Introduction to Web Application - Java Servlet

Objectives:

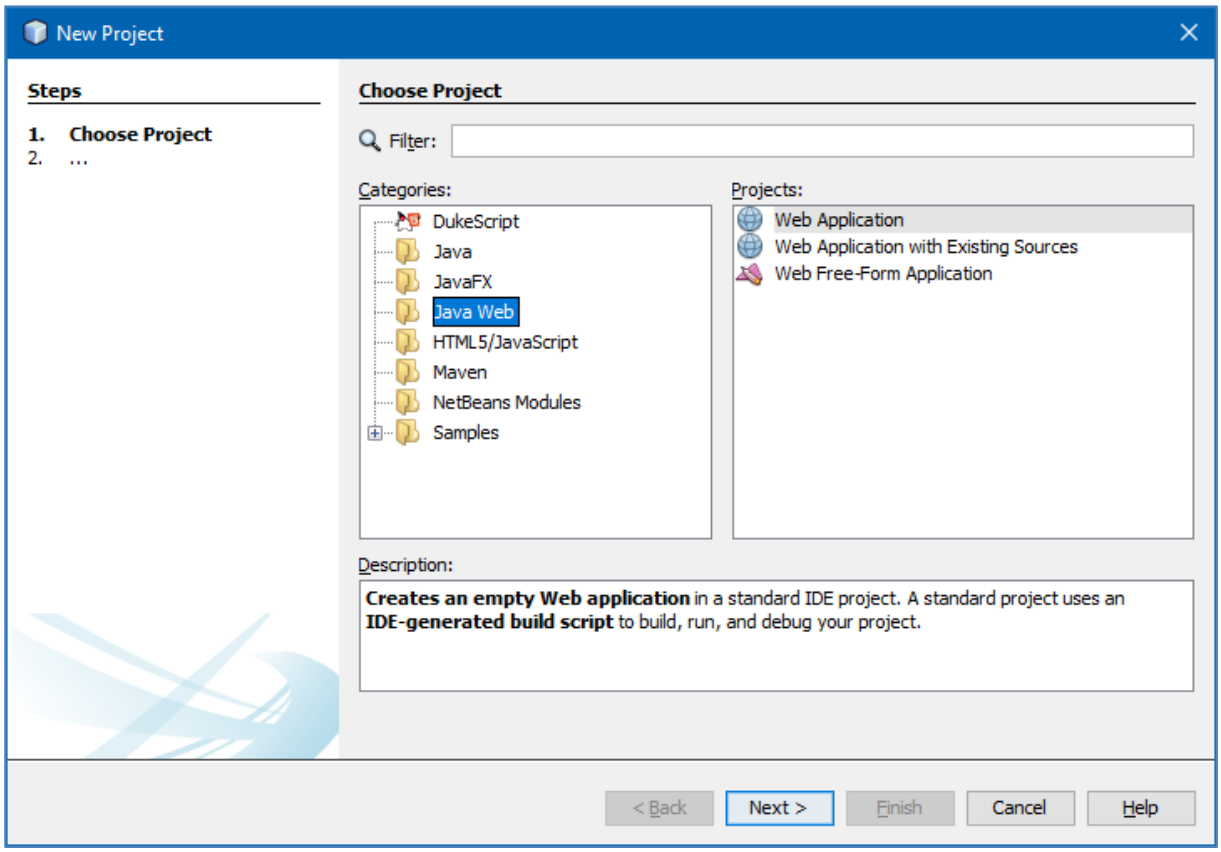
1. How to create a java website project in netbeans.
2. How to create a jsp and a servlet in netbeans.
3. How to add servlet config in to descryptor file.

