Glassfish setup

JAVA

Java was not installed initially

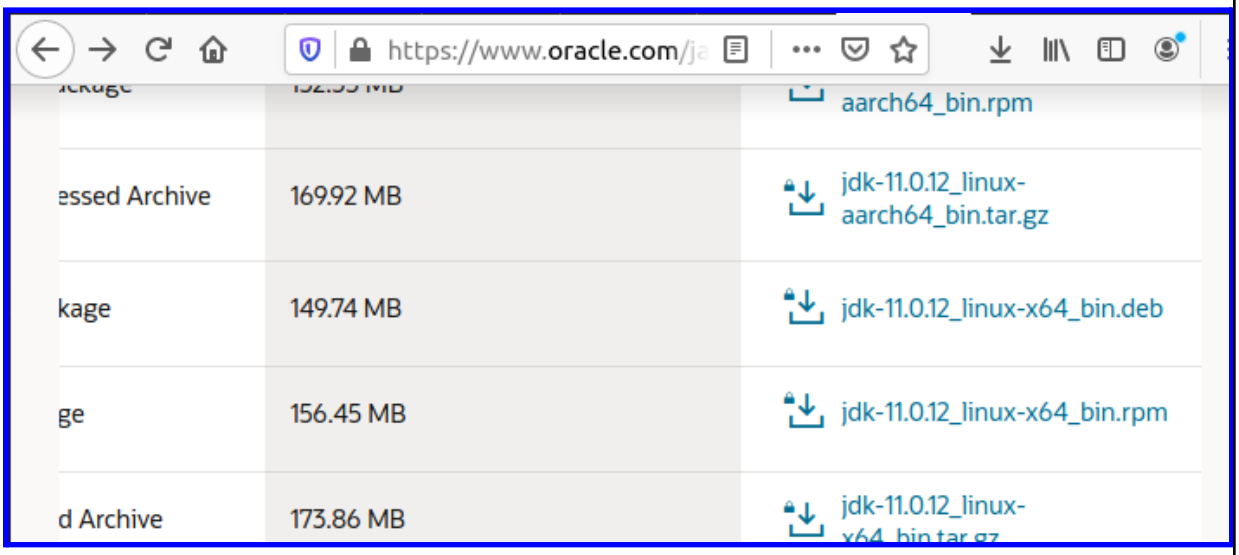
```
bibek@bibek-lfTechnology:~$ java --version

Command 'java' not found, but can be installed with:

sudo apt install openjdk-11-jre-headless  # version 11.0.11+9-0ubuntu2~20.04, o
r
sudo apt install default-jre              # version 2:1.11-72
sudo apt install openjdk-16-jre-headless  # version 16.0.1+9-1~20.04
sudo apt install openjdk-8-jre-headless   # version 8u292-b10-0ubuntu1~20.04
sudo apt install openjdk-13-jre-headless  # version 13.0.7+5-0ubuntu1~20.04
sudo apt install openjdk-17-jre-headless  # version 17+35-1~20.04
```

To install **oracle-jdk-11**

Download the debian package from oracle website



sudo dpkg -i <debian-package-name>

```
bibek@bibek-lfTechnology:~/Downloads$ sudo dpkg -i jdk-11.0.12_linux-x64_bin.de
b
[sudo] password for bibek:
Selecting previously unselected package jdk-11.0.12.
(Reading database ... 175544 files and directories currently installed.)
Preparing to unpack jdk-11.0.12_linux-x64_bin.deb ...
Unpacking jdk-11.0.12 (11.0.12-1) ...
Setting up jdk-11.0.12 (11.0.12-1) ...
```

After successful installation, few more steps for auto-mode and setting the java and javac path

sudo update-alternatives --install /usr/bin/java java /usr/lib/jvm/jdk-11.0.12/bin/java 1

```
bibek@bibek-lfTechnology:~/Downloads$ sudo update-alternatives --install /usr/b
in/java java /usr/lib/jvm/jdk-11.0.12/bin/java 1
update-alternatives: using /usr/lib/jvm/jdk-11.0.12/bin/java to provide /usr/bi
n/java (java) in auto mode
```

sudo update-alternatives --install /usr/bin/javac javac /usr/lib/jvm/jdk-11.0.12/bin/javac 1

```
bibek@bibek-lfTechnology:~/Downloads$ sudo update-alternatives --install /usr/b
in/javac javac /usr/lib/jvm/jdk-11.0.12/bin/javac 1
update-alternatives: using /usr/lib/jvm/jdk-11.0.12/bin/javac to provide /usr/b
in/javac (javac) in auto mode
```

To view the java and javac version

java --version

javac --version

```
bibek@bibek-lfTechnology:~/Downloads$ java --version
java 11.0.12 2021-07-20 LTS
Java(TM) SE Runtime Environment 18.9 (build 11.0.12+8-LTS-237)
Java HotSpot(TM) 64-Bit Server VM 18.9 (build 11.0.12+8-LTS-237, mixed mode)
bibek@bibek-lfTechnology:~/Downloads$ javac --version
javac 11.0.12
```

To set config of java

sudo update-alternatives --config java

To set environments

sudo gedit /etc/environments

And pate the path of JAVA_HOME to its path

```
1 PATH="/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin:/usr/-
  games:/usr/local/games:/snap/bin"
2 JAVA_HOME="/usr/lib/jvm/jdk-11.0.12"
```

Save and exit

To refresh the environment

source /etc/environment

Now we can echo the home path of java

```
bibek@bibek-lfTechnology:~/Downloads$ echo $JAVA_HOME
/usr/lib/jvm/jdk-11.0.12
```

GlassFish

To install glassfish6

Download the zip file of glassfish6.2.2

wget https://github.com/eclipse-ee4j/glassfish/releases/download/6.2.2/glassfish-6.2.2.zip

We can view the zip file using "**ls" command**

And then unzip it

unzip glassfish-6.2.2.zip

```
bibek@bibek-lfTechnology:~$ wget https://github.com/eclipse-ee4j/glassfish/releas
--2021-11-13 21:35:38--  https://github.com/eclipse-ee4j/glassfish/releases/downl
Resolving github.com (github.com)... 20.205.243.166
Connecting to github.com (github.com)|20.205.243.166|:443... connected.
HTTP request sent, awaiting response... 302 Found
Location: https://github-releases.githubusercontent.com/148886237/ac9792e0-2716-4
X-Amz-Credential=AKIAIWNJYAX4CSVEH53A%2F20211113%2Fus-east-1%2Fs3%2Faws4_request&
nature=1a0ac327d191de249a98000d3914b50e6eaf3f8fa6e4994c0240da2464ac5490&X-Amz-Sig
esponse-content-disposition=attachment%3B%20filename%3Dglassfish-6.2.2.zip&respon
--2021-11-13 21:35:44--  https://github-releases.githubusercontent.com/148886237/
S4-HMAC-SHA256&X-Amz-Credential=AKIAIWNJYAX4CSVEH53A%2F20211113%2Fus-east-1%2Fs3%
s=300&X-Amz-Signature=1a0ac327d191de249a98000d3914b50e6eaf3f8fa6e4994c0240da2464a
_id=148886237&response-content-disposition=attachment%3B%20filename%3Dglassfish-6
am
Resolving github-releases.githubusercontent.com (github-releases.githubuserconten
.154, ...
Connecting to github-releases.githubusercontent.com (github-releases.githubuserco
HTTP request sent, awaiting response... 200 OK
Length: 118186239 (113M) [application/octet-stream]
Saving to: 'glassfish-6.2.2.zip'

glassfish-6.2.2.zip               100%[=========================================

2021-11-13 21:36:53 (1.64 MB/s) - 'glassfish-6.2.2.zip' saved [118186239/11818623

bibek@bibek-lfTechnology:~$ ls
Desktop  Documents  Downloads  glassfish-6.2.2.zip  Music  Pictures  Public  Temp
bibek@bibek-lfTechnology:~$ unzip glassfish-6.2.2.zip
Archive:  glassfish-6.2.2.zip
   creating: glassfish6/
   creating: glassfish6/glassfish/
```

