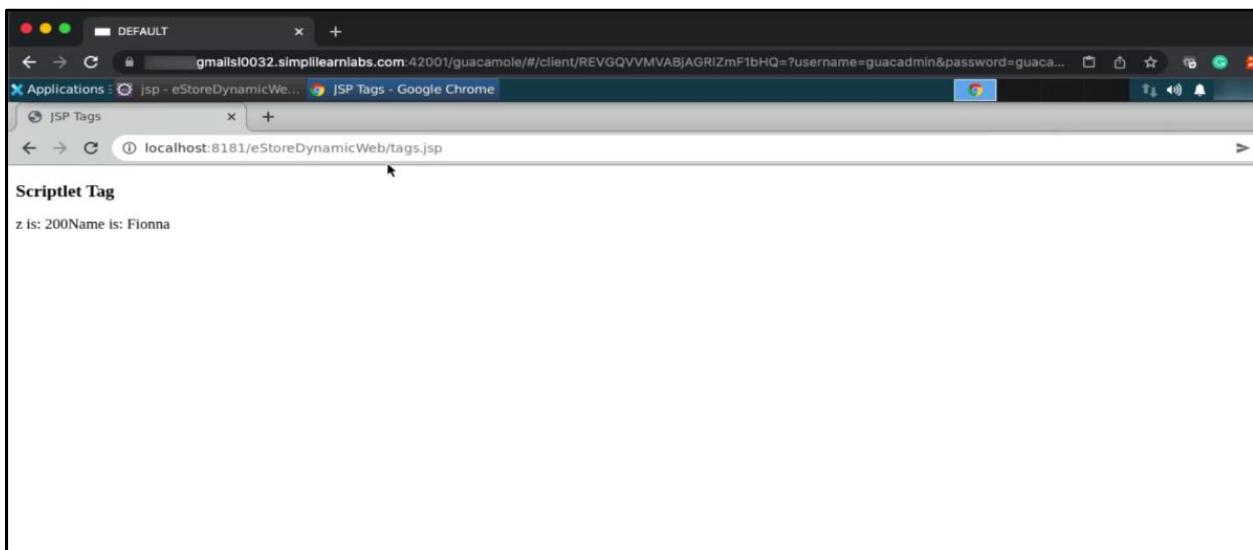
2.3 Select the project, then follow the path Run As->Run on Server->Finish:



You should get the below output:

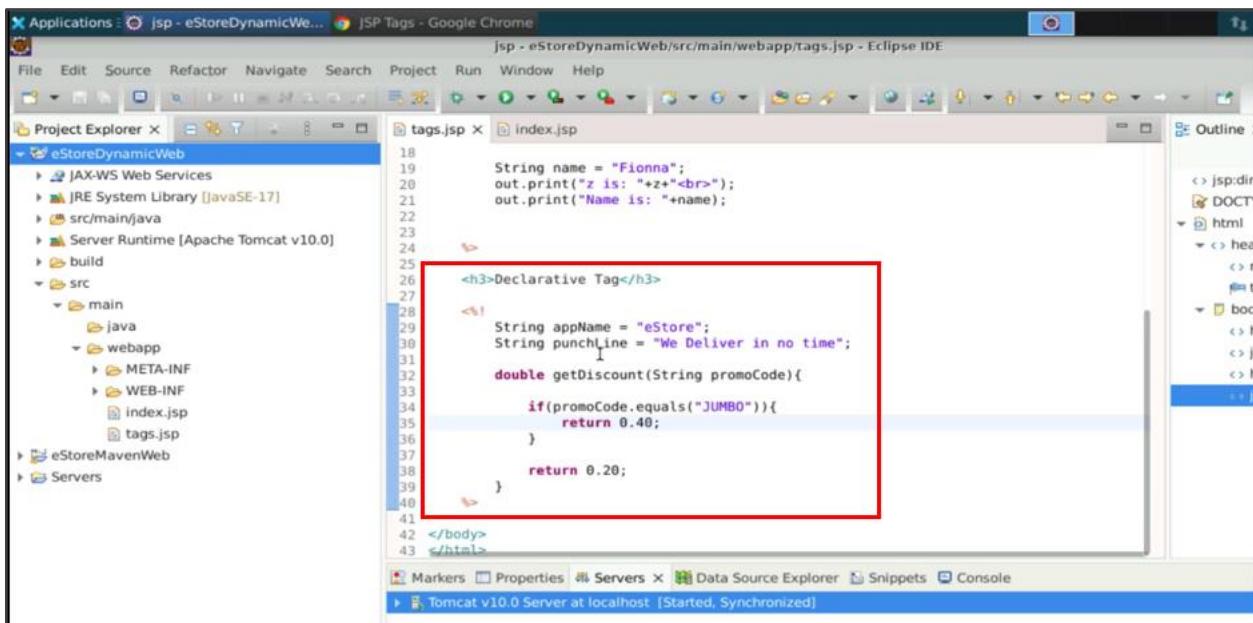


2.4 Click on the JSP Tags link and the following output can be seen:



Step 3: Create a declarative tag

3.1 Add a declarative tag in the **tags.jsp** file and write the necessary code logic to apply a 40% discount when the **JUMBO** promo code is applied