1.1 Create a website project

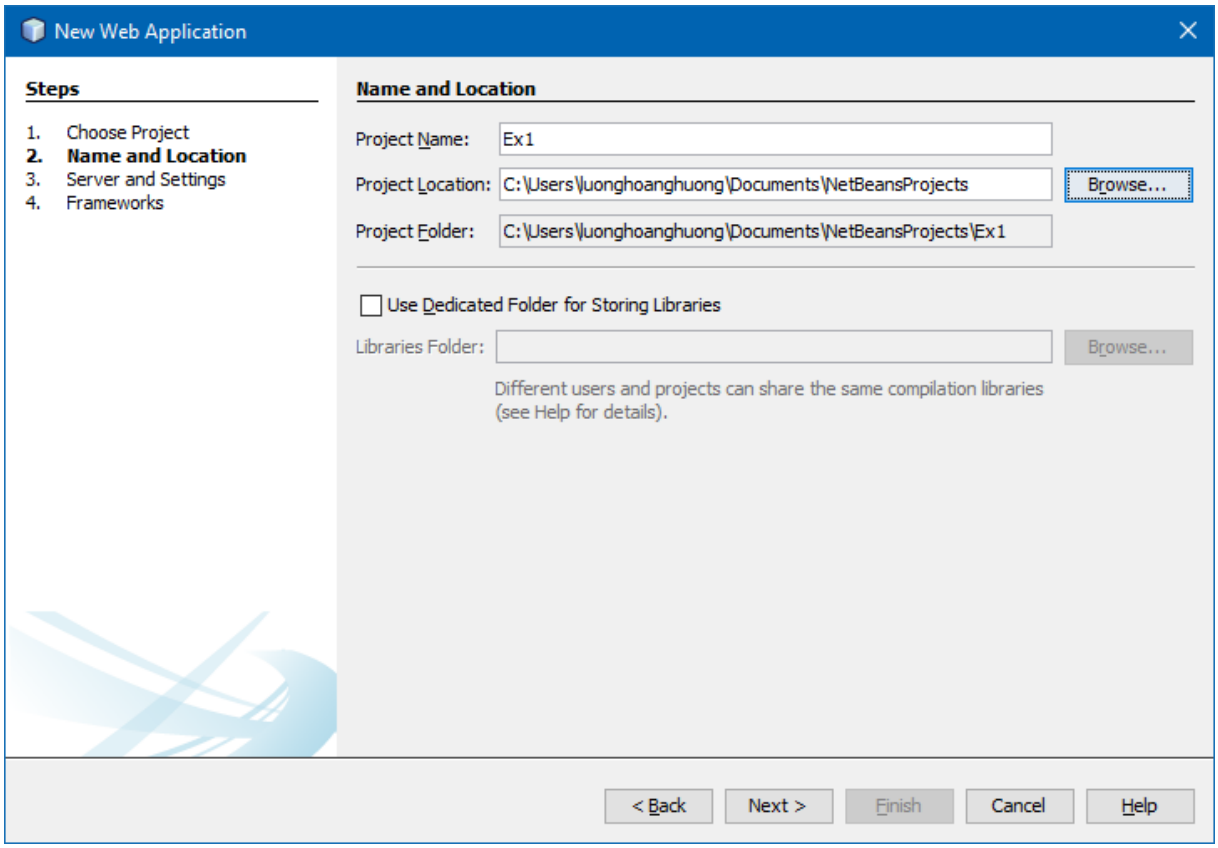
In this exercise, we will create a java website by using Netbean IDE.

Step 1. In Netbeans, click on the New Project icon.

