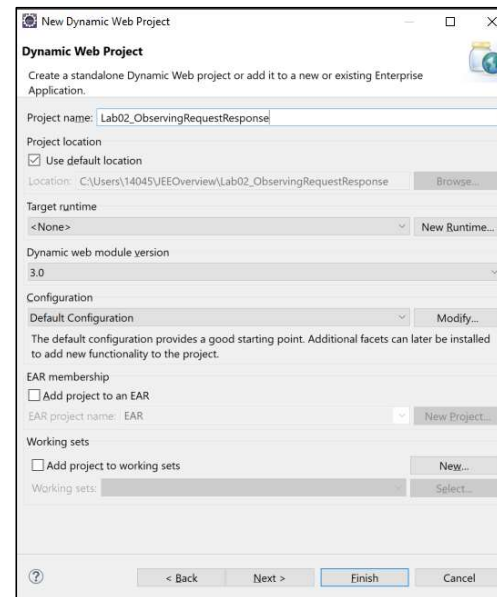
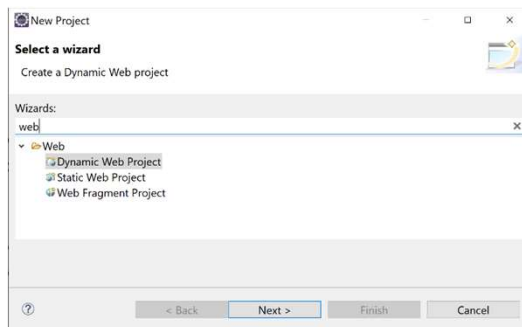


Lab 2 - Observing a Request and Response

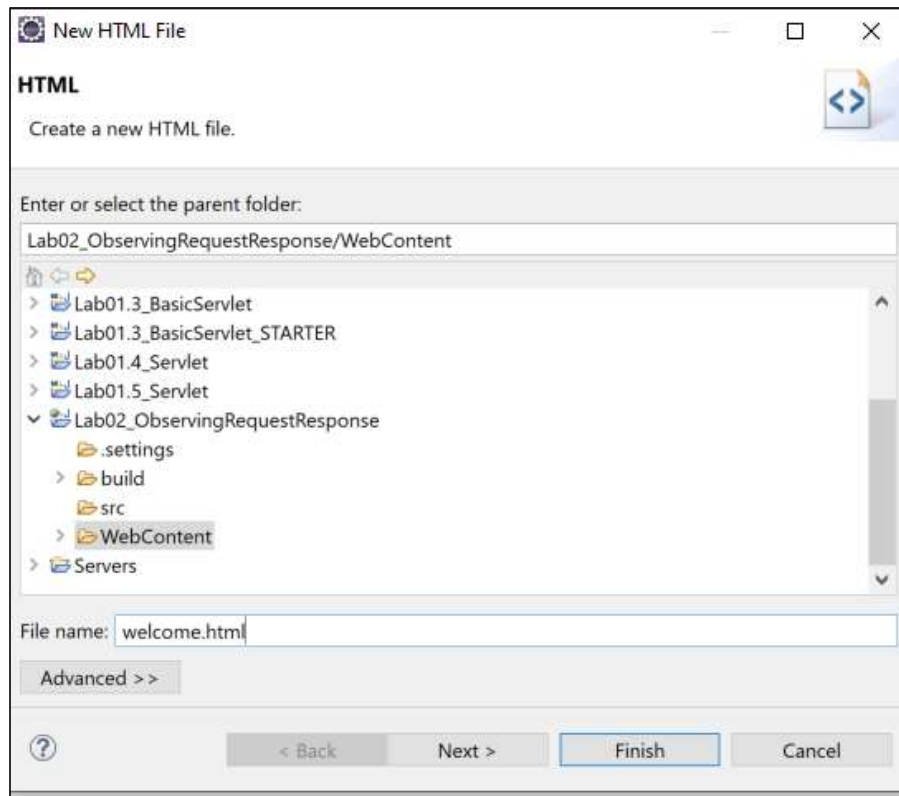
- **Launch Eclipse, selecting a default workspace**
- **Create a new Dynamic Web Project**
 - Use the menu bar to select a new project (Files>New>Project...)
 - Search for Dynamic Web Project in the search bar, select the Dynamic Web Project and then “Next >”
 - Enter “Lab02_ObservingRequestResponse” 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 2 - Observing a Request and Response

