

KAMNIS

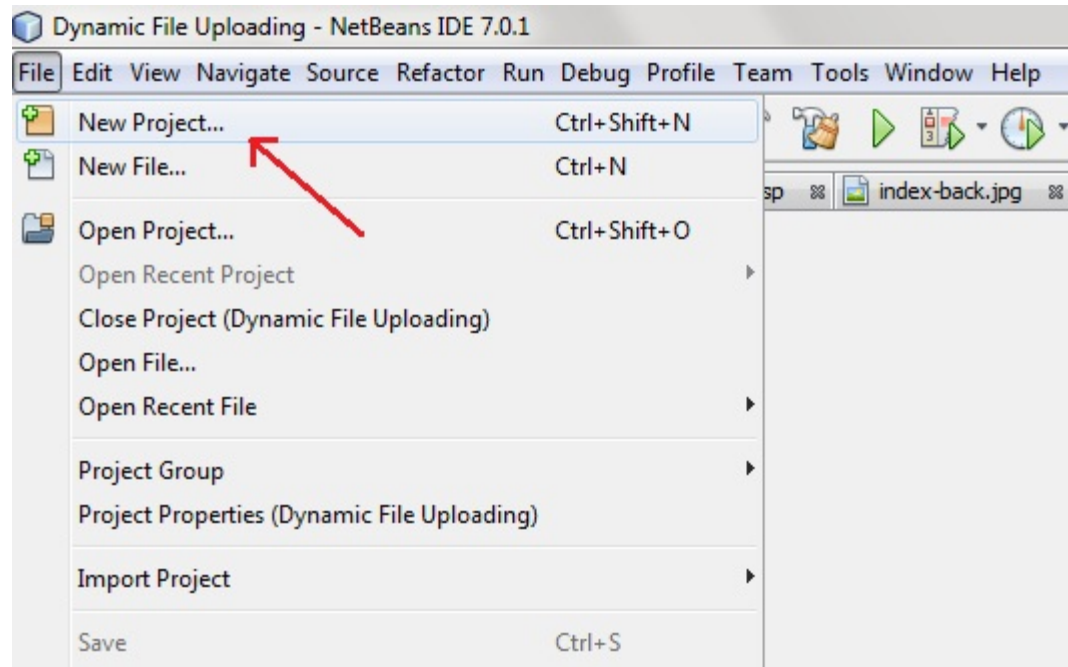
Java Servlets

Dr. Ferdin Joe John Joseph

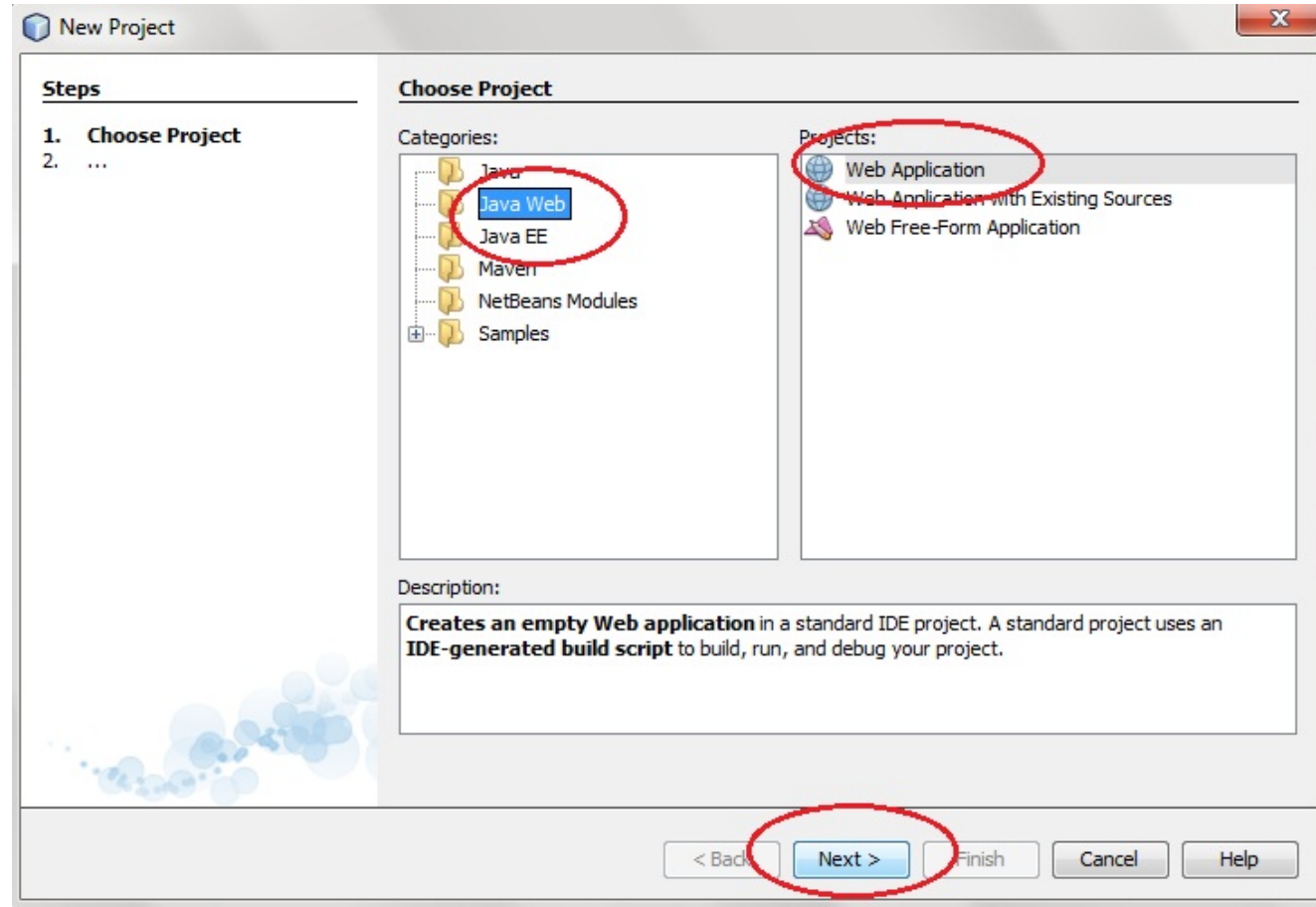
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Create Project