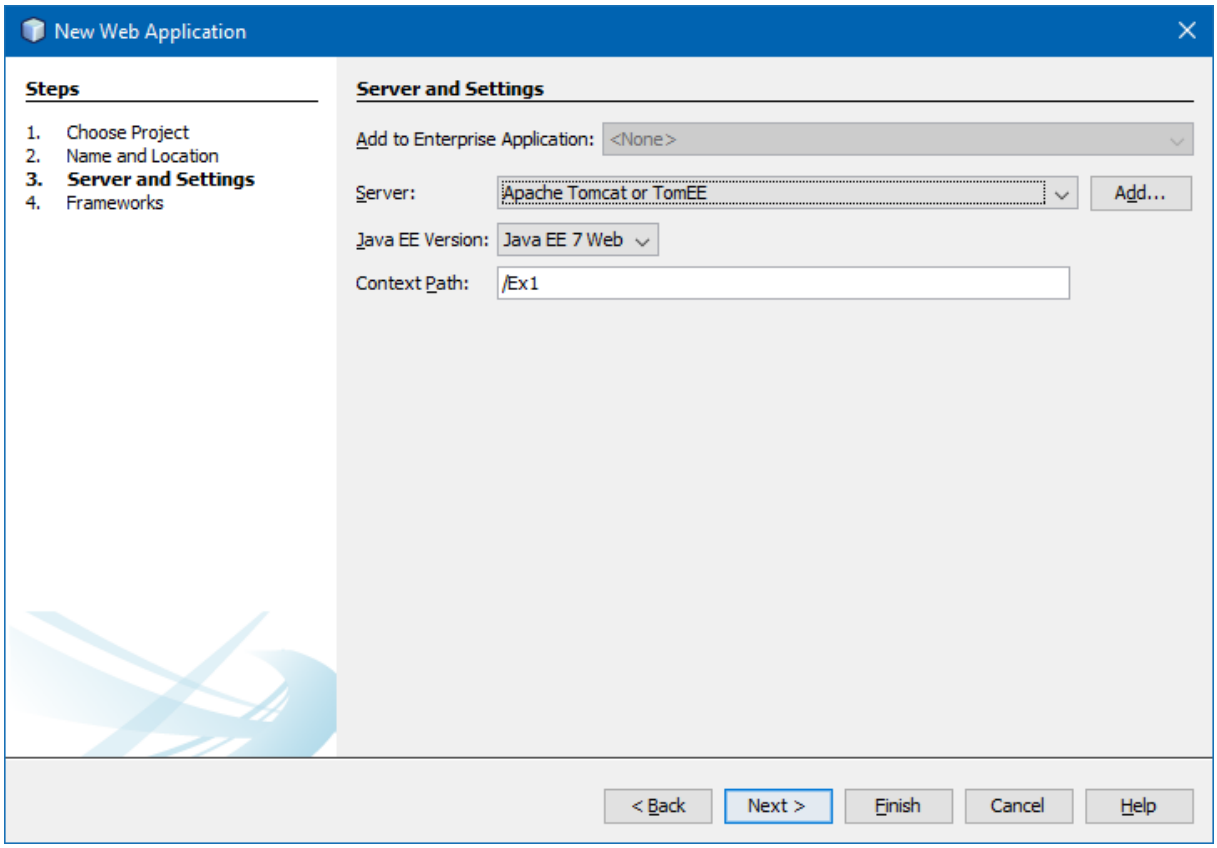
Step 2. New Project window will appear, Select Java Web → Web Application → Next.



