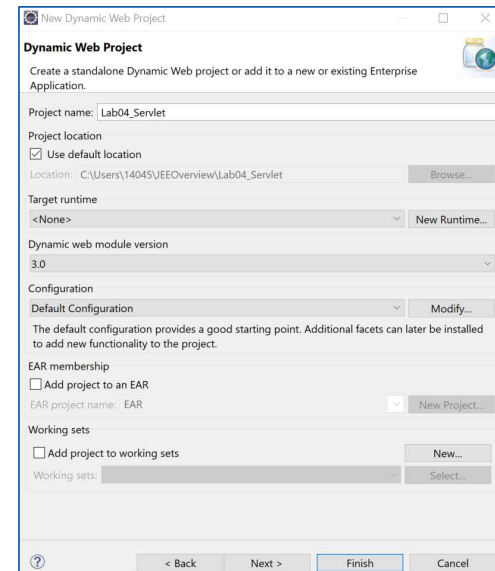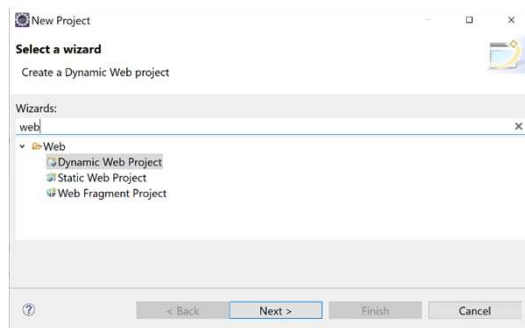# Lab 4 – Servlets

- **Launch Eclipse selecting a default workspace**
- **Create a new Dynamic Web Project**
  - Use the menu bar to select a new project (Files>New>Project…)
  - Search for Dynamic Web Project in the search bar, select the Dynamic Web Project and then "Next >"
  - Enter "Lab04_Servlet as the Project Name and then select "Finish >" [1]

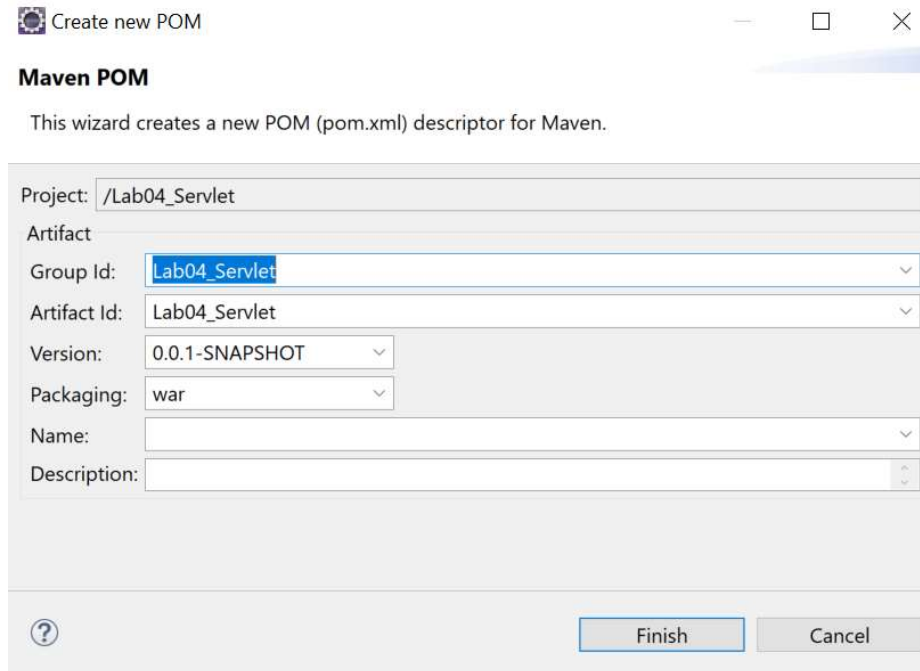 - Open the EE perspective if prompted (otherwise select Window>Perspective>Open Perspective>Java EE to open the EE perspective)

Lab 4 – Servlets

Convert the project to a Maven project

- Within the Project Explorer, configure the project as a Maven project (right click on the project> Configure>Convert to Maven Project)
- Within the Create new POM window, select Finish to convert the project