3.2 Write additional lines of code in `tags.jsp` file to display `AppName`, `Discount`, and `headers` between each section using an `h3` tag

```

1 <%@ page language="java" contentType="text/html; charset=UTF-8"
2   pageEncoding="UTF-8"%>
3 <!DOCTYPE html>
4 <html>
5 <head>
6 <meta charset="UTF-8">
7 <title>JSP Tags</title>
8 </head>
9 <body>
10 <h3>Accessing elements from Declarative Tag in Beginning of the Page</h3>
11 <%>
12   out.print("AppName: "+appName+"<br>");
13   out.print(punchLine+"<br>");
14   out.print("Discount: "+getDiscount("JUMBO")+"<br>");
15 <%>
16 <h3>Scriptlet Tag</h3>
17 <%>
18   int x = 10;
19   int y = 20;
20   int z = x * y;
21 
22   String name = "Fionna";
23   out.print("z is: "+z+"<br>");
24   out.print("Name is: "+name);
25 <%>
26 
```

3.3 Refresh the browser and observe the output

Accessing elements from Declarative Tag in Beginning of the Page

AppName: eStore
We Deliver in no time
Discount: 0.4

Scriptlet Tag

z is: 200
Name is: Fionna

Declarative Tag

Step 4: Copy the tags.jsp file to eStoreMavenWeb project

4.1 Copy the **tags.jsp** file and paste it in the **webapp** folder under the **eStoreMavenWeb** project

```

tags.jsp
1: <%>
2: int y = 20;
3: int z = x * y;
4:
5: String name = "Fionna";
6: out.print("z is: "+z+"<br>");
7: out.print("Name is: "+name);
8:
9: <h3>Declarative Tag</h3>
10:
11: <%!
12:     String appName = "eStore";
13:     String punchLine = "We Deliver in no time";
14:
15:     double getDiscount(String promoCode){
16:
17:         if(promoCode.equals("JUMBO")){
18:             return 0.40;
19:         }
20:
21:         return 0.20;
22:     }
23:
24: %>
25:
26: <h3>Expression Tag</h3>
27:
28: <%>
29:
30: <h3>Scriptlet Tag</h3>
31:
32: <%!
33:     String appName = "eStore";
34:     String punchLine = "We Deliver in no time";
35:
36:     double getDiscount(String promoCode){
37:
38:         if(promoCode.equals("JUMBO")){
39:             return 0.40;
40:         }
41:
42:         return 0.20;
43:     }
44:
45: %>
46:

```

Note: Please refer to the previous demo on how to create the **eStoreMavenWeb** project

```

tags.jsp
1: <%>
2: int y = 20;
3: int z = x * y;
4:
5: String name = "Fionna";
6: out.print("z is: "+z+"<br>");
7: out.print("Name is: "+name);
8:
9: <h3>Declarative Tag</h3>
10:
11: <%!
12:     String appName = "eStore";
13:     String punchLine = "We Deliver in no time";
14:
15:     double getDiscount(String promoCode){
16:
17:         if(promoCode.equals("JUMBO")){
18:             return 0.40;
19:         }
20:
21:         return 0.20;
22:     }
23:
24: %>
25:
26: <h3>Expression Tag</h3>
27:
28: <%>
29:
30: <h3>Scriptlet Tag</h3>
31:
32: <%!
33:     String appName = "eStore";
34:     String punchLine = "We Deliver in no time";
35:
36:     double getDiscount(String promoCode){
37:
38:         if(promoCode.equals("JUMBO")){
39:             return 0.40;
40:         }
41:
42:         return 0.20;
43:     }
44:
45: %>
46:

```

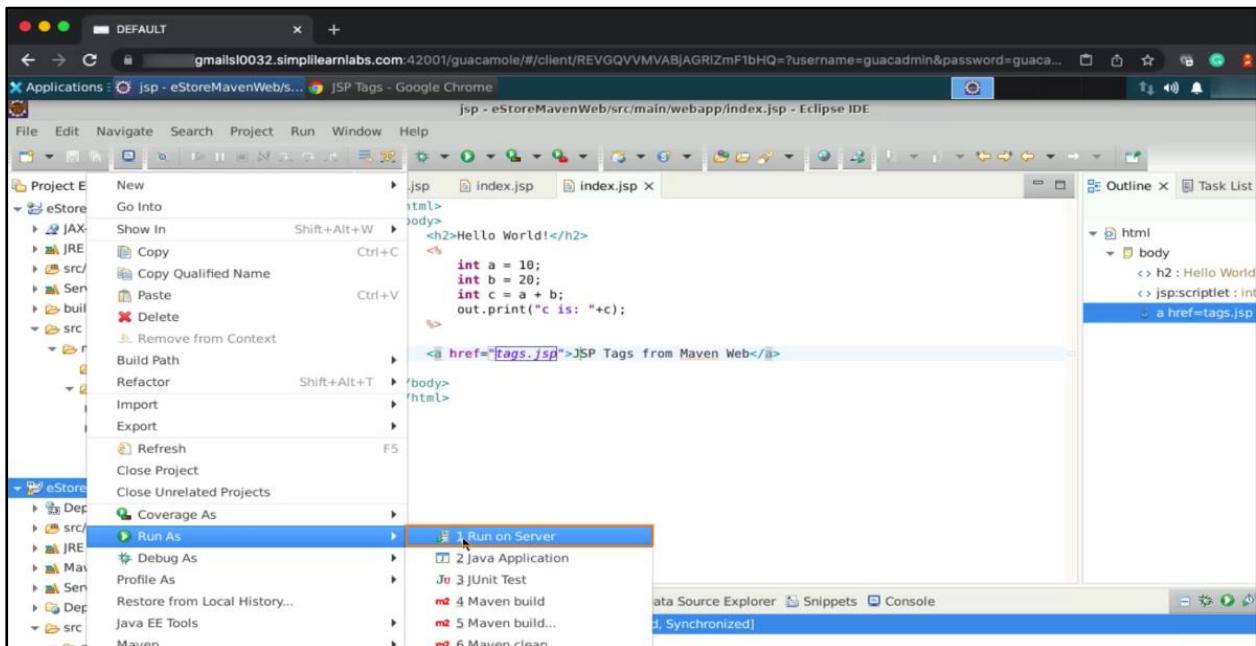
4.2 Open the `index.jsp` file, create an anchor tag, and link it to the `tags.jsp` file

```

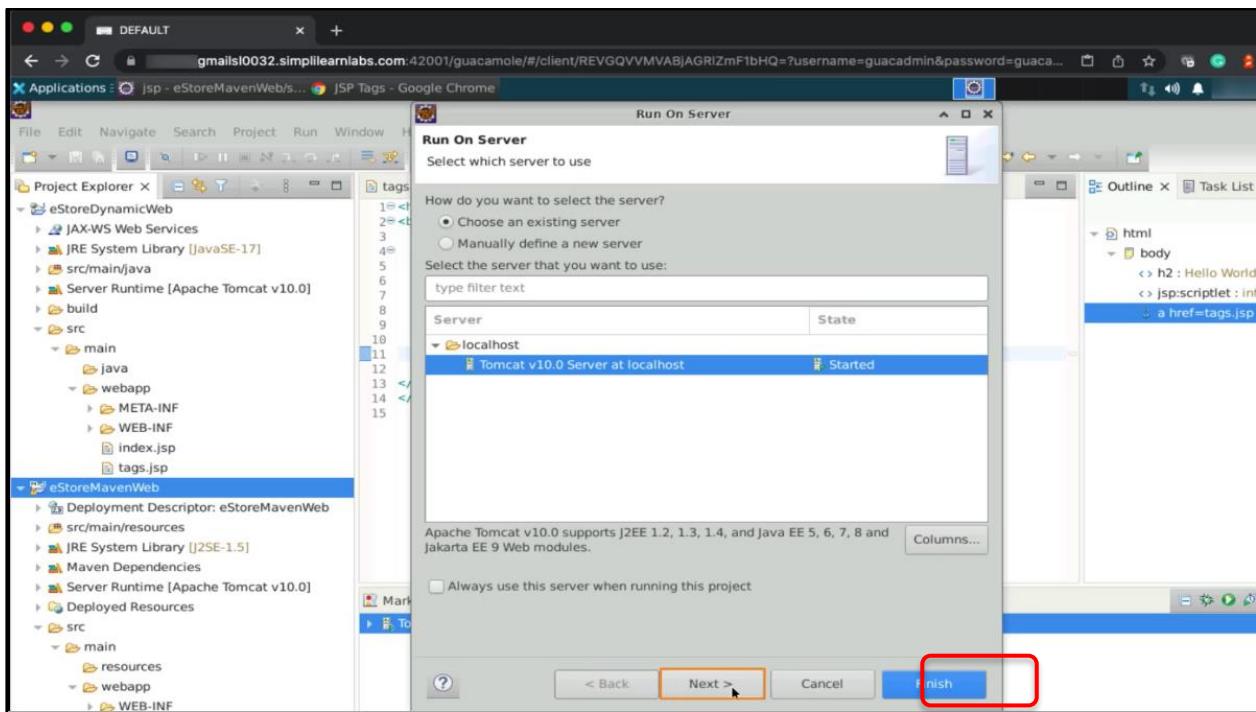
1<html>
2<body>
3    <h2>Hello World!</h2>
4<%>
5    int a = 10;
6    int b = 20;
7    int c = a + b;
8    out.print("c is: "+c);
9<%>
10
11    <a href="tags.jsp">JSP Tags from Maven Web</a>
12
13 </body>
14 </html>
15