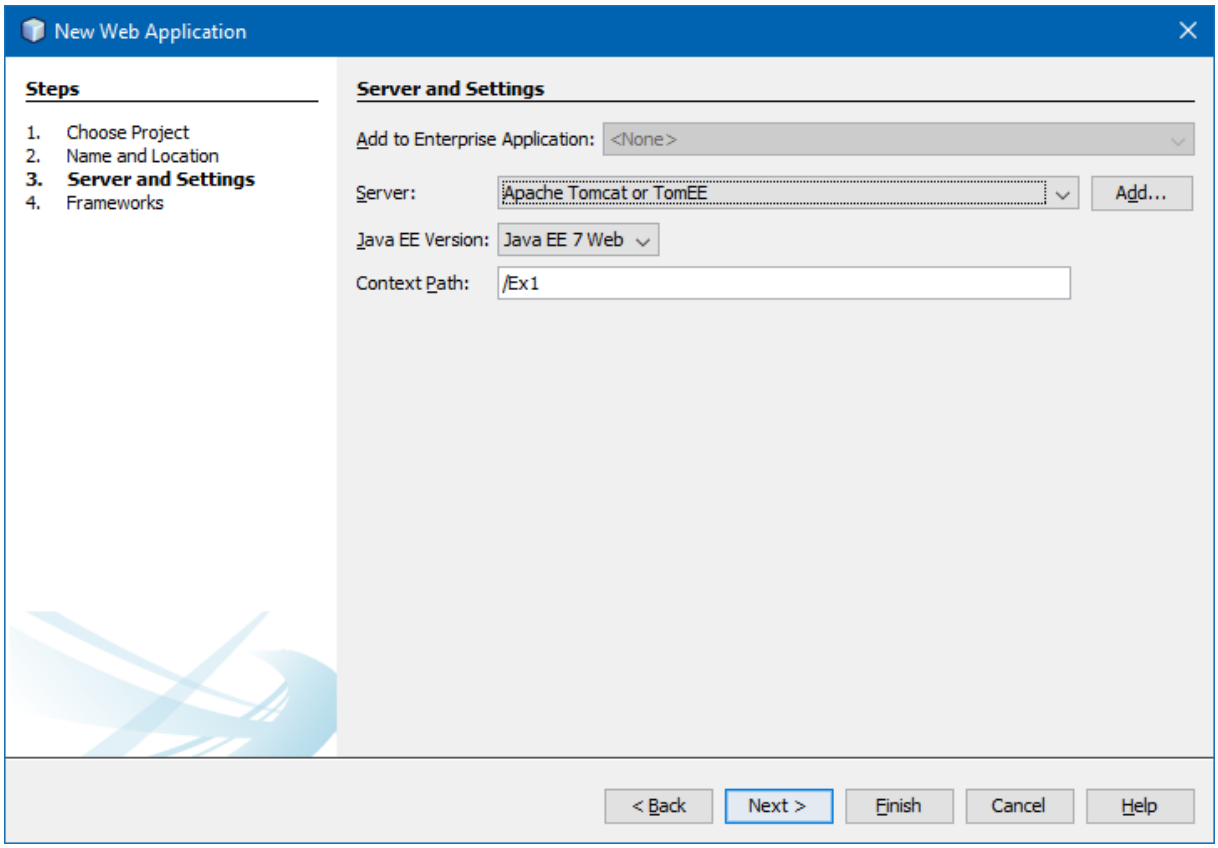
Step 3. In the next step, change the project name, project location and click Next button.



Step 4. Next step, select tomcat server at Server, select latest version for Java EE Version → Click Next button.



Step 5. The project is created.



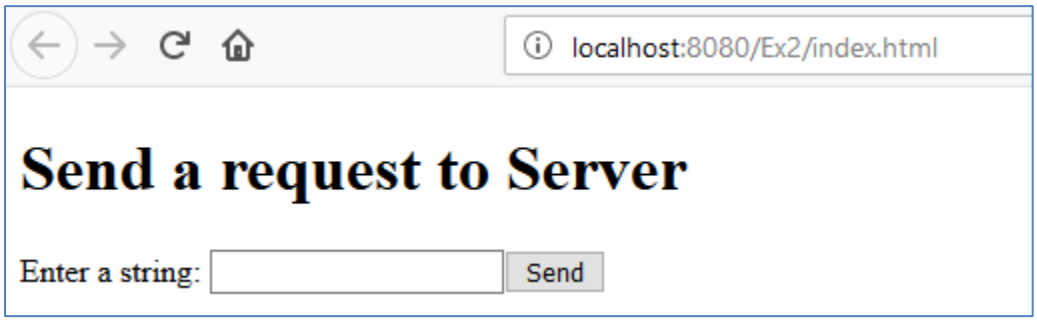
1.2 Read all header of request

In this exercise, we will create a webpage to send a request to server. After that, server will read all header of request that is sent by client.