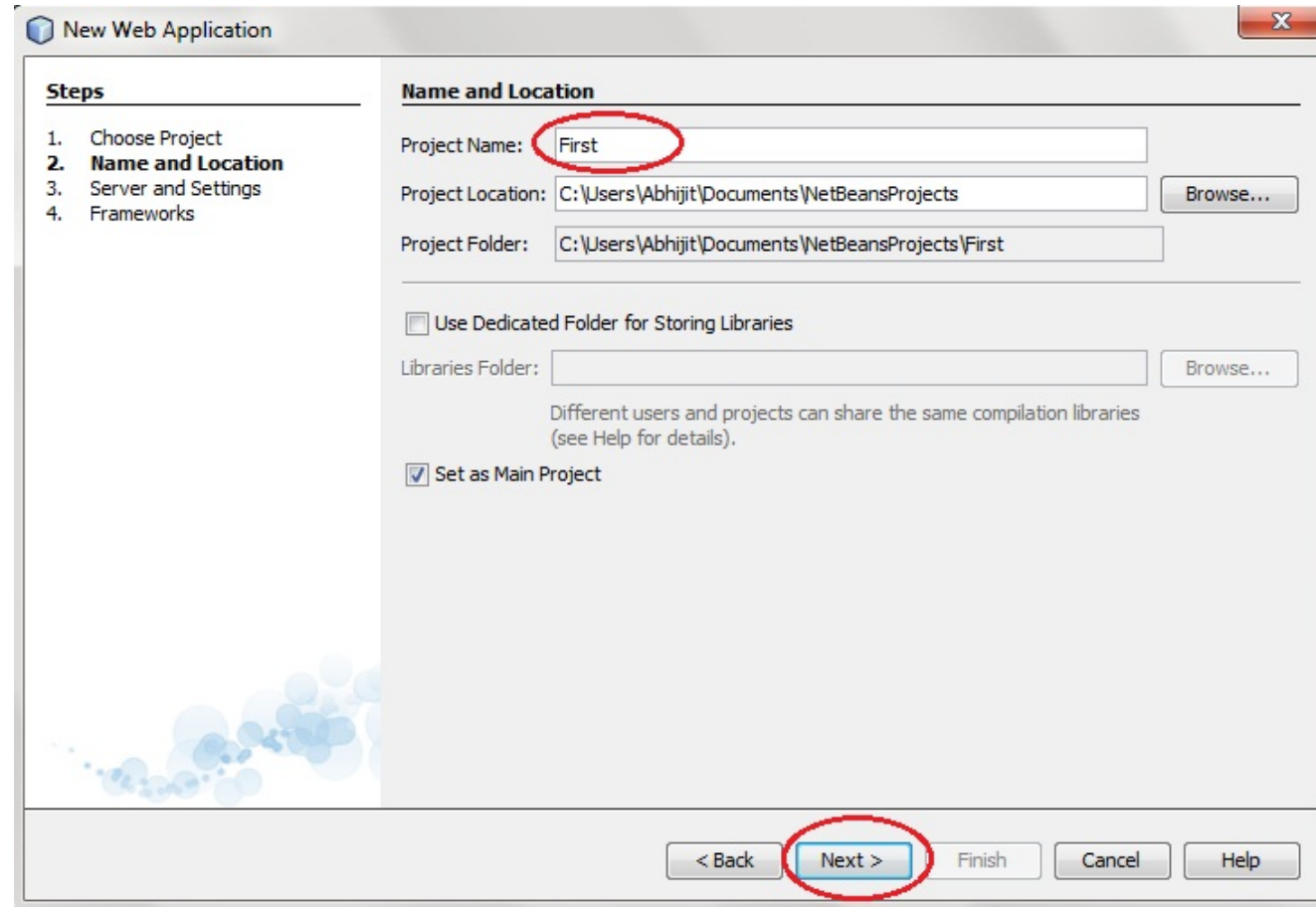
- Open Netbeans IDE, Select **File -> New Project**



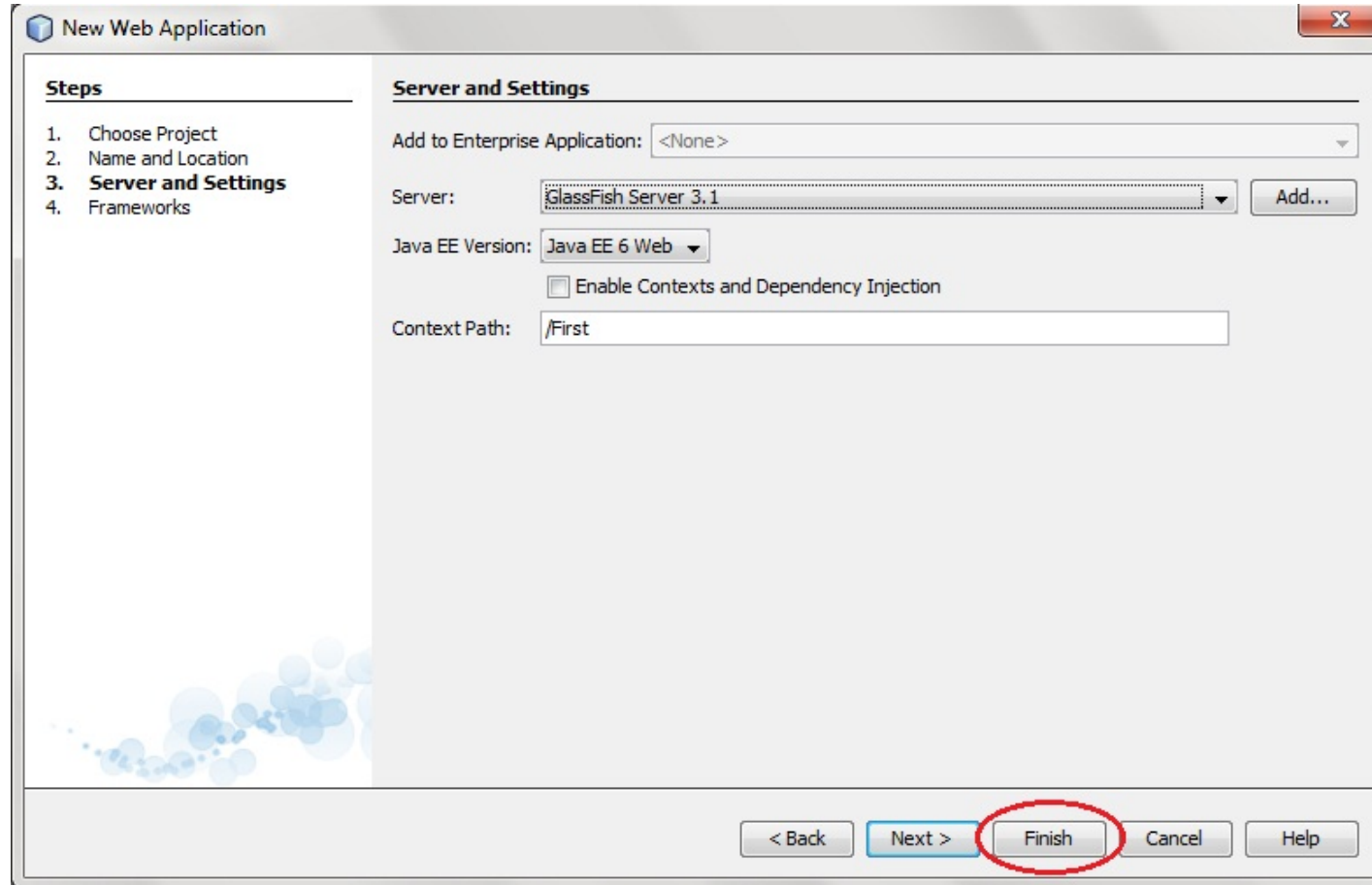
Select Java Web -> Web Application, then click on Next