- **Right click on WebContent and create a new HTML file**
- Name it welcome.html
 - Click "Finish"
- In your new welcome.html file add a simple paragraph as shown below

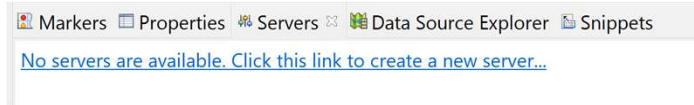


```
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Welcome Page</title>
</head>
<body>
<p>Welcome to our site</p>
</body>
</html>
```

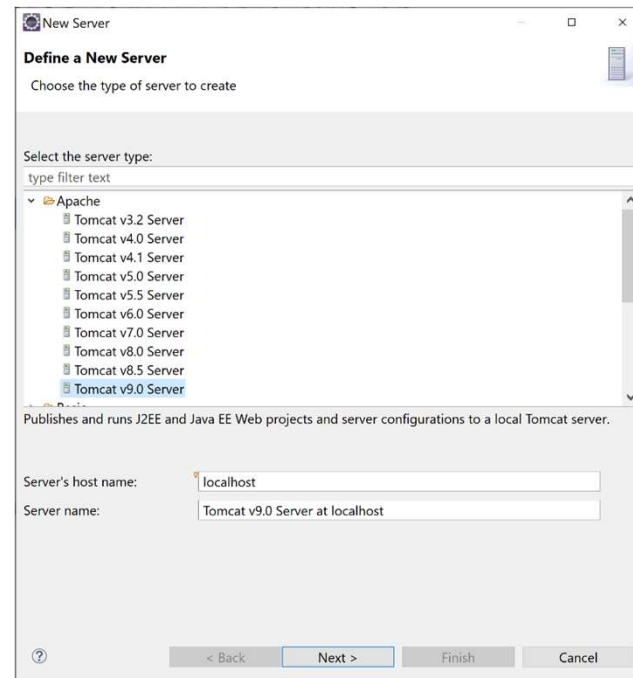
Lab 2 - Observing a Request and Response

■ Add a Server

- 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...



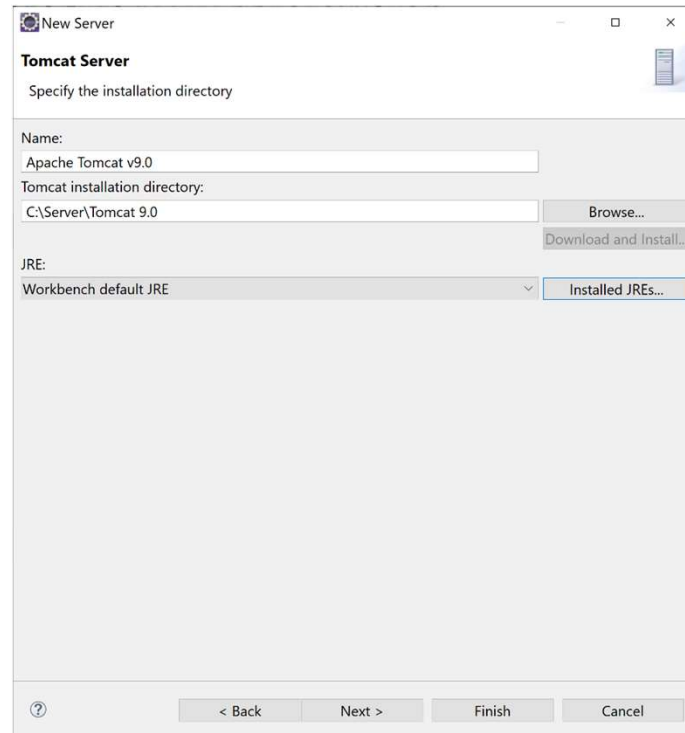
- Within the New Server window, select Apache>Tome v9.0 Server and then select “Next >”