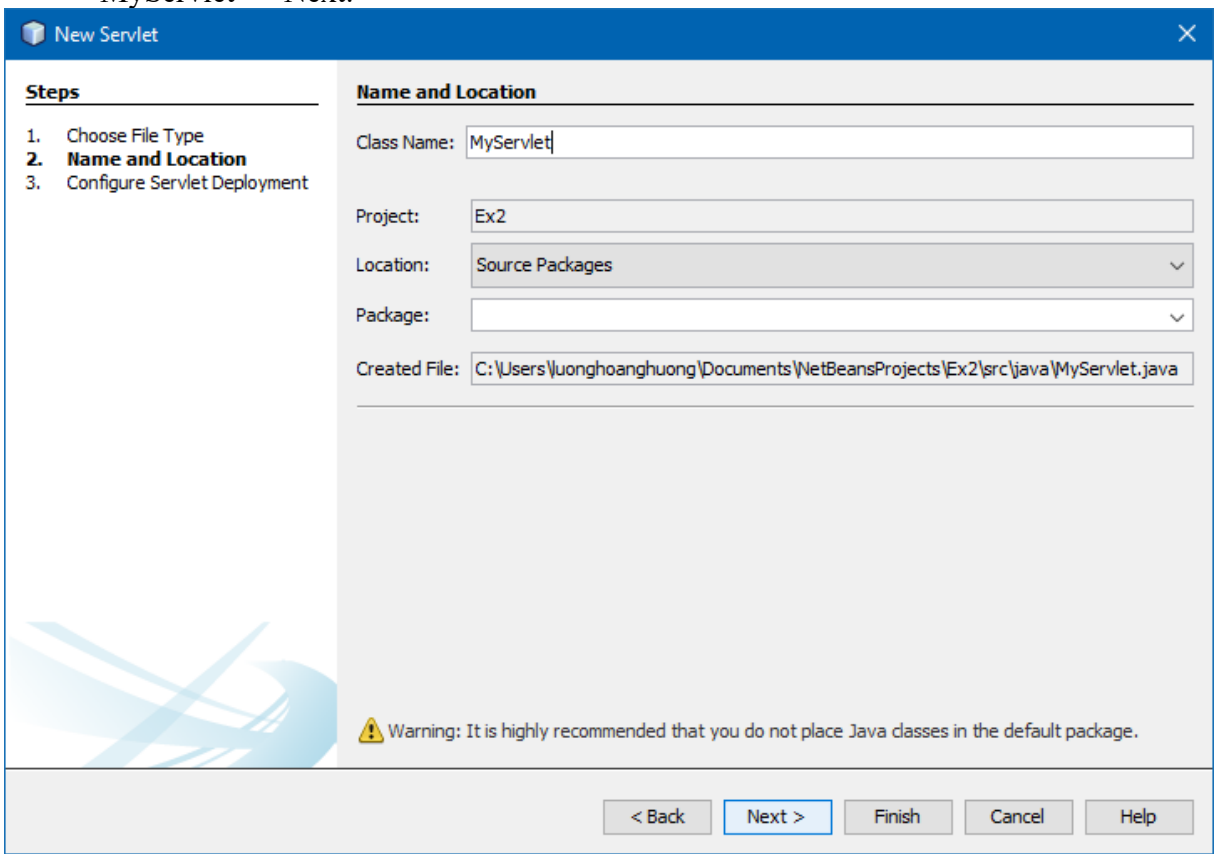
Step 1. Create a project named: Ex2.

Step 2. In Ex2 project, edit the code of index.html as below:

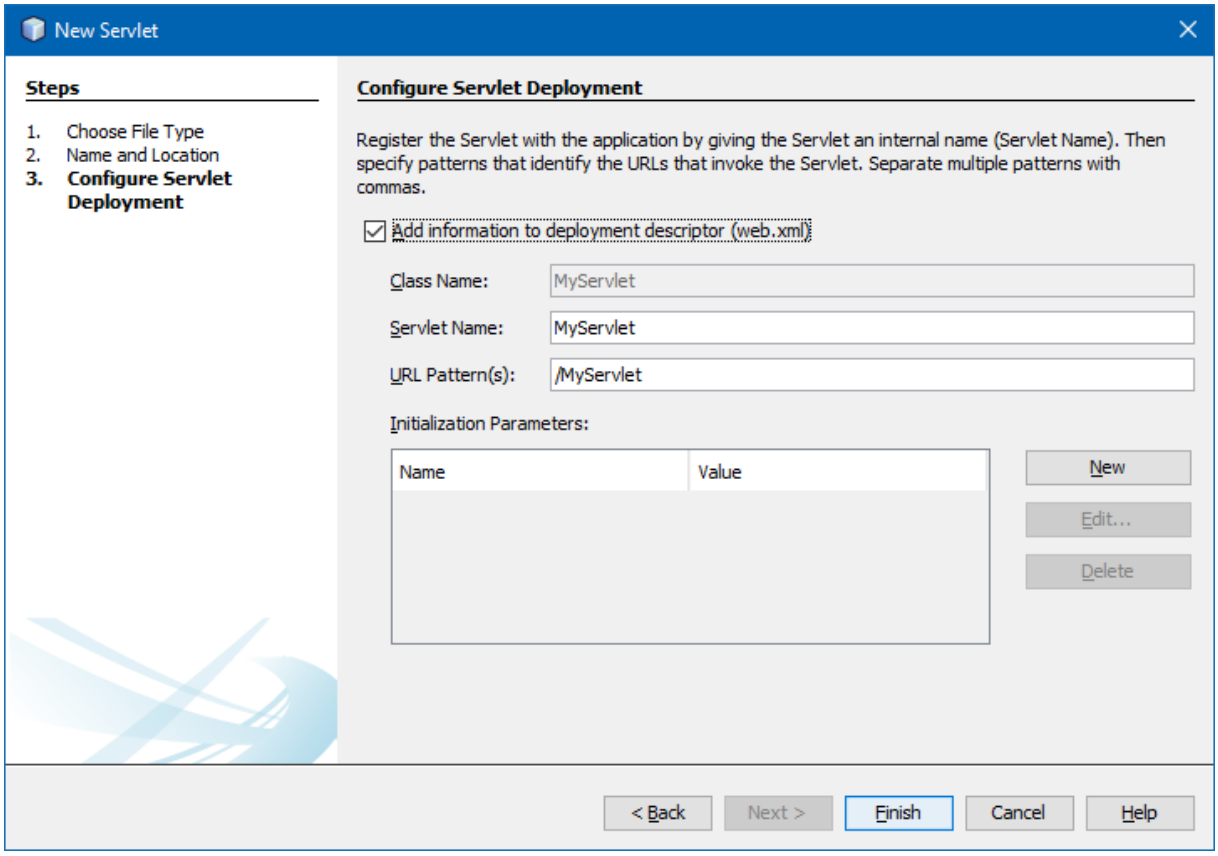
```
<html>
   <head>
      <title>TODO supply a title</title>
      <meta charset="UTF-8">
      <meta name="viewport" content="width=device-width, initial-scale=1.0">
   </head>
   <body>
      <h1>Send a request to Server</h1>
      <form action="MyServlet">
         Enter a string: <input type="text" name="txtDemo" value="" /><input
type="submit" value="Send" />
      </form>
   </body>
</html>
```



Step 3. Right-click on Ex2 project → New → Servlet. Set name of new servlet is MyServlet → Next.



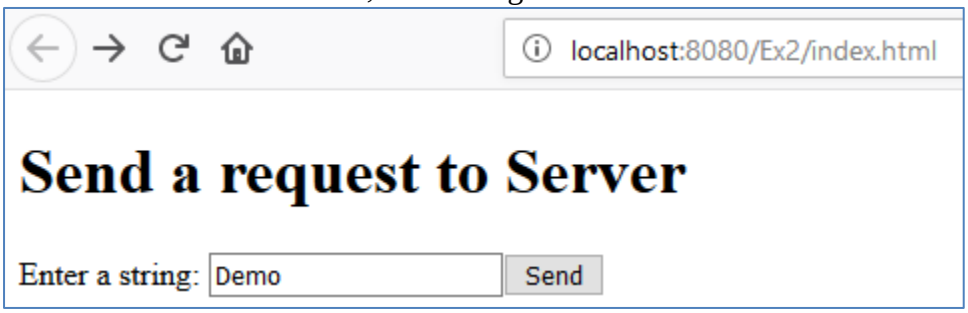
Step 4. Next step, check on "Add information to deployment descriptor (web.xml)" → Finish.