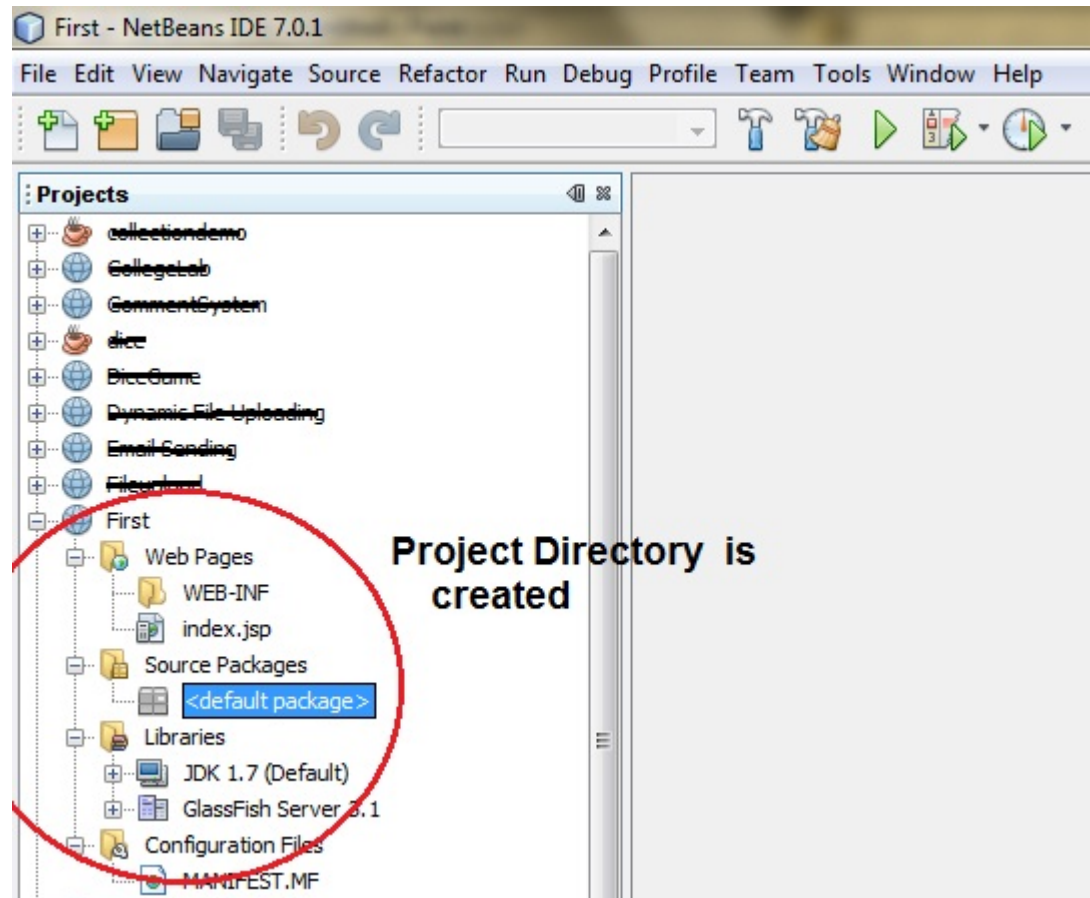
Give a name to your project and click on Next,