Lab 2 - Observing a Request and Response

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



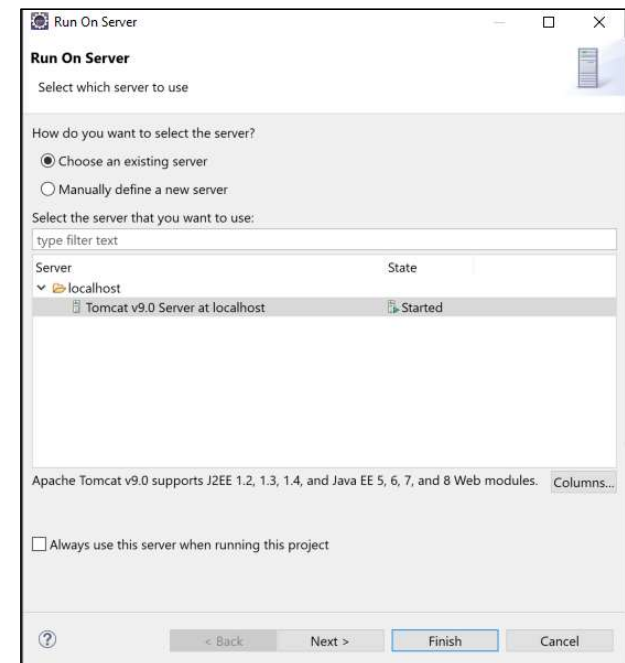
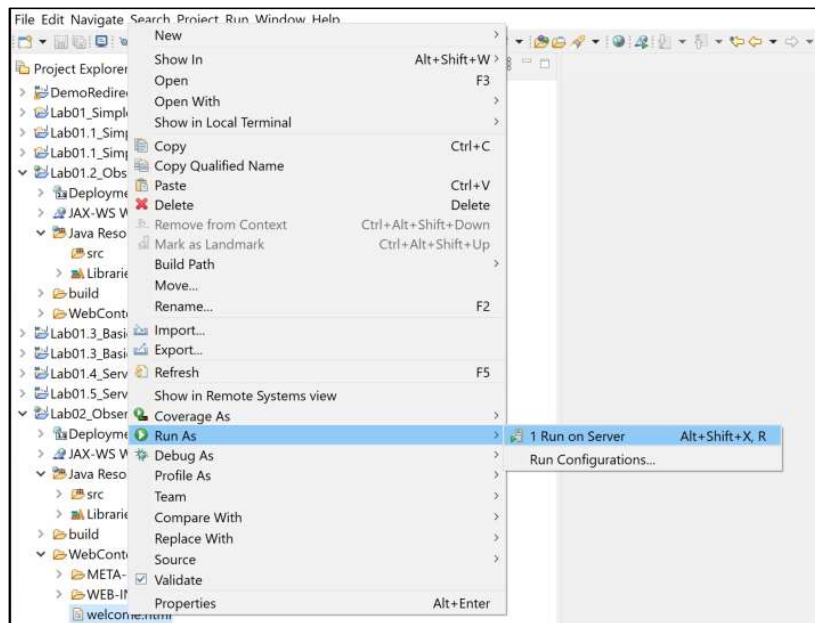
Lab 2 - Observing a Request and Response

■ Use an external Web Browser

- On the menu bar select Window>Web Browser > Chrome if it exists or anything other than Internal Web Browser ¹

■ Run the application

- Within the Project Explorer window, right click on the welcome.html file and select Run> Run As > Run on Server
- Confirm that Tomcat v9.0 Server at localhost is selected and then select “Finish”