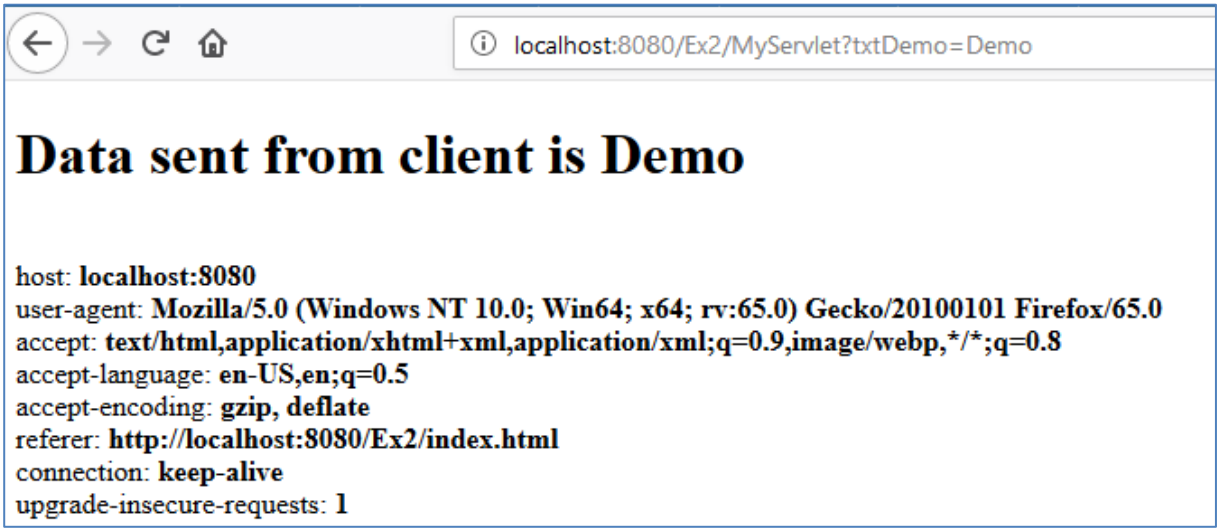
Step 5. Change the code in processRequest() method as below. In this code, we will use some methods getParameter(), getHeaderNames(), getHeader() to receive data and get the header of request that is sent from client.

```
response.setContentType("text/html;charset=UTF-8");
PrintWriter out = response.getWriter();
out.println("<!DOCTYPE html>");
out.println("<html>");
out.println("<head>");
out.println("<title>Read All Header Request</title>");
out.println("</head>");
out.println("<body>");
out.println("<h1>Data sent from client is " + request.getParameter("txtDemo")+ "</h1>");
Enumeration list = request.getHeaderNames();
while (list.hasMoreElements()) {
    String s = list.nextElement().toString();
    out.println("<br>"+s+": <b>"+request.getHeader(s)+"</b>");
}
out.println("</body>");
out.println("</html>");
```

Step 6. Run the index.html file, fill a string into a textbox and click on Send button.



Step 7. The request will send to server. This is a header of request that server receivered.

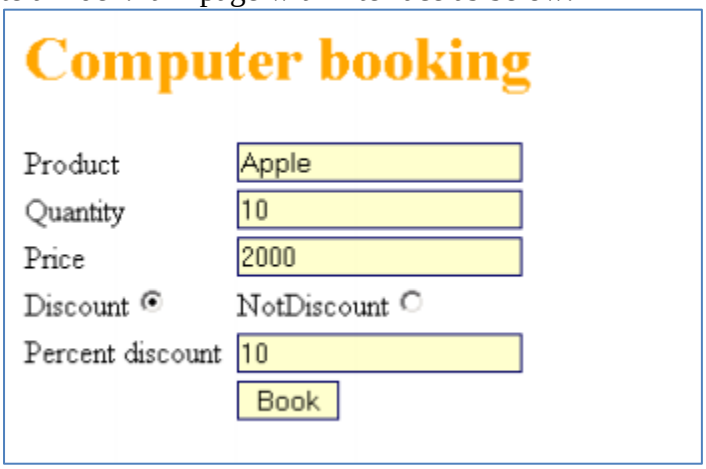


1.3 Do it Your self

In this exercise, you will create a project with booking product function. This project work as description as below:

- Client access to booking web page.
- Client will fill all fields in this page and submit it to server.
- Server will get all data that is sent from client and response all information to client.

Step 8. Create a index.html page with interface as below:



Step 9. Create a Servlet to receive all data that is sent from client.

Step 10. Response all information to client.