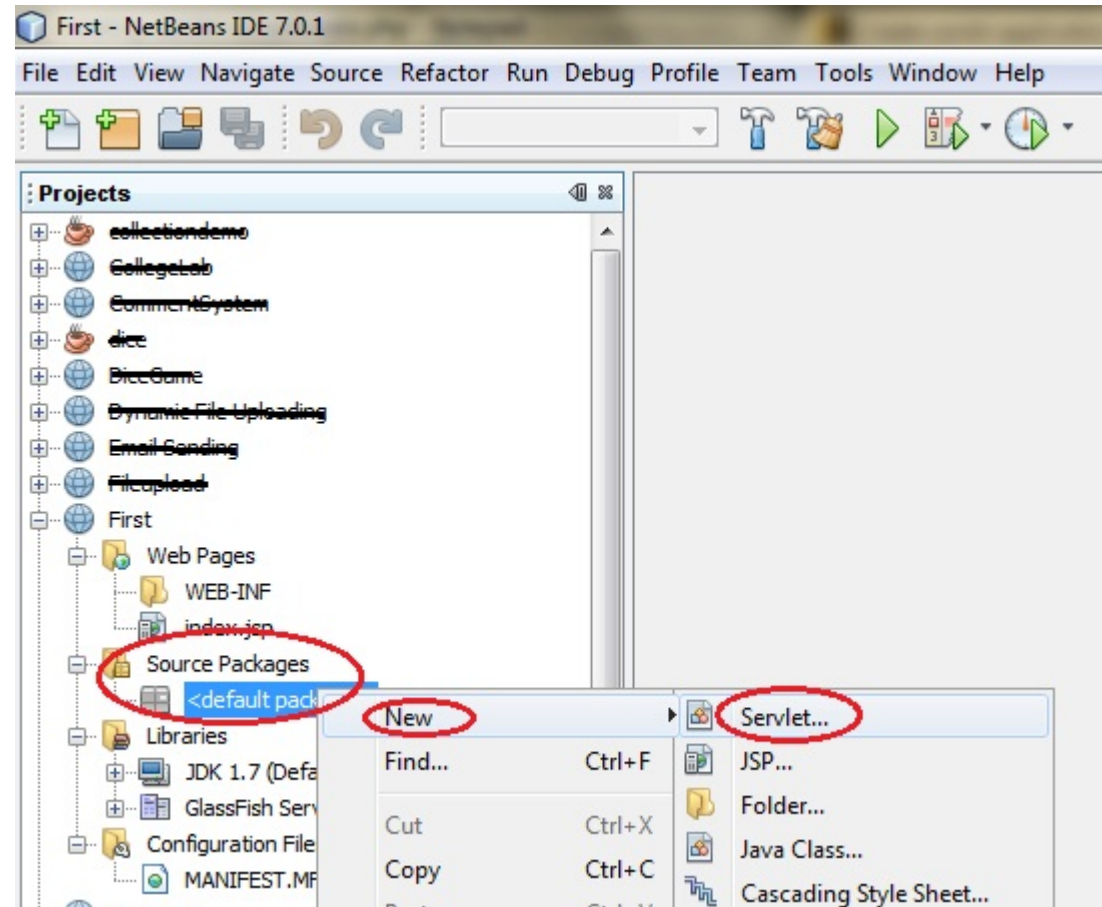
and then, Click **Finish**



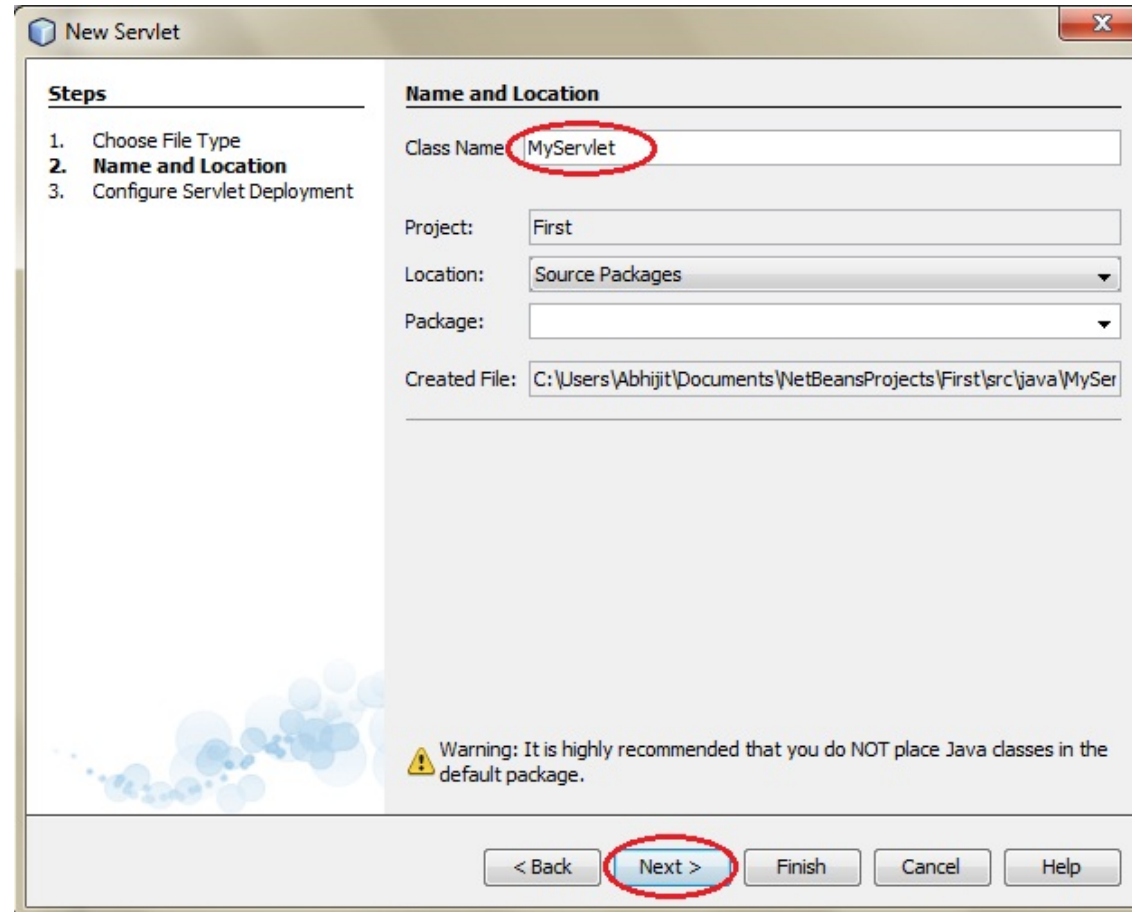
- The complete directory structure required for the Servlet Application will be created automatically by the IDE.

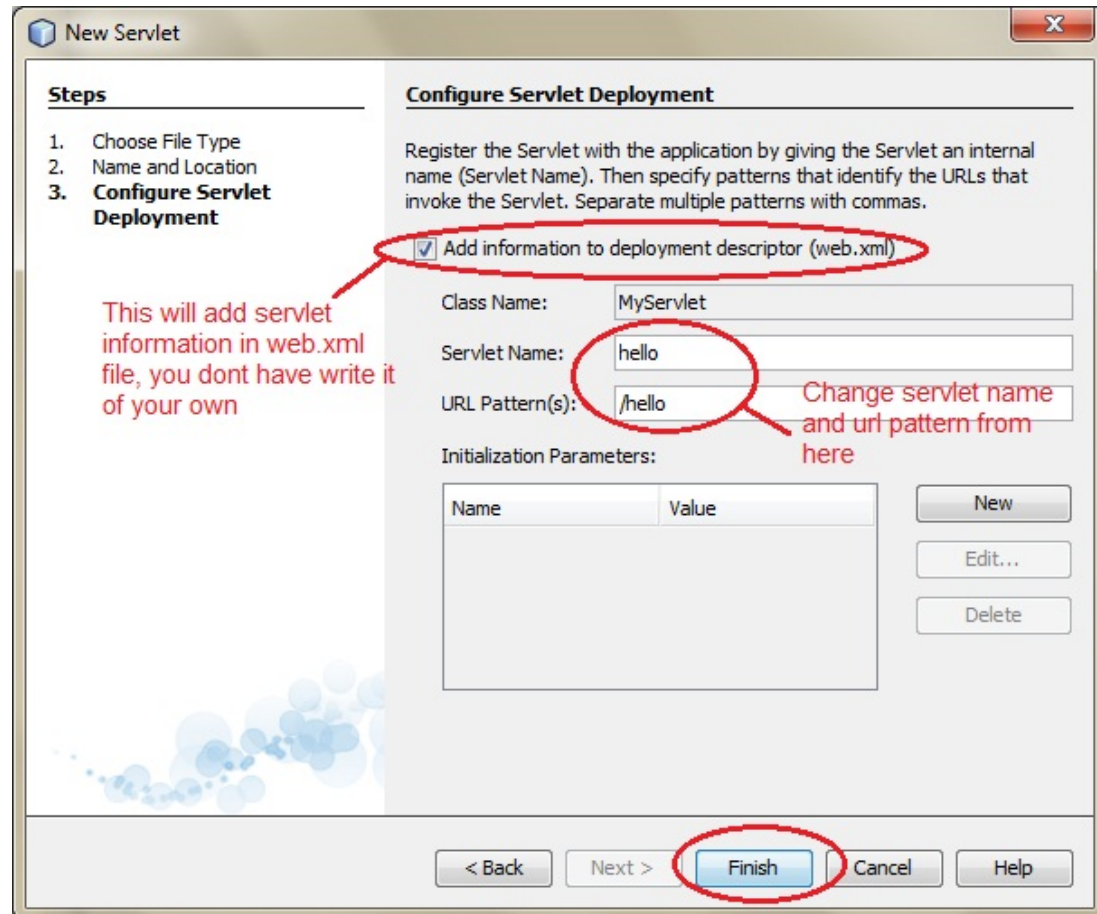


To create a Servlet, open **Source Package**, right click on **default packages** -> **New** -> **Servlet**.