We can see glassfish6 directory now using "**ls" command**

Go to the bin directory glassfish6/bin and start the domain to use glassfish

cd glassfish6/bin

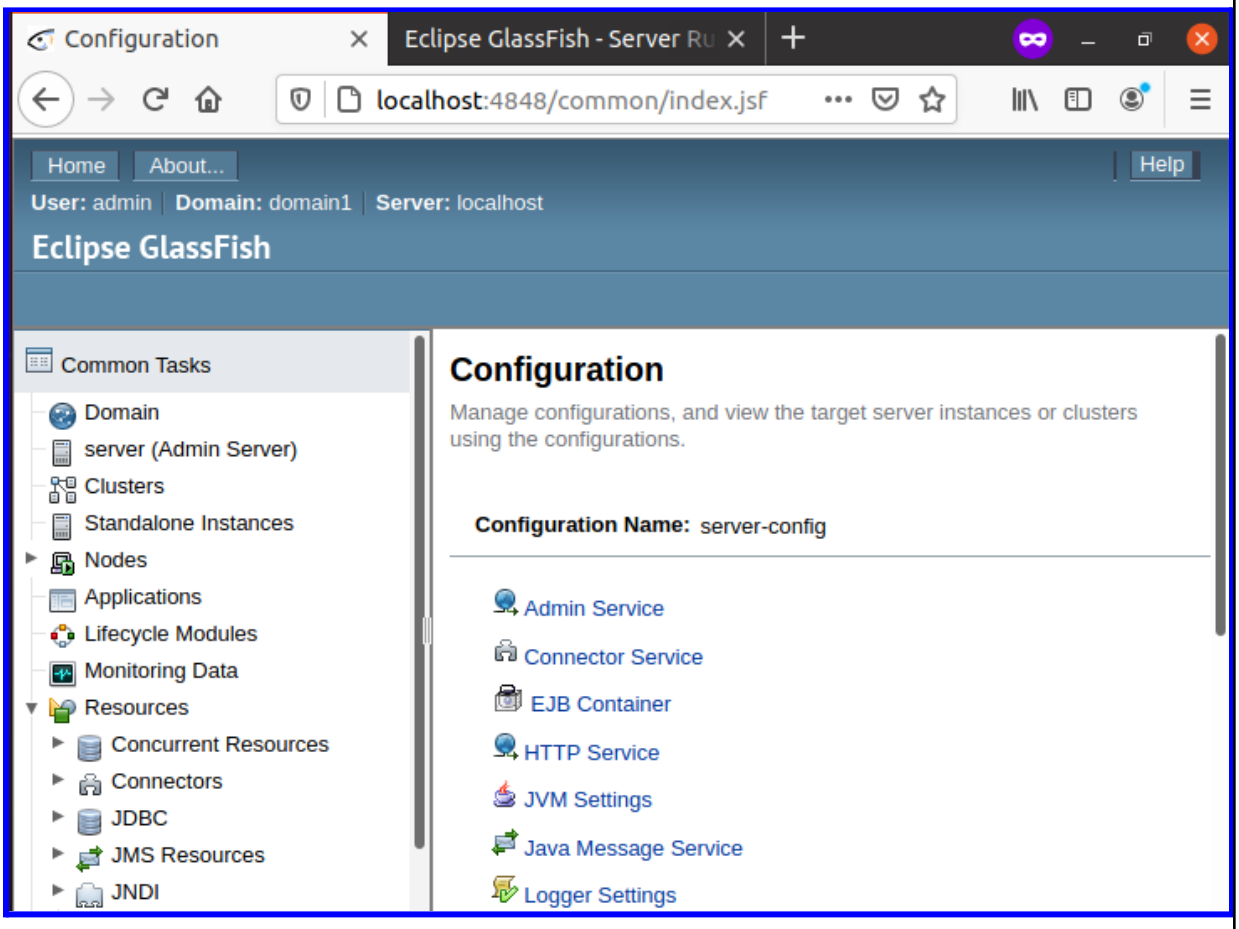
And run the asadmin script

./asadmin start-domain

```
bibek@bibek-lfTechnology:~$ ls
Desktop  Documents  Downloads  glassfish6  glassfish-6.2.2.zip  Music  Pictures
bibek@bibek-lfTechnology:~$ cd glassfish6/
bibek@bibek-lfTechnology:~/glassfish6$ ls
bin  glassfish  javadb  META-INF  mq  README.txt
bibek@bibek-lfTechnology:~/glassfish6$ cd bin/
bibek@bibek-lfTechnology:~/glassfish6/bin$ ls
asadmin  asadmin.bat  debug-asadmin  debug-asadmin.bat
bibek@bibek-lfTechnology:~/glassfish6/bin$ ./asadmin start-domain
Waiting for domain1 to start ................................
Successfully started the domain : domain1
domain  Location: /home/bibek/glassfish6/glassfish/domains/domain1
Log File: /home/bibek/glassfish6/glassfish/domains/domain1/logs/server.log
Admin Port: 4848
Command start-domain executed successfully.
```