```

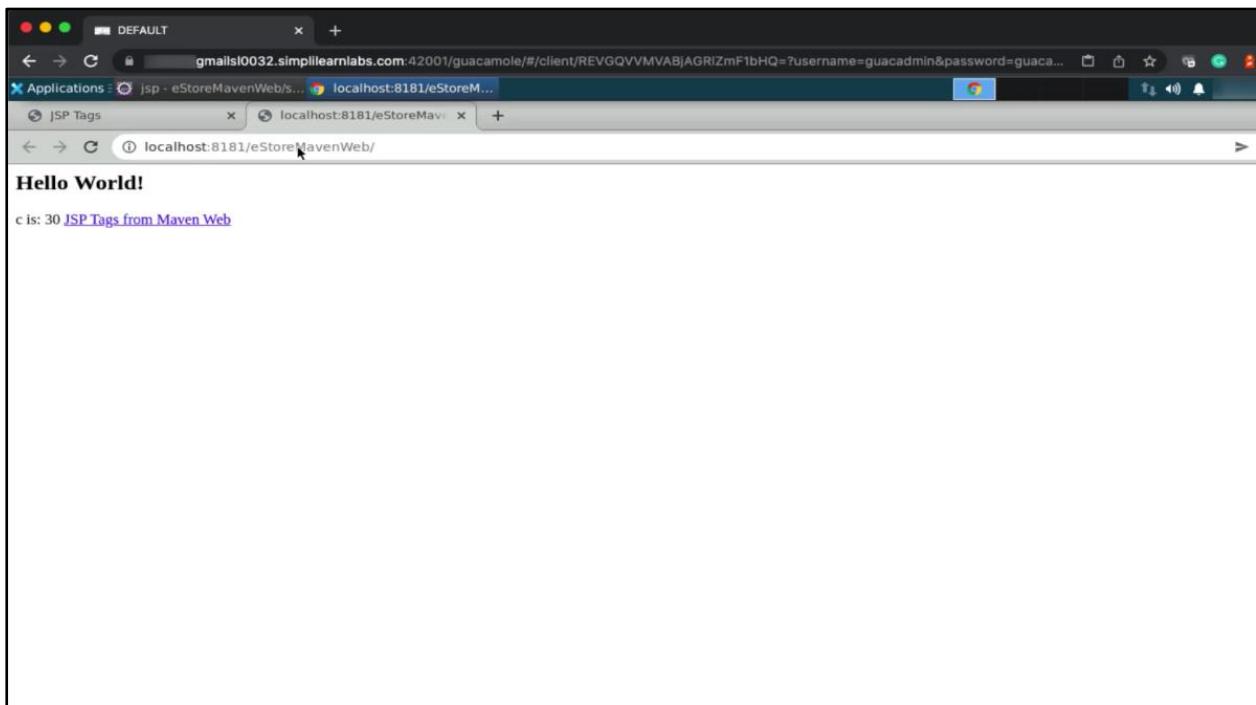
4.3 Right-click on the project then follow the path **Run As->Run on Server**