Lab 2 - Observing a Request and Response

- Verify that the browser loads the page and displays the message



Welcome Page



localhost:8080/Lab02_ObservingRequestResponse/welcome.html

Welcome to our site

Lab 2 - Observing a Request and Response

■ We're going to set up a TCP/IP Monitor in Eclipse

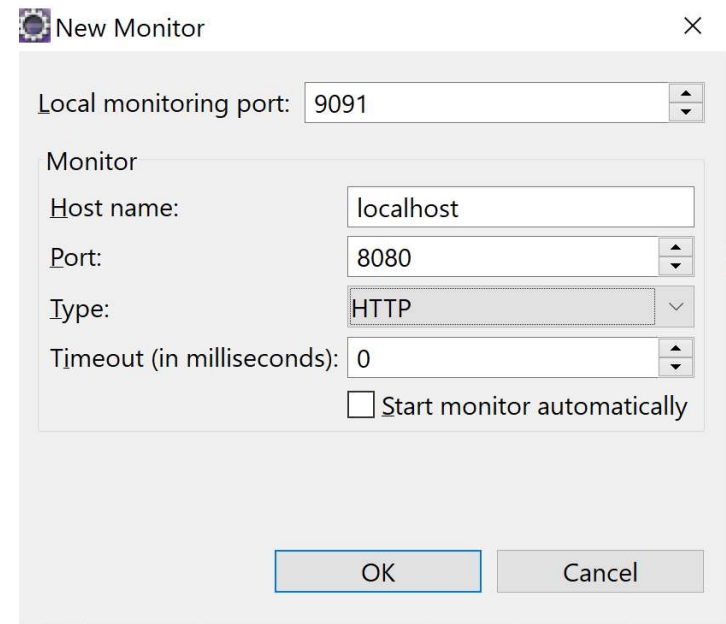
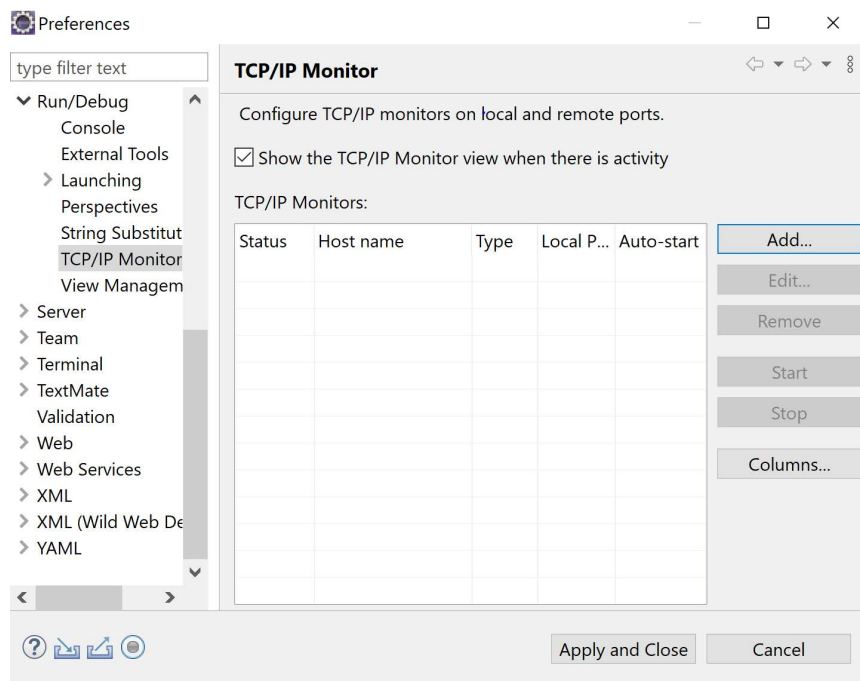
- This will allow us to see the Request and Response exchange
- Choose Window > Preferences > TCP/IP Monitor
- Click "Add" and enter the values as shown