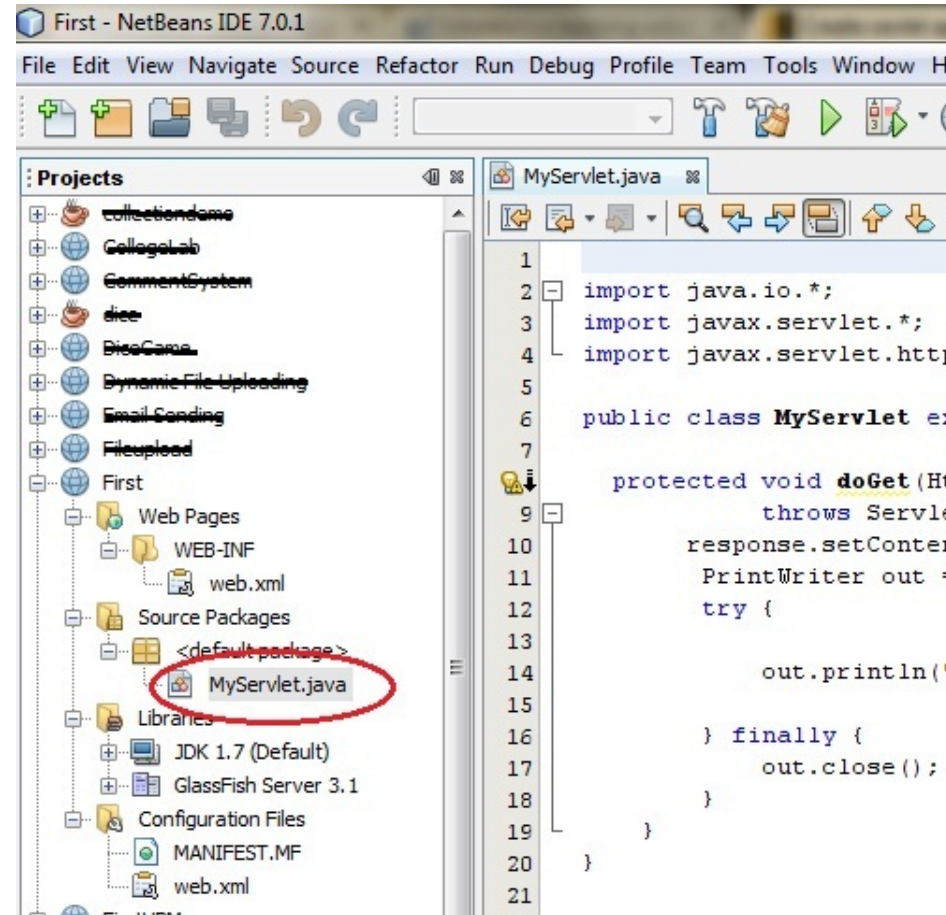


Give a Name to your Servlet class file,



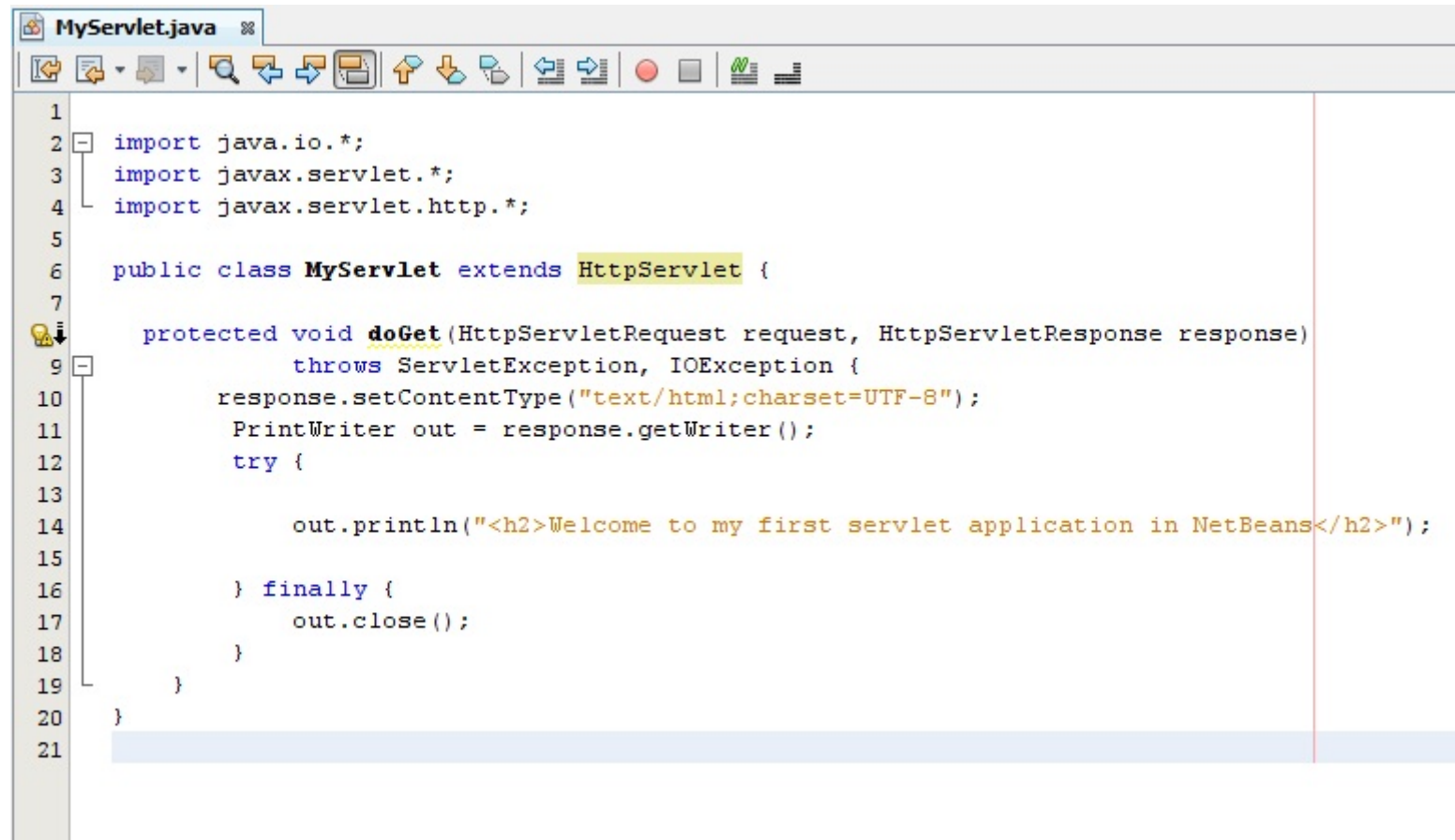


Now, your Servlet class is ready, and you just need to change the method definitions and you will be good to go.