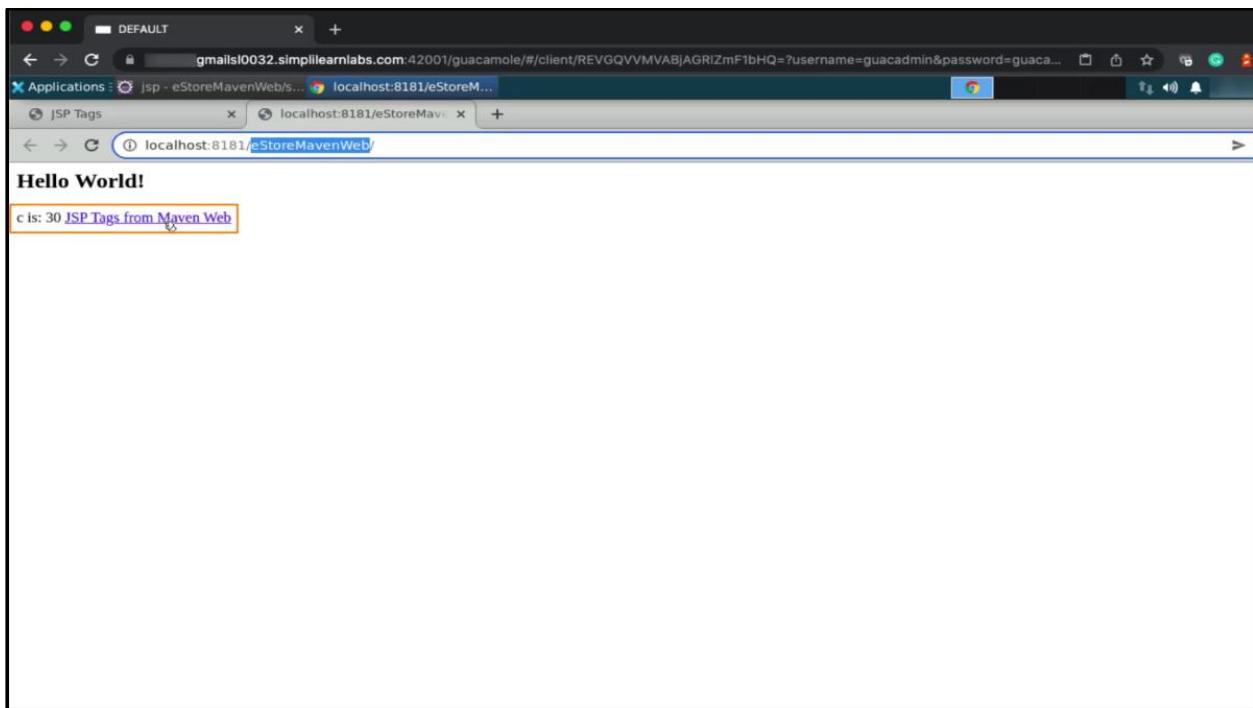
4.4 Select the Tomcat Server, click **Next**, and then click **Finish**



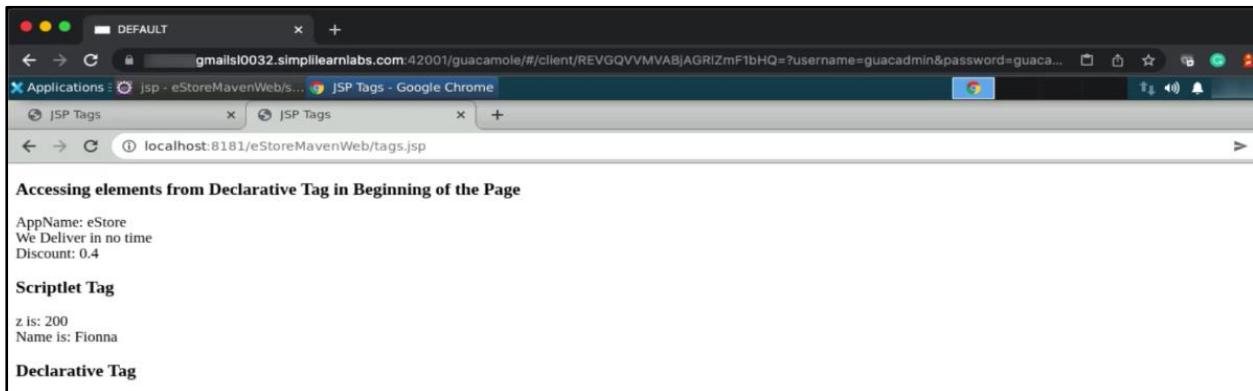
The following output can be seen:



4.5 Click on the JSP Tags from Maven Web link



The output will appear as shown below:



Following these steps, you have successfully explored different JSP tags in a web application using Eclipse IDE.