After successful start message

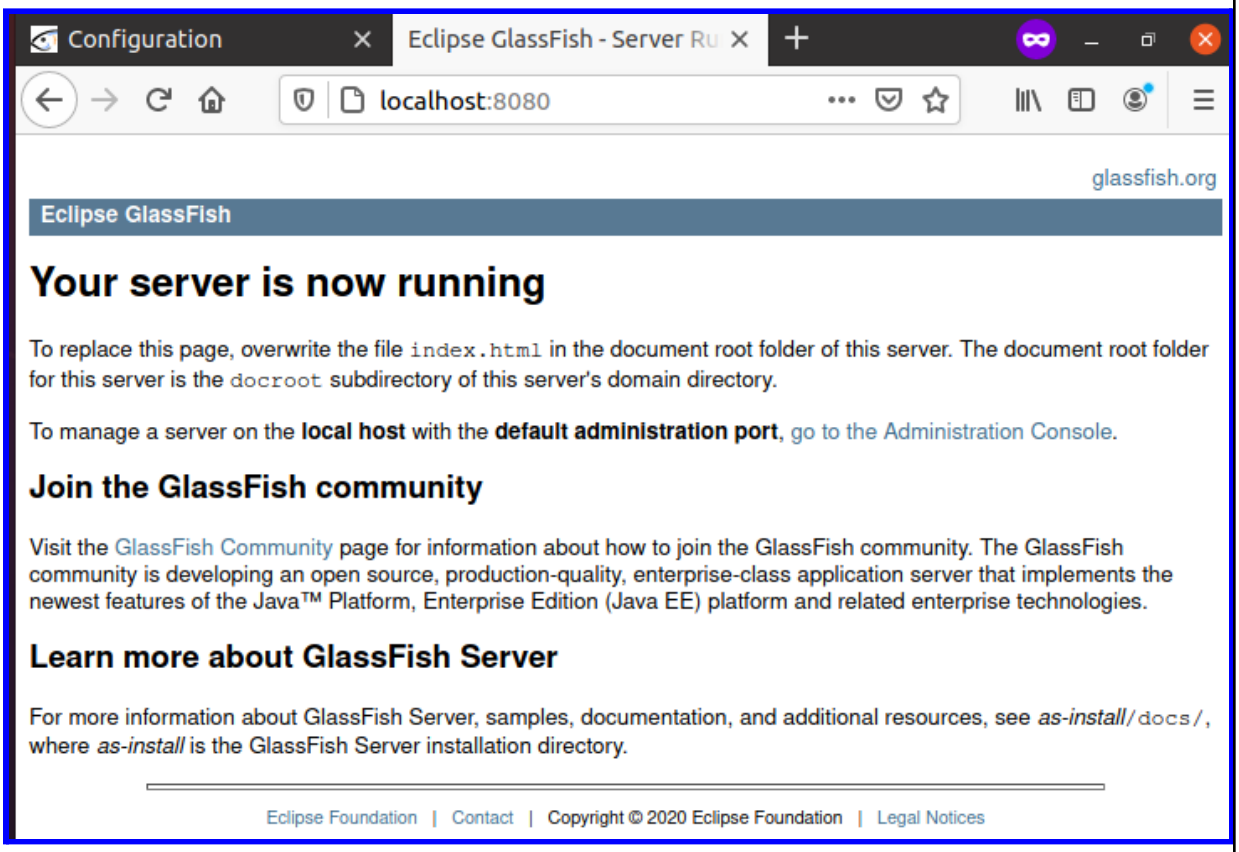
We can check the glassfish page on localhost at admin port (default:4848) in browser



Note: wait for sometime if it has not get started

To change http listener port to 8088

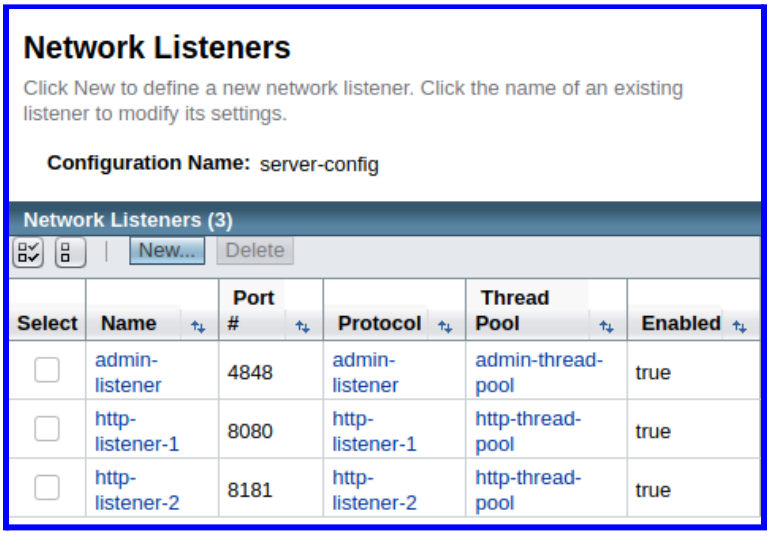
The default http listener port of glassfish is 8080



To change the listener port

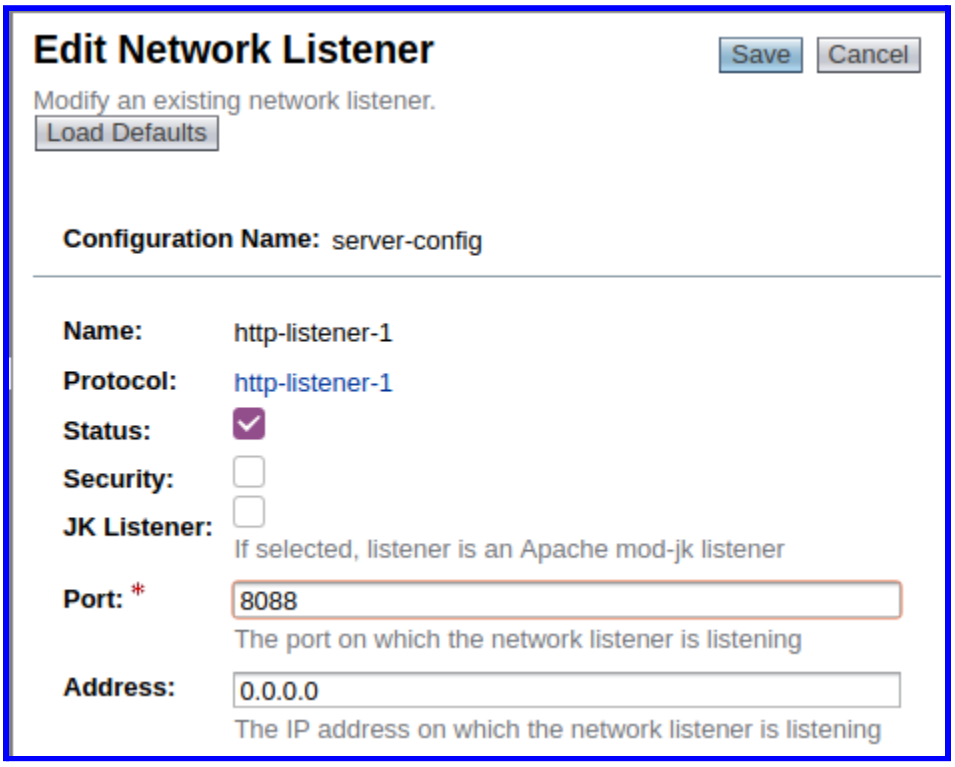
Go to admin panel

Click on server-config (at bottom) >> Network Listeners



We can see here the default http listener 1 port is 8080

Click on http-listener-1, change the port to 8088 and click on save (top-right-corner)