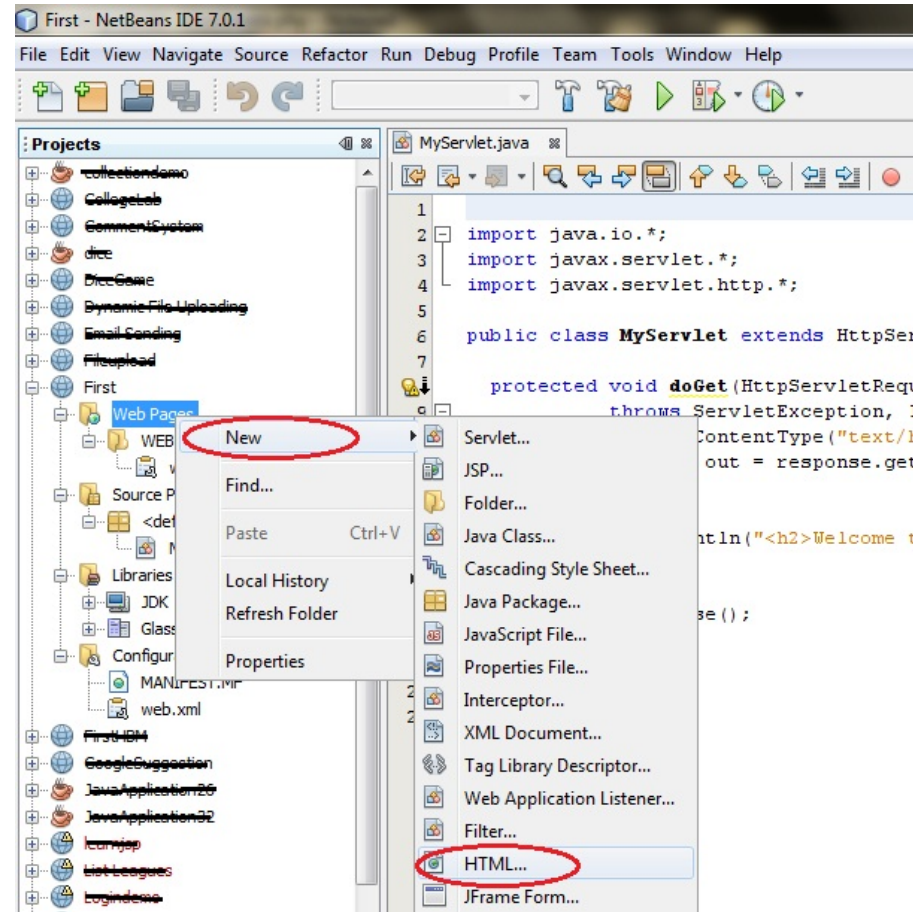
```
1
2 import java.io.*;
3 import javax.servlet.*;
4 import javax.servlet.http
5
6 public class MyServlet ex
7
8     protected void doGet (Http
9         throws ServletE
10         response.setConten
11         PrintWriter out =
12         try {
13
14             out.println("
15
16         } finally {
17             out.close();
18         }
19     }
20 }
21
```

Write code

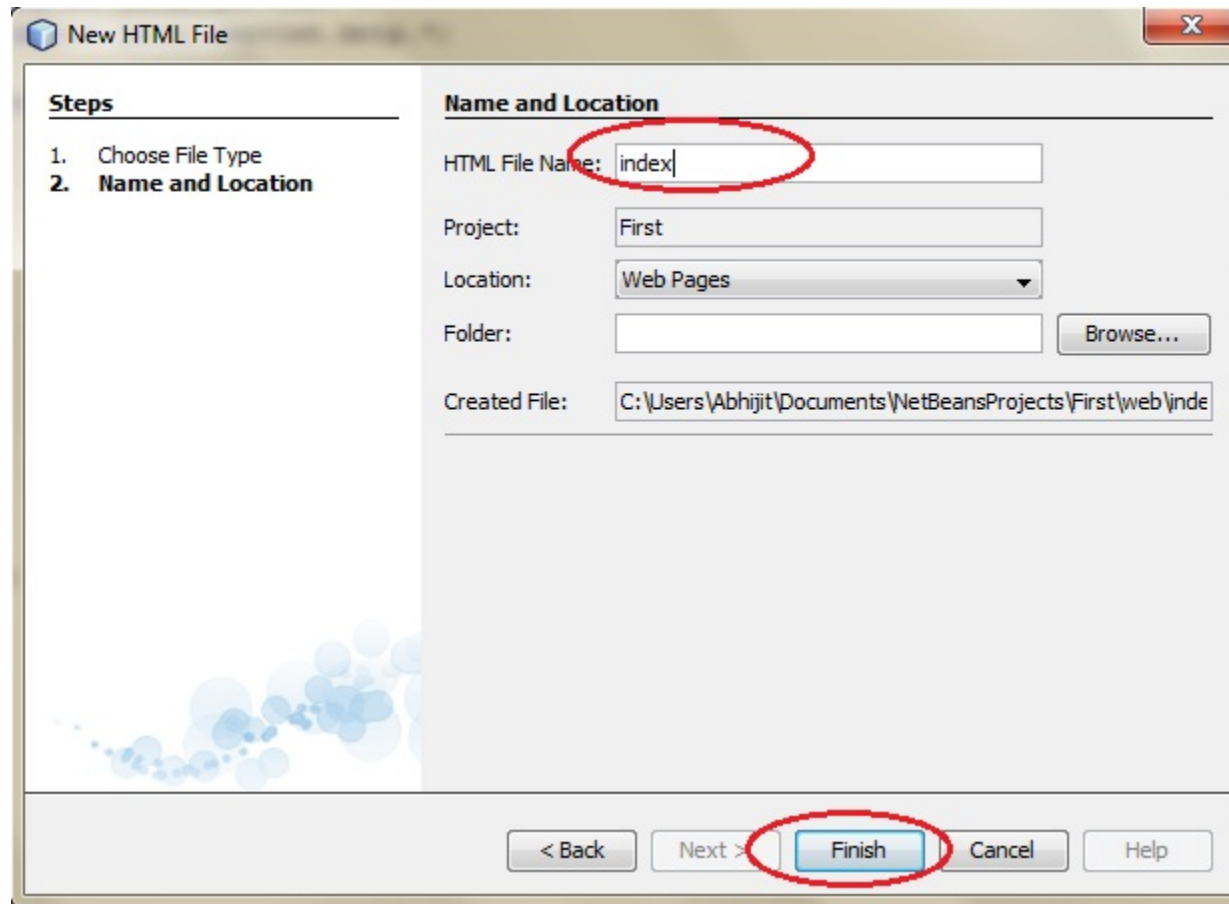


```
1
2 import java.io.*;
3 import javax.servlet.*;
4 import javax.servlet.http.*;
5
6 public class MyServlet extends HttpServlet {
7
8     protected void doGet(HttpServletRequest request, HttpServletResponse response)
9         throws ServletException, IOException {
10         response.setContentType("text/html; charset=UTF-8");
11         PrintWriter out = response.getWriter();
12         try {
13
14             out.println("<h2>Welcome to my first servlet application in NetBeans</h2>");
15
16         } finally {
17             out.close();
18         }
19     }
20 }
21
```