Lab 4 – Servlets

Add the Servlet API maven dependency to the pom.xml file

- Open the pom.xml file and add the following (immediately before the Build tag):

```
<dependencies>
        <dependency>
                <groupId>org.apache.tomcat</groupId>
                <artifactId>tomcat-servlet-api</artifactId>
                <version>9.0.1</version>
        </dependency>
</dependencies>
```
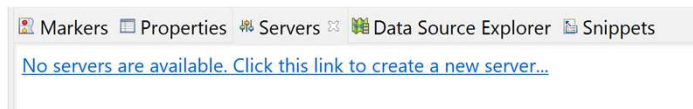
- Save the pom.xml file
- Update the Maven Project
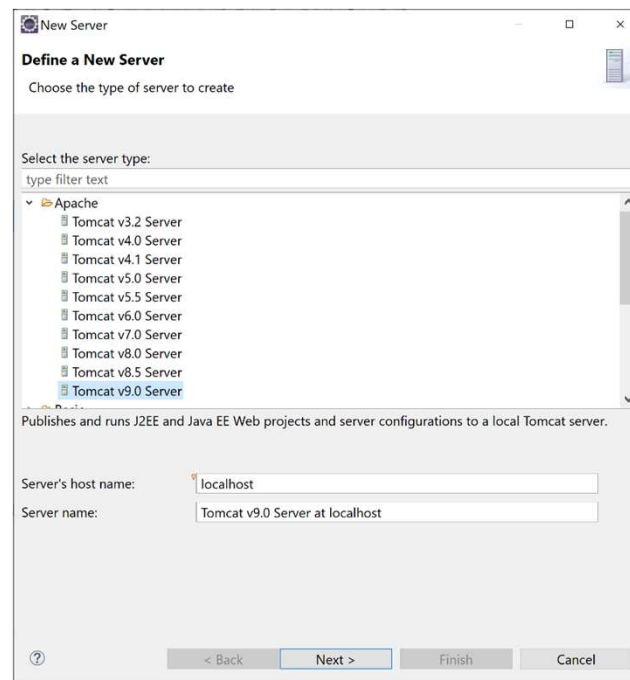 - ✓ Within the Explorer window, right click on the project > Maven > Update Project

Lab 4 – Servlets

- **Add a Server (if it doesn't already exist)**
  - Within the server tab, click on "Click this link to create a new server…" (if this window isn't visible, then use the menu bar to make it visible Window>Show Window>Servers…

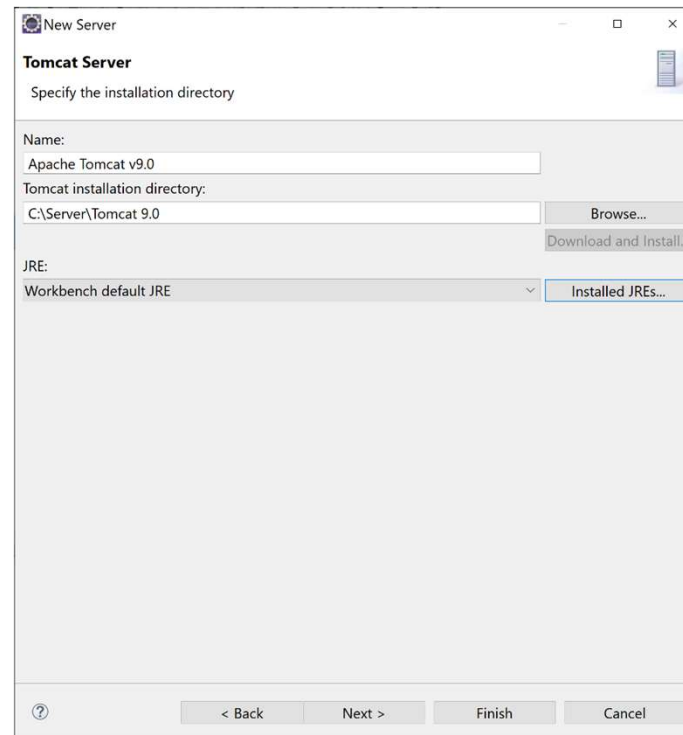 - Within the New Server window, select Apache>Tome v9.0 Server and then select "Next >"

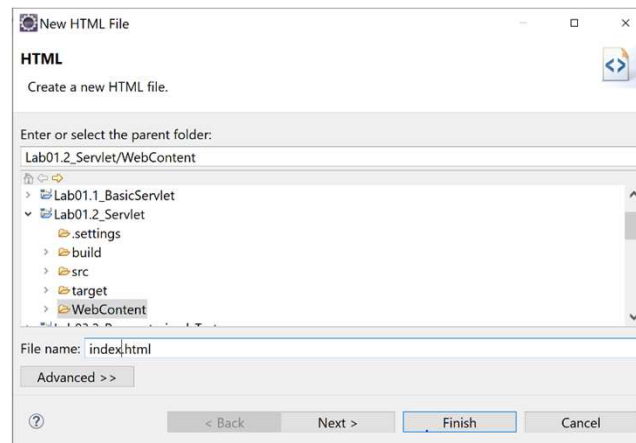# Lab 4 – Servlets

Add a Server

- Within the New Server window, use Browse… to locate and set the Tomcat Installation directory [1]
- Select "Finish" to create the Tomcat Server

Lab 4 – Servlets

Create an HTML starting page

- Within the Project Explorer, right click on WebContent, select New>HTML
- Within the New HTML file window, enter a File name of "index.html" and select "Finish"
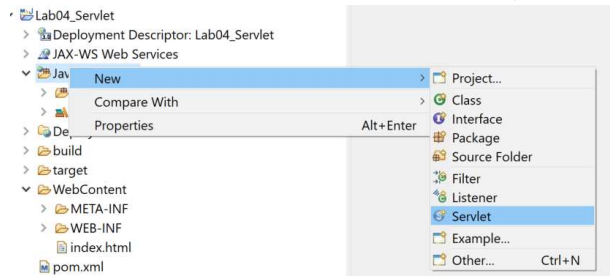
Lab 4 – Servlets