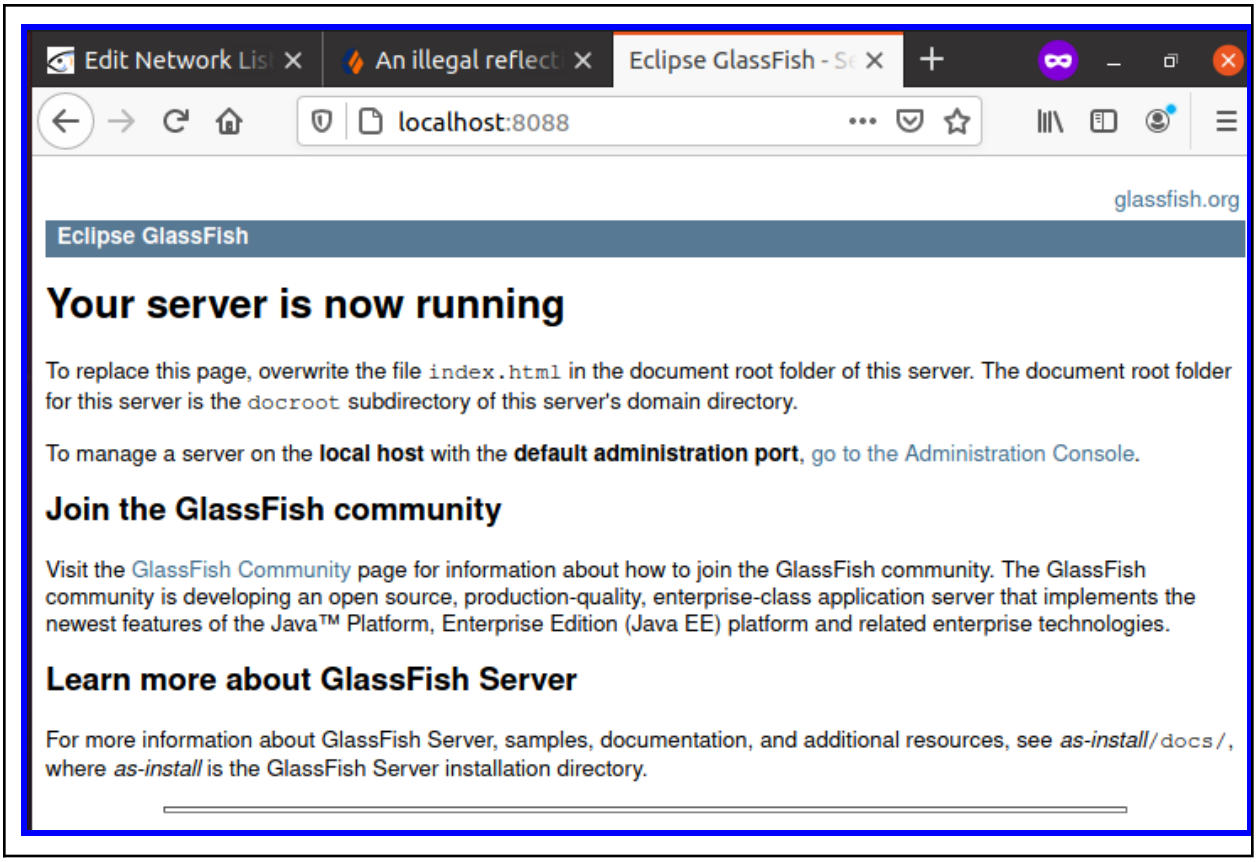
You can open the HTTP listener 1 on port 8088 of localhost.

- If it does not opens then stop the glassfish and again start it from the bin directory

./asadmin stop-domain

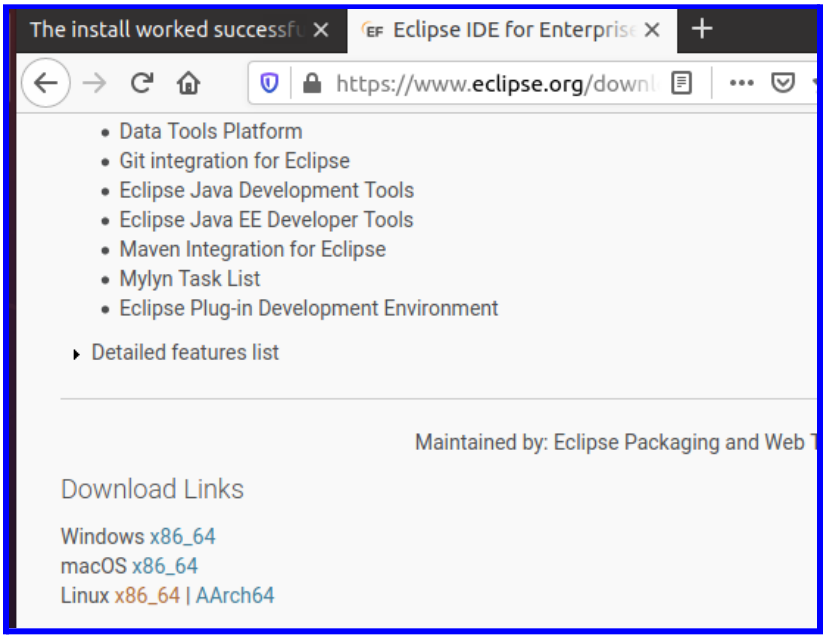
./asadmin start-domain

```
bibek@bibek-lfTechnology:~/glassfish6/bin$ ./asadmin stop-domain
Waiting for the domain to stop .....................................
Command stop-domain executed successfully.
bibek@bibek-lfTechnology:~/glassfish6/bin$ ./asadmin start-domain
Waiting for domain1 to start .....................................
Successfully started the domain : domain1
domain  Location: /home/bibek/glassfish6/glassfish/domains/domain1
Log File: /home/bibek/glassfish6/glassfish/domains/domain1/logs/server.log
Admin Port: 4848
Command start-domain executed successfully.
bibek@bibek-lfTechnology:~/glassfish6/bin$
```



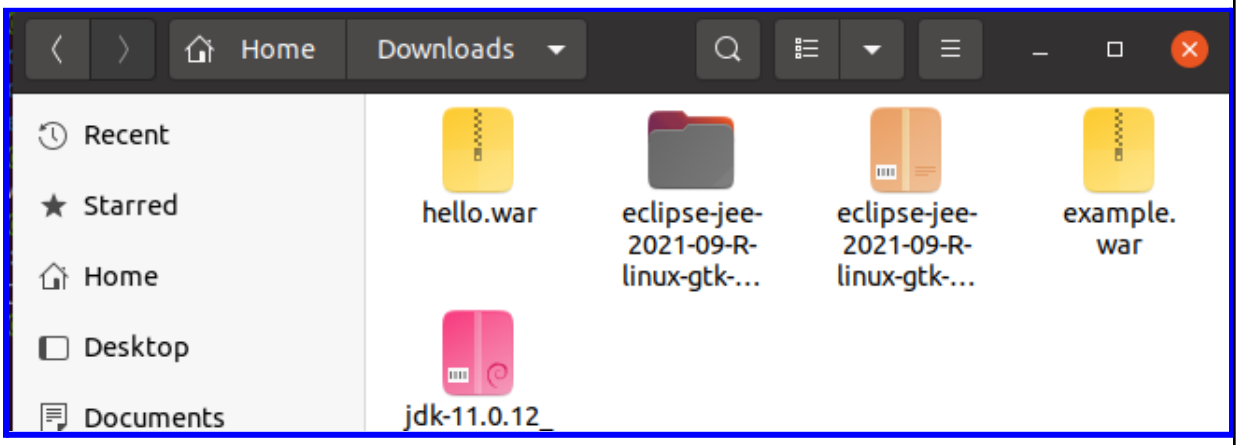
To create servlet install **Java EE - Eclipse** for using **maven project**