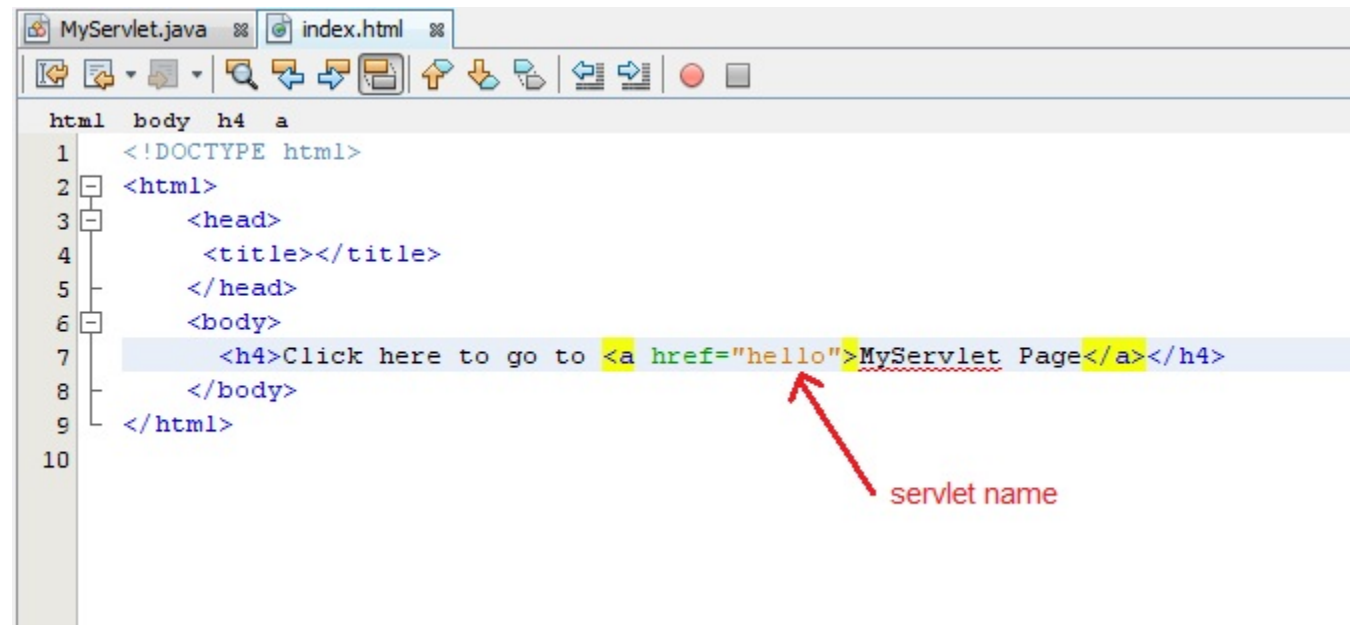
Create an HTML file, right click on **Web Pages** -> **New** -> **HTML**



- Give it a name. It is recommended to name it index, because browser will always pick up the index.html file automatically from a directory. Index file is read as the first page of the web application.



Modify the html file



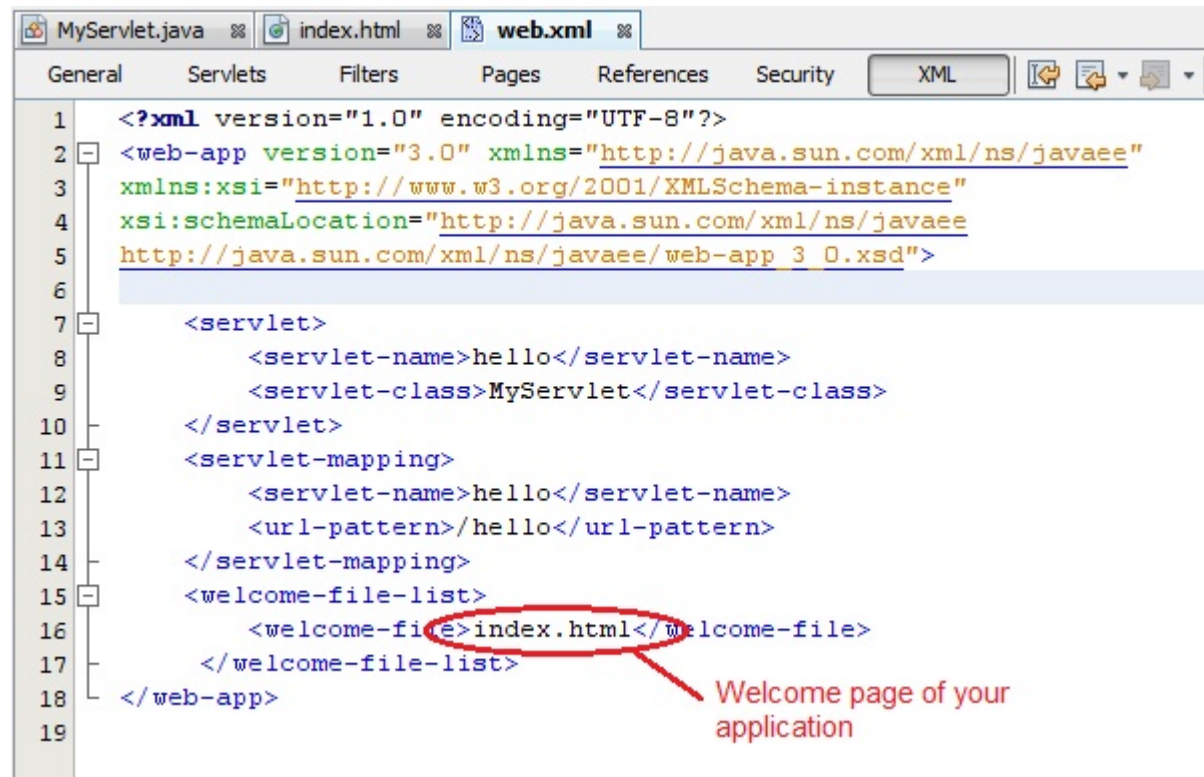
The screenshot shows an IDE window with two tabs: 'MyServlet.java' and 'index.html'. The 'index.html' tab is active, displaying the following HTML code:

```
1 <!DOCTYPE html>
2 <html>
3   <head>
4     <title></title>
5   </head>
6   <body>
7     <h4>Click here to go to <a href="hello">MyServlet Page</a></h4>
8   </body>
9 </html>
10
```

The code is displayed with a tree view on the left showing the structure: html > body > h4 > a. The line containing the link is highlighted in blue. The text 'MyServlet Page' is underlined in red. A red arrow points from the text 'servlet name' to the underlined text 'MyServlet Page'.

- Edit web.xml file. In the web.xml file you can see, we have specified the url-pattern and the servlet-name, this means when hello url is accessed our Servlet file will be executed.