Edit the index.html file and add a hyperlink to pass a first_name and a last_name as parameters using a GET method (which is the default)

```html
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Insert title here</title>
</head>
<body>
<a href="Home?first_name=tony&last_name=stark">Click Me</a>
</body>
</html>
```
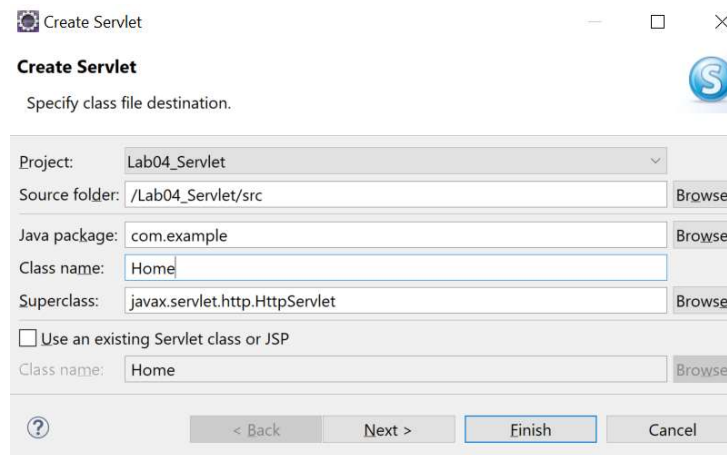
Lab 4 – Servlets

Create a Servlet

- Within the Project Explorer right click on the Java Resources, select New>Servlet

- Within the Create Servlet window enter a Java package name of "com.example", enter a Class name of "Home", and then select "Finish"
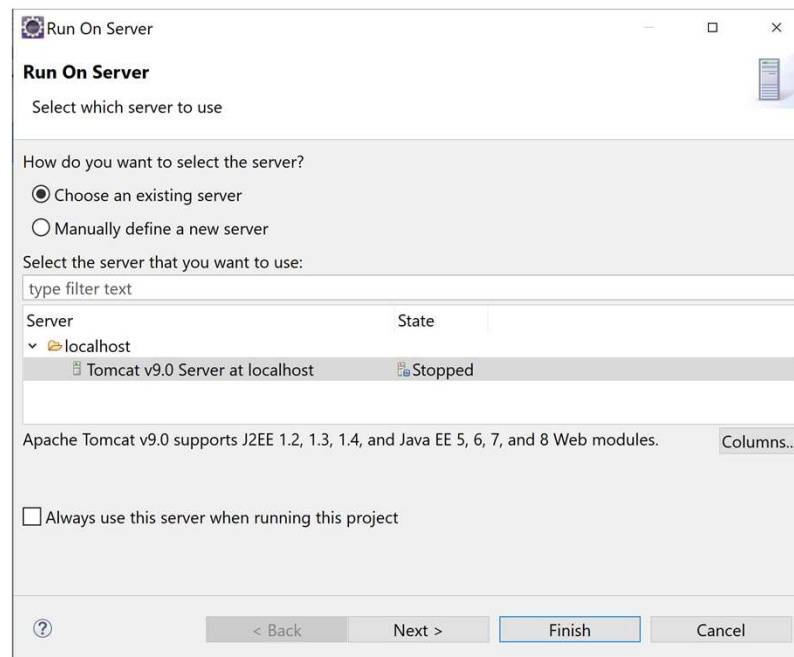
Lab 4 – Servlets

Edit the Servlet file and modify the doGet method to read the first_name and last_name, and output their values

```
protected void doGet(HttpServletRequest request, HttpServletResponse response)
throws ServletException, IOException {
    response.setContentType("text/html");
    PrintWriter out = response.getWriter();
    String first_name = request.getParameter("first_name");
    String last_name = request.getParameter("last_name");
    out.println( "<!DOCTYPE html>\n<html>\n" +
        "<head><title>Process Servlet Parameters</title></head>\n" +
        "<body>\n" +
            "<ul>\n" +
            "   <li><b>First Name</b>: " + first_name + "\n" +
            "   <li><b>Last Name</b>: " + last_name + "\n" +
            "</ul>\n" +
        "</body>" +
    "</html>");
}
```

Lab 4 – Servlets

- **Use an external Web Browser (if not already configured)**
  - On the menu bar select Window>Web Browser > Chrome if it exists or anything other than Internal Web Browser [1]
- **Run the index.html on Tomcat**
  - Within the Project Explorer window, right click on the index.html file and select Run>Run on Server
  - Confirm that Tomcat v9.0 Server at localhost is selected and then select "Finish"

Lab 4 – Servlets

Confirm that something similar to the following is displayed in an external Web Browser after the "Click Me" hyperlink is selected in the Web Browser