Downloaded the eclipse IDE from official page for linux

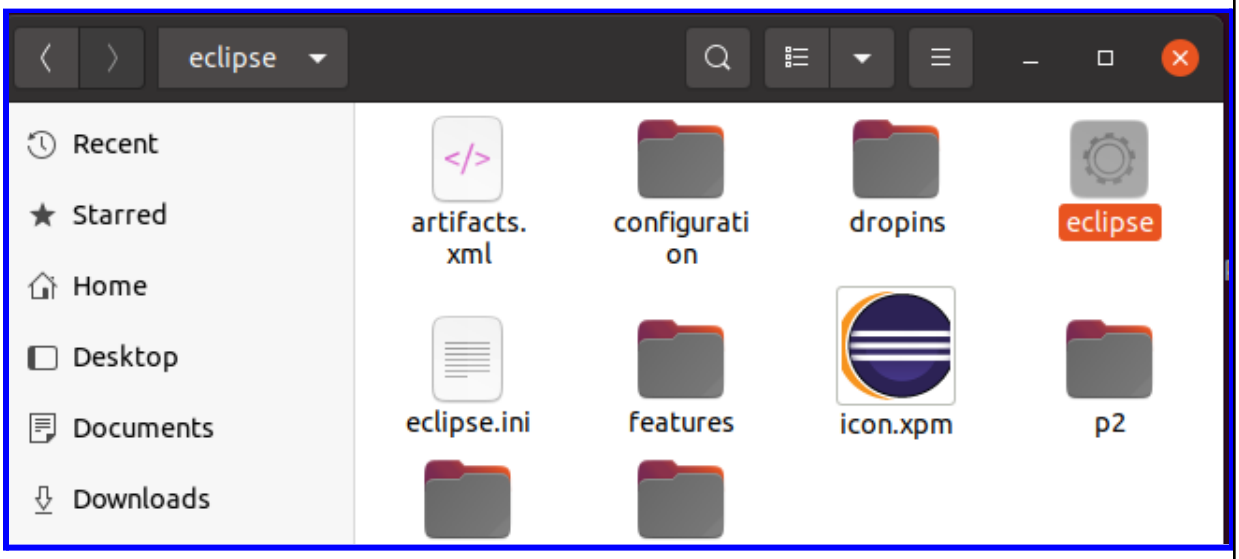


Extracted it and we can directly use it as I have done below

- We can do it either by gui directly or with the command
    - **sudo tar -xzvf <zip-filename>**

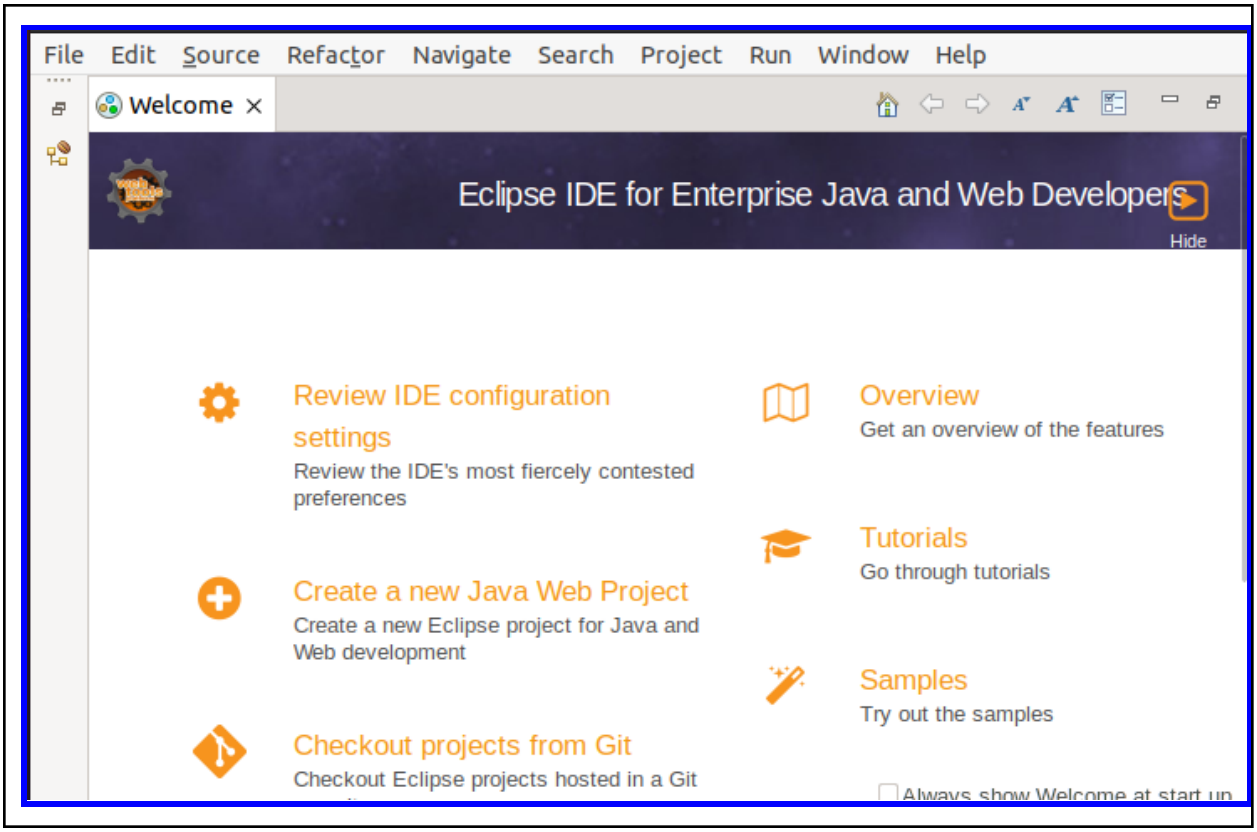


We can go inside this directory >> eclipse and open the eclipse file



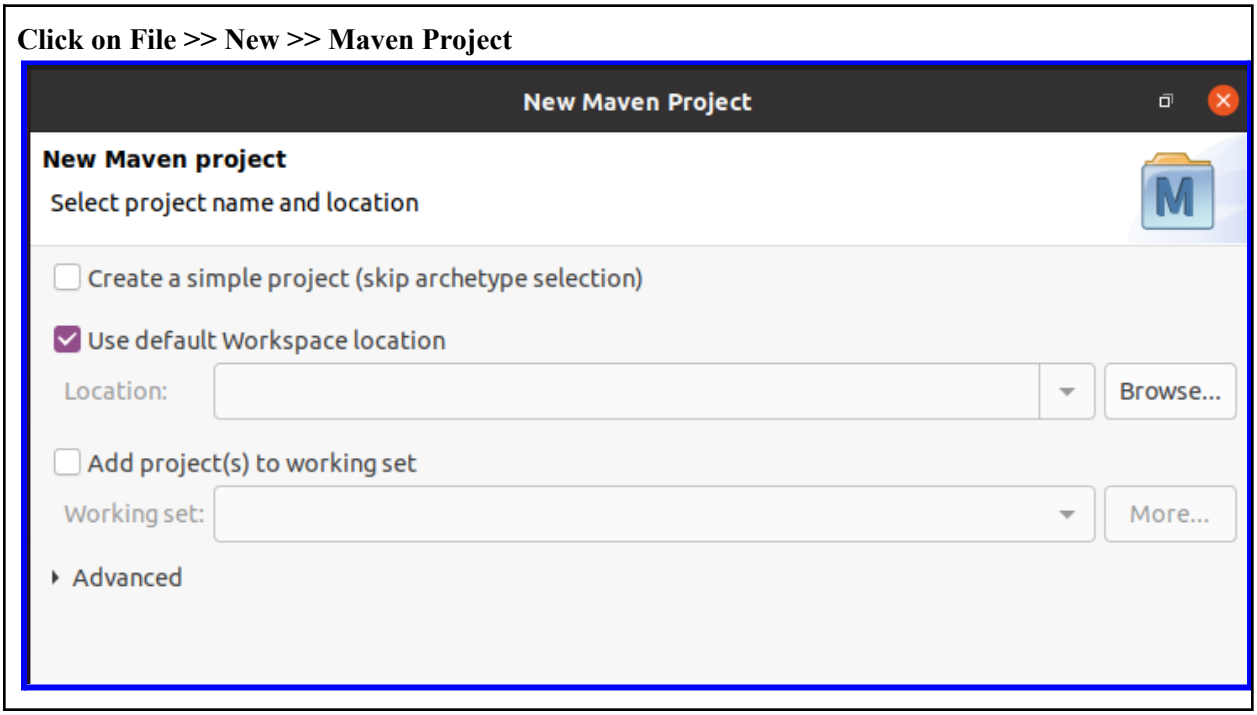
Now eclipse IDE will configure its workspace and we can continue working