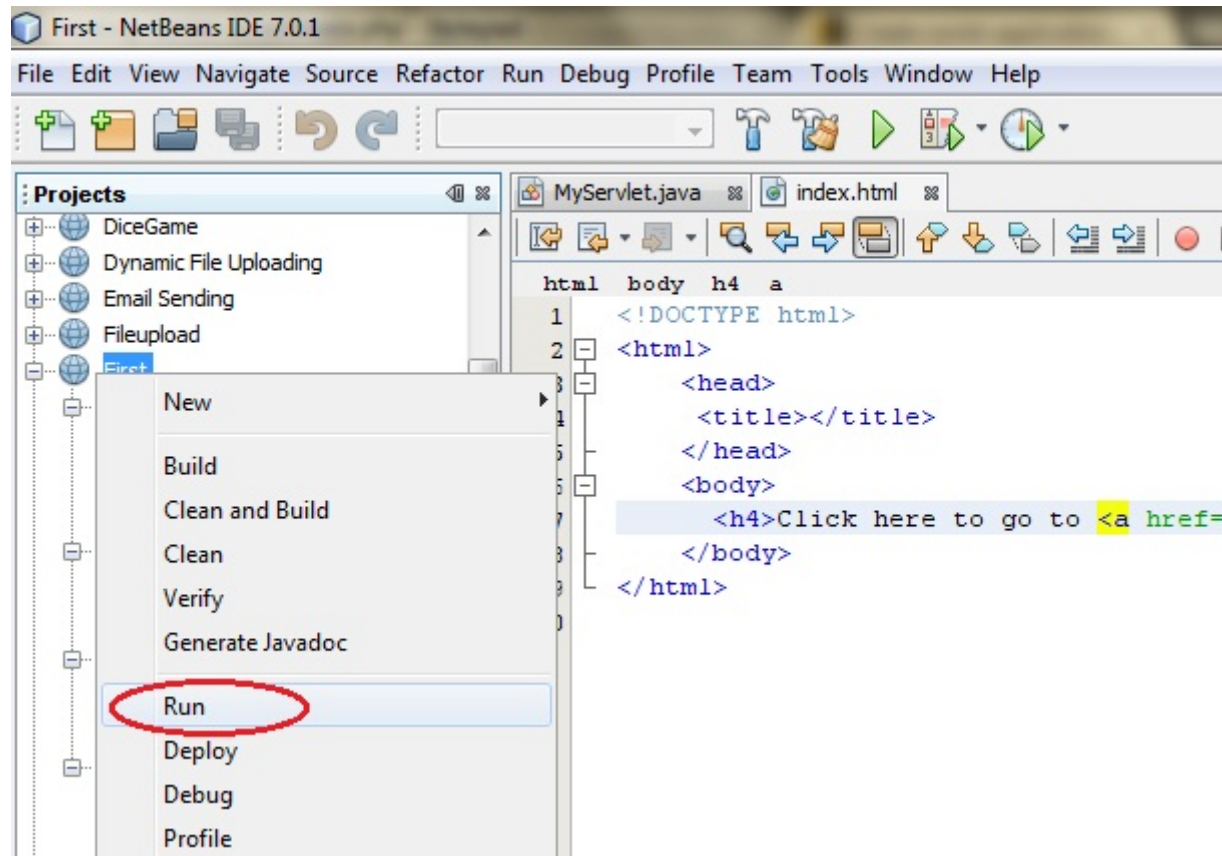
Add the welcome file tag



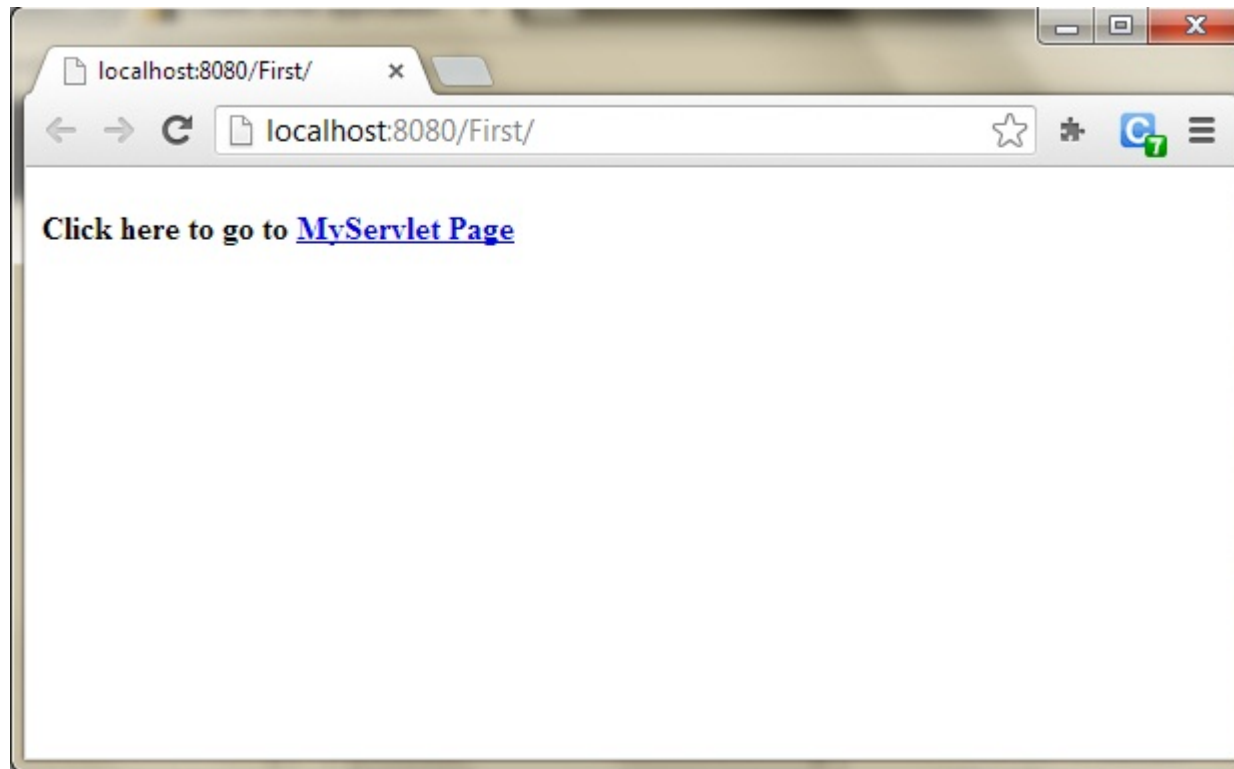
```
1 <?xml version="1.0" encoding="UTF-8"?>
2 <web-app version="3.0" xmlns="http://java.sun.com/xml/ns/javaee"
3 xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
4 xsi:schemaLocation="http://java.sun.com/xml/ns/javaee
5 http://java.sun.com/xml/ns/javaee/web-app_3_0.xsd">
6
7 <servlet>
8     <servlet-name>hello</servlet-name>
9     <servlet-class>MyServlet</servlet-class>
10 </servlet>
11 <servlet-mapping>
12     <servlet-name>hello</servlet-name>
13     <url-pattern>/hello</url-pattern>
14 </servlet-mapping>
15 <welcome-file-list>
16     <welcome-file>index.html</welcome-file>
17 </welcome-file-list>
18 </web-app>
19
```

Welcome page of your application

Run your application, right click on your Project and select **Run**



Click on the link



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Servlet Request

- It is used to send a value to another web page and use for manipulation for operations in the landing page

Modify index.html

```
<form method="post" action="check">  
Name <input type="text" name="user" >  
<input type="submit" value="submit">  
</form>
```

Modify web.xml

```
<servlet>
  <servlet-name>check</servlet-name>
  <servlet-class>MyServlet</servlet-class>
</servlet>
<servlet-mapping>
  <servlet-name>check</servlet-name>
  <url-pattern>/check</url-pattern>
</servlet-mapping>
```

Modify MyServlet.java

```
import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;

public class MyServlet extends HttpServlet {

    protected void doPost(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {
        response.setContentType("text/html;charset=UTF-8");
        PrintWriter out = response.getWriter();
        try {

            String user=request.getParameter("user");
            out.println("<h2> Welcome "+user+"</h2>");
        } finally {
            out.close();
        }
    }
}
```


Class Exercise

- Go to [w3schools.com](https://www.w3schools.com)
- Browse through the html tags and try to modify the servlet page with other tags available.