Local monitoring port: 9091

Host name: localhost

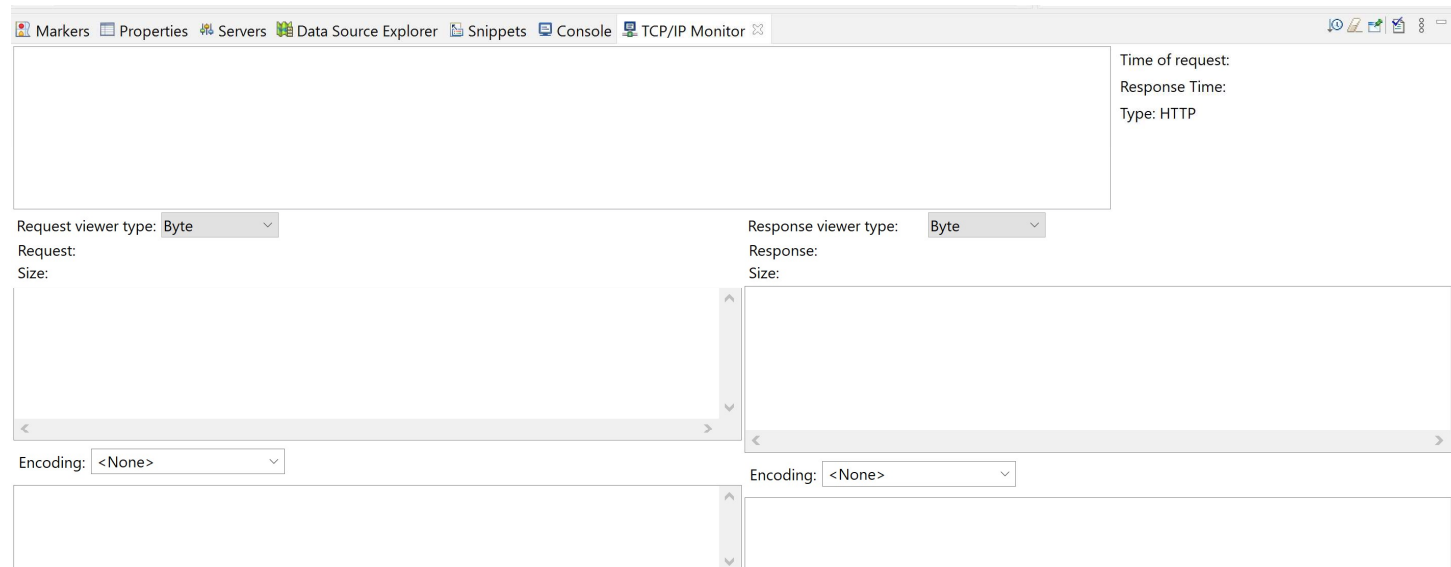
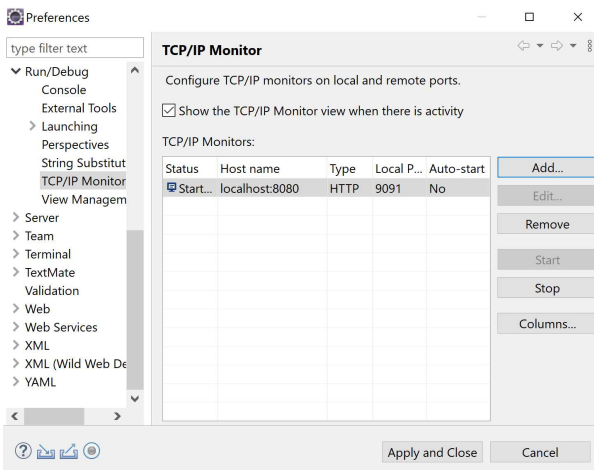
Port: 8080

Type: HTTP



Lab 2 - Observing a Request and Response

- Click “Start”, then “Apply and Close”
- Then open the monitor view
 - Click Window > Show View > Other > TCP/IP Monitor > OK



Lab 2 - Observing a Request and Response

- Ensure that your application is still running on the server
- Go to your browser and enter the following URL (note: only the port changed from last time)
 - http://localhost:9091/Lab02_ObservingRequestResponse/welcome.html



Welcome Page



localhost:9091/Lab02_ObservingRequestResponse/welcome.html

Welcome to our site

Lab 2 - Observing a Request and Response

- **Observe the Request and Response views**
 - You may have to click on localhost:9091 and then your page first, see screen print

The screenshot displays the Chrome DevTools interface with the 'Request' and 'Response' tabs selected. The 'Request' tab on the left shows the details of a GET request to `/Lab02_ObservingRequestResponse/welcome.html` from `localhost:9091`. The 'Response' tab on the right shows the corresponding HTTP 200 response from `localhost:8080`, including headers like `Accept-Ranges: bytes`, `ETag: W/"166-1638026121253"`, and `Content-Type: text/html`. The response body is a simple text message: 'Welcome to our site'.

Request

```
GET /Lab02_ObservingRequestResponse/welcome.html HTTP/1.1
Host: localhost:8080
Connection: keep-alive
sec-ch-ua: " Not A;Brand";v="99", "Chromium";v="96", "Google Chrome";v="96"
sec-ch-ua-mobile: ?0
sec-ch-ua-platform: "Windows"
Upgrade-Insecure-Requests: 1
User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/96.0.4660.55 Safari/537.36
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,image/apng,*/*;q=0.8
Sec-Fetch-Site: none
Sec-Fetch-Mode: navigate
Sec-Fetch-User: ?1
Sec-Fetch-Dest: document
```

Response

```
HTTP/1.1 200
Accept-Ranges: bytes
ETag: W/"166-1638026121253"
Last-Modified: Sat, 27 Nov 2021 15:15:21 GMT
Content-Type: text/html
Content-Length: 166
Date: Sat, 27 Nov 2021 15:25:37 GMT
Keep-Alive: timeout=20
Connection: keep-alive
```

Welcome to our site

Lab 2 - Observing a Request and Response

- To Stop the monitor, use the same Preferences path as before or right click in the TCP/IP Monitor view > Properties, select your monitor, and then click “Stop”