At first we can get welcome page like this



Create new maven project

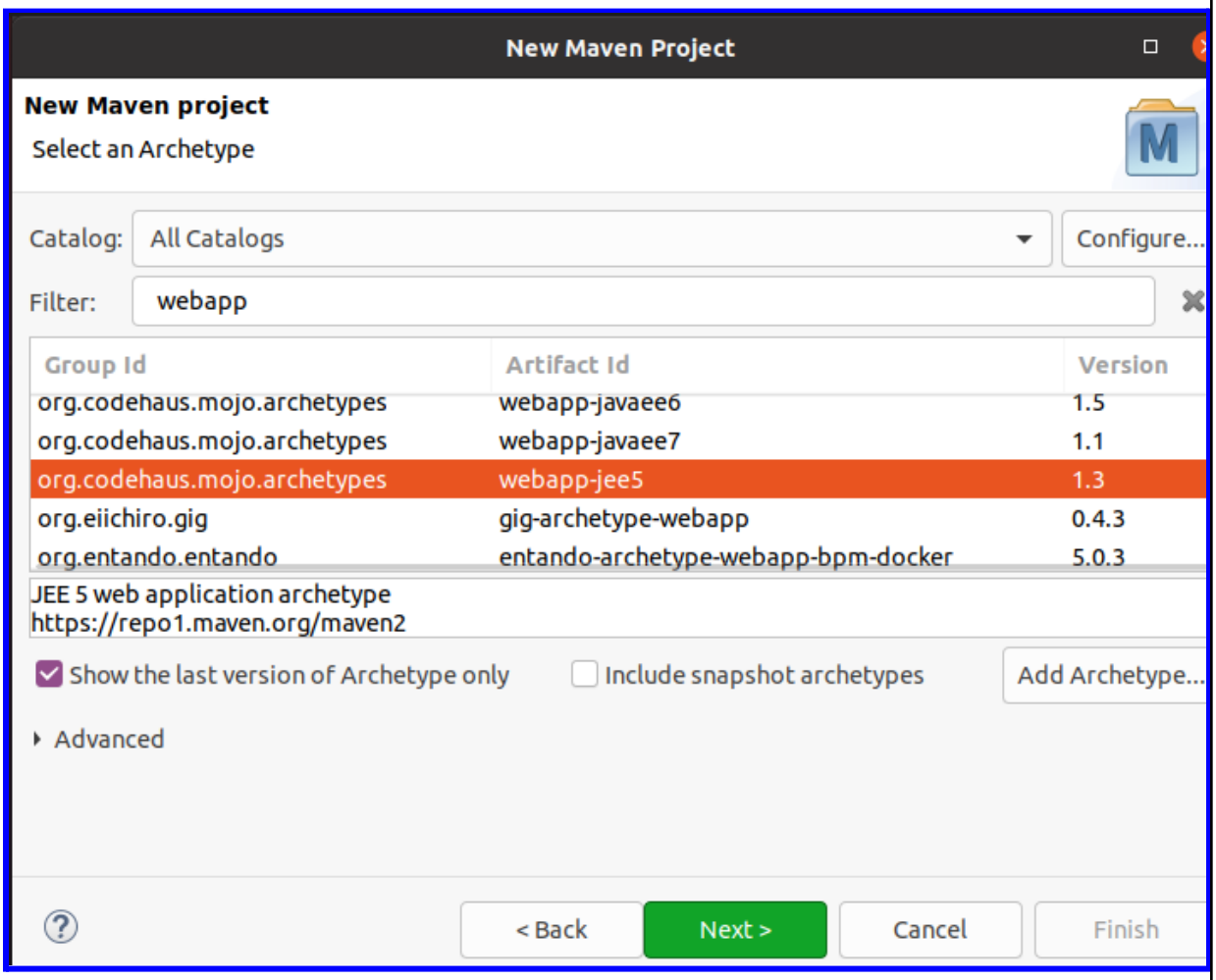
Click on File >> New >> Maven Project



optional -- we can change the default workspace if we want

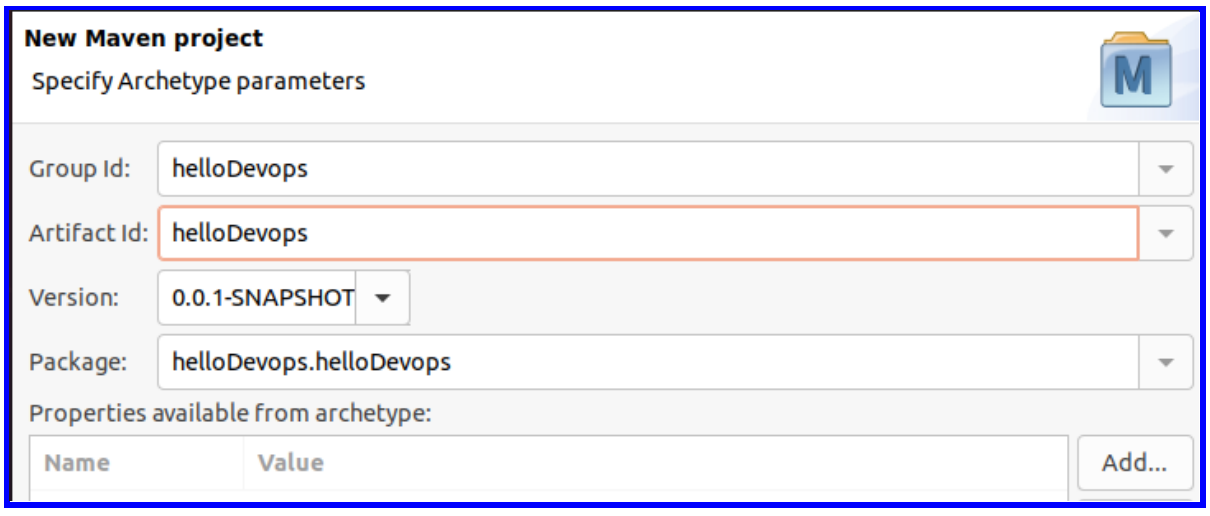
Click on Next (bottom)

Filter for webapp-jee5



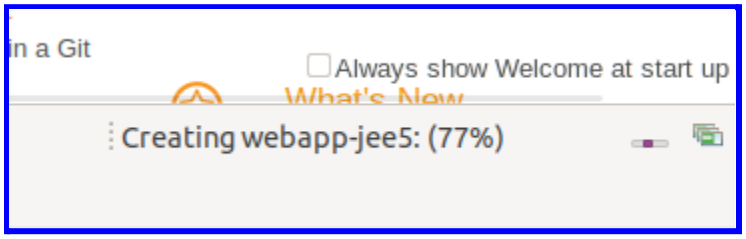
Select it and click next

Give the group Id and Artifact ID



Click on finish

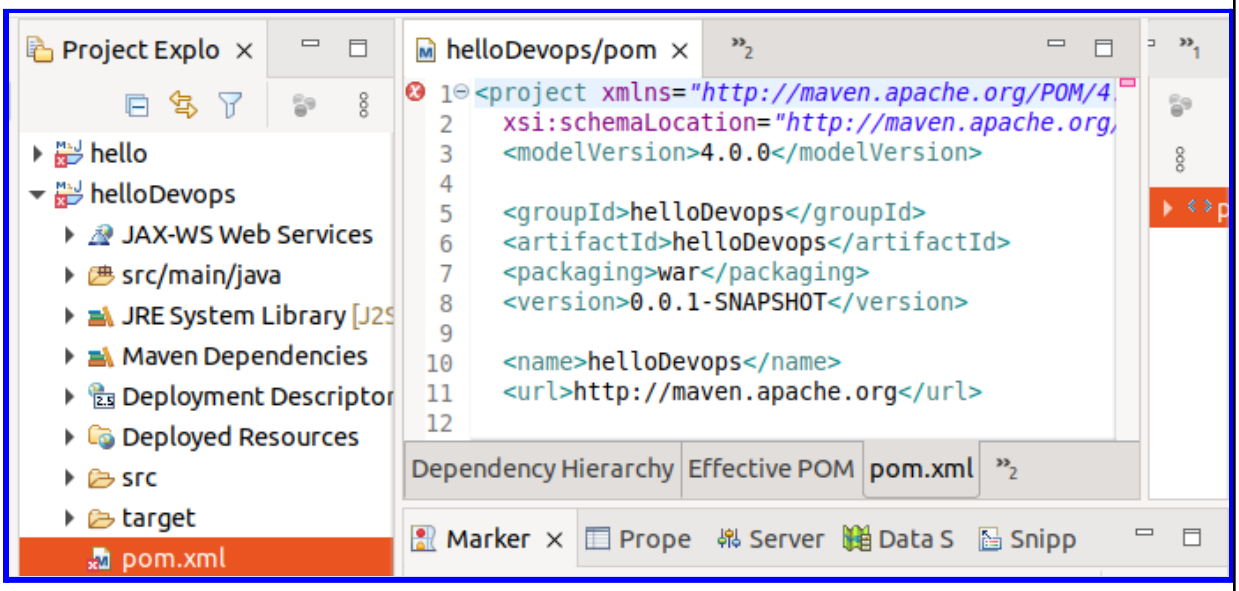
You can see something like this at bottom



When it finishes we can now proceed

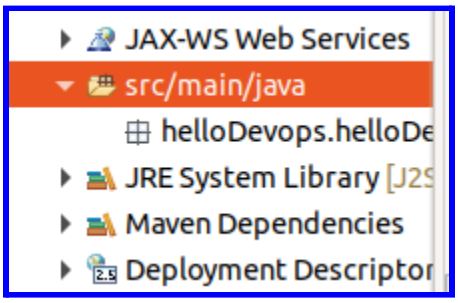
Clicking on pom.xml file

We can view the code

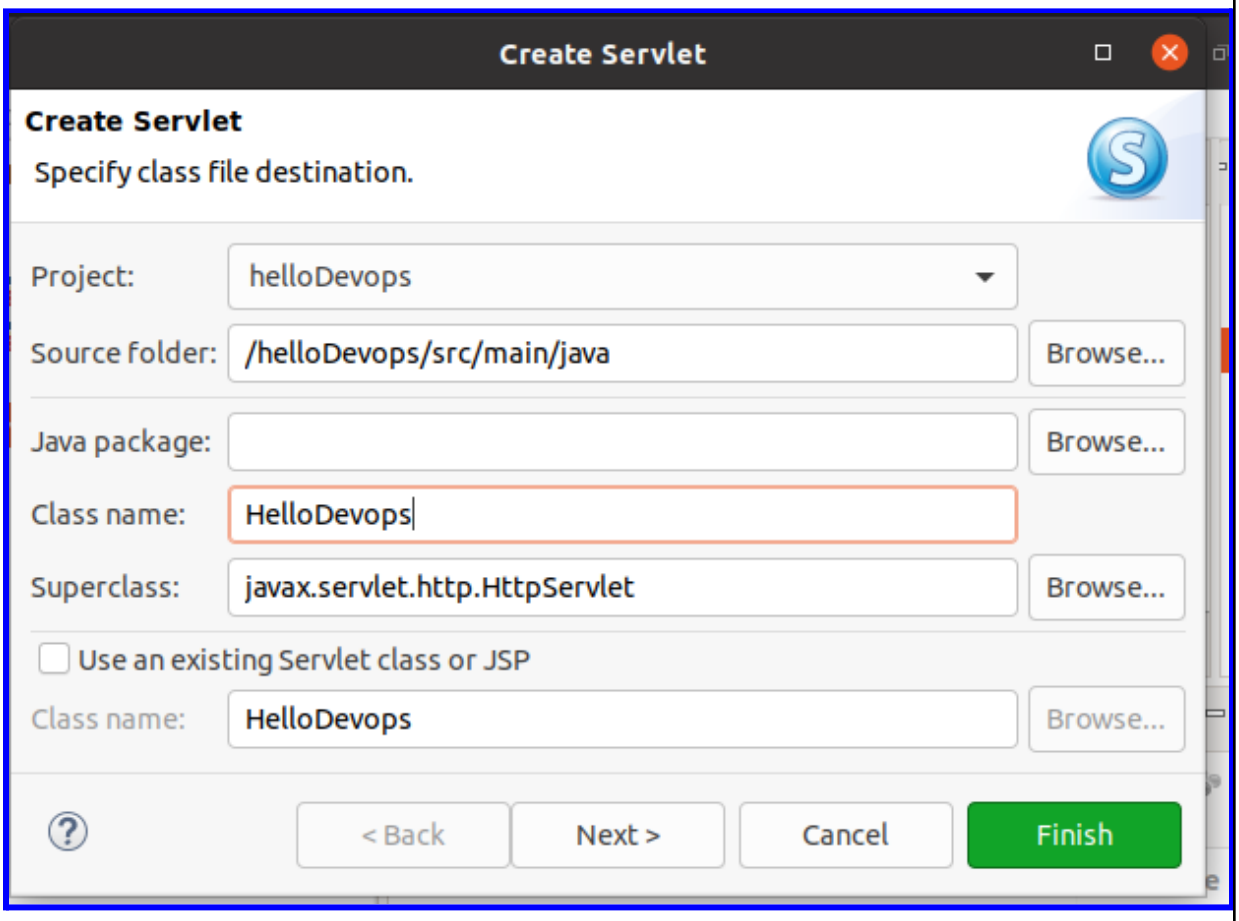


If we scroll down we can see javax.servlet dependencies too

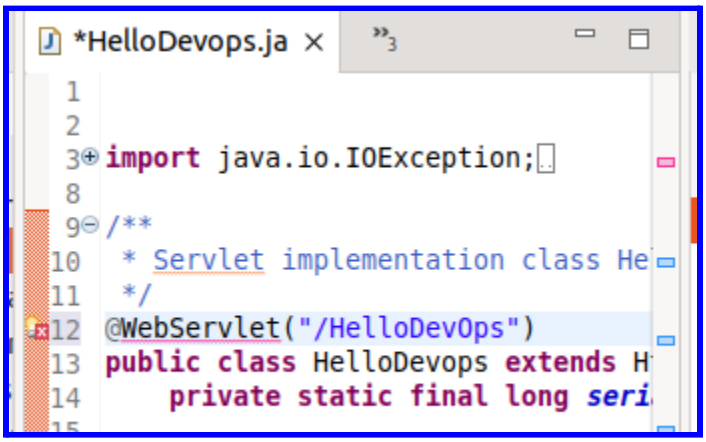
To add servlet class right click on src/main/java directory



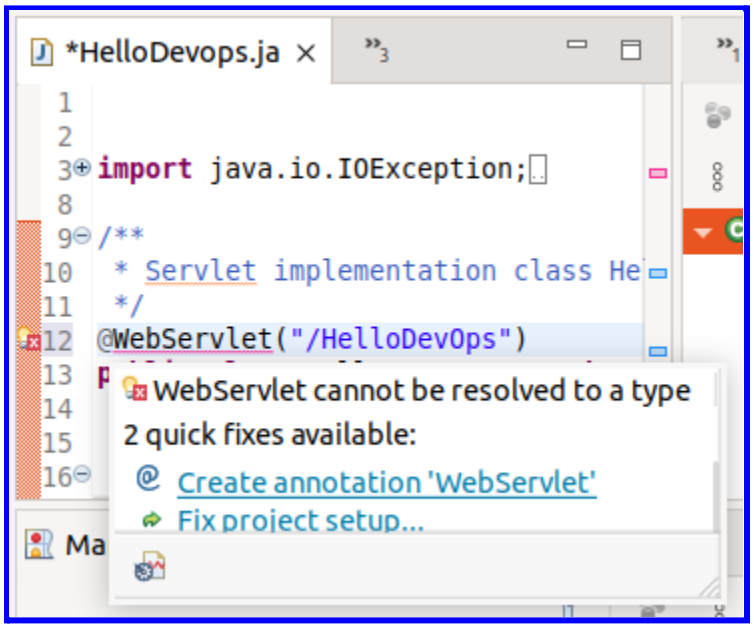
Folow for New >> Servlet and give the class name



In HelloDevops.java add @WebServlet line above public class

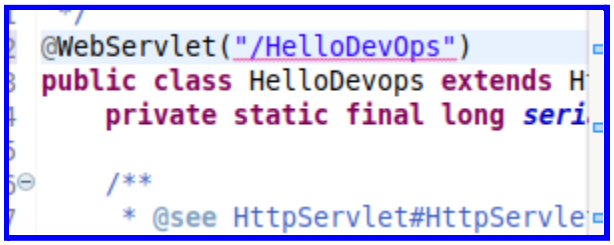


Hover over WebServlet and **create annotation**

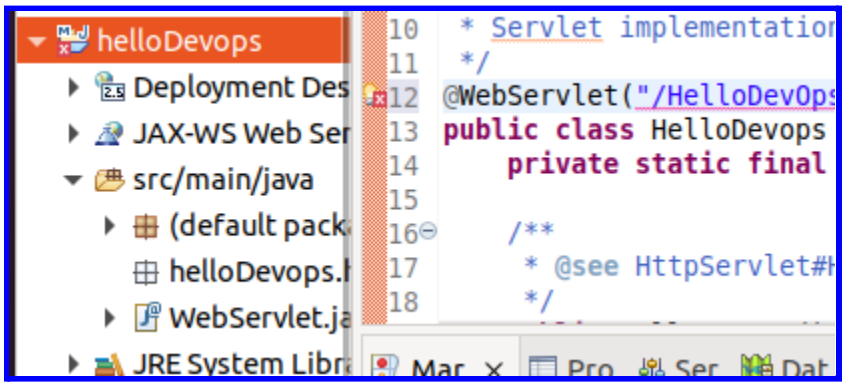


Click on finish when you get another page

Now we can see the error has gone

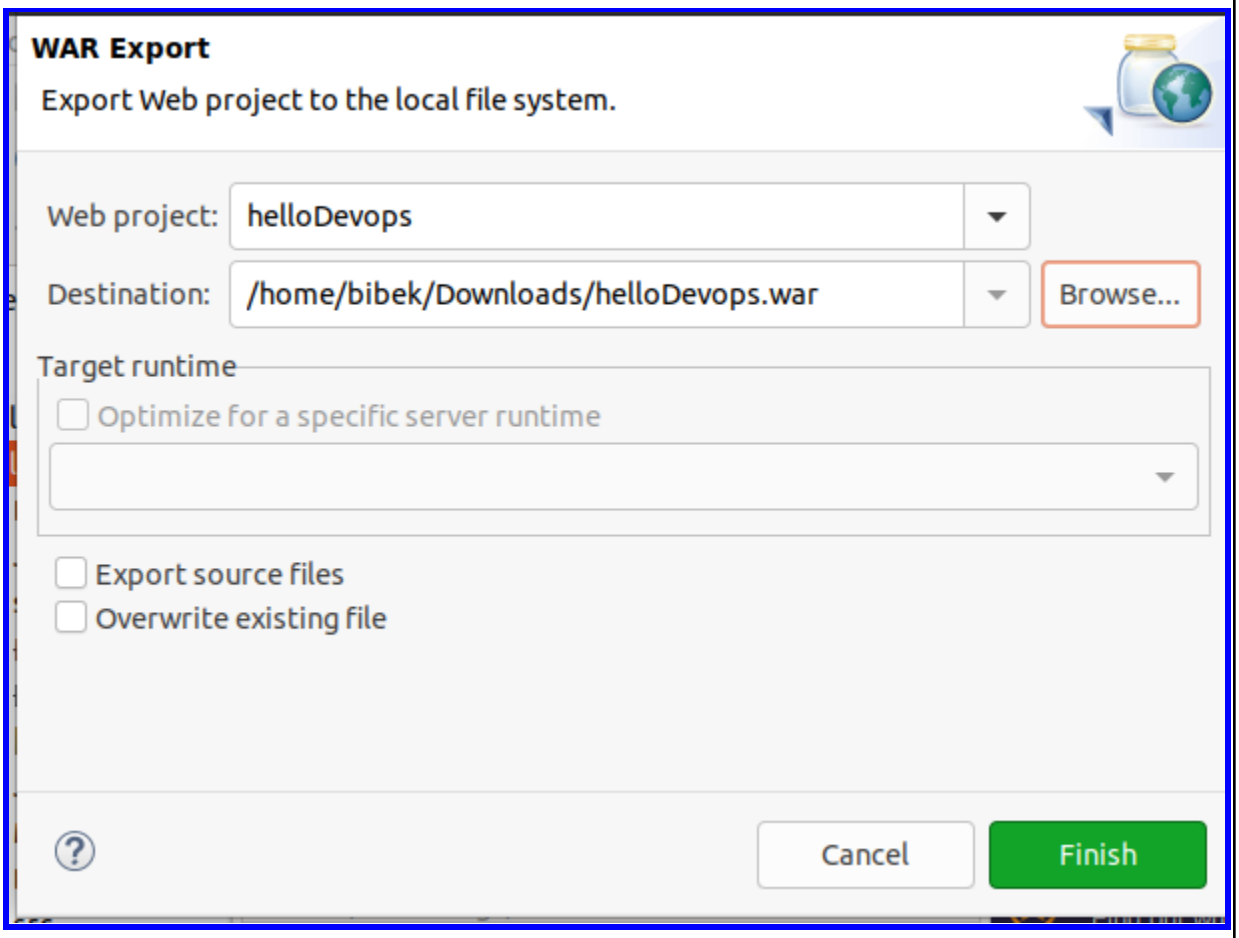


Now we can generate the war file from the main project



Right click on it >> export >> war file

Browse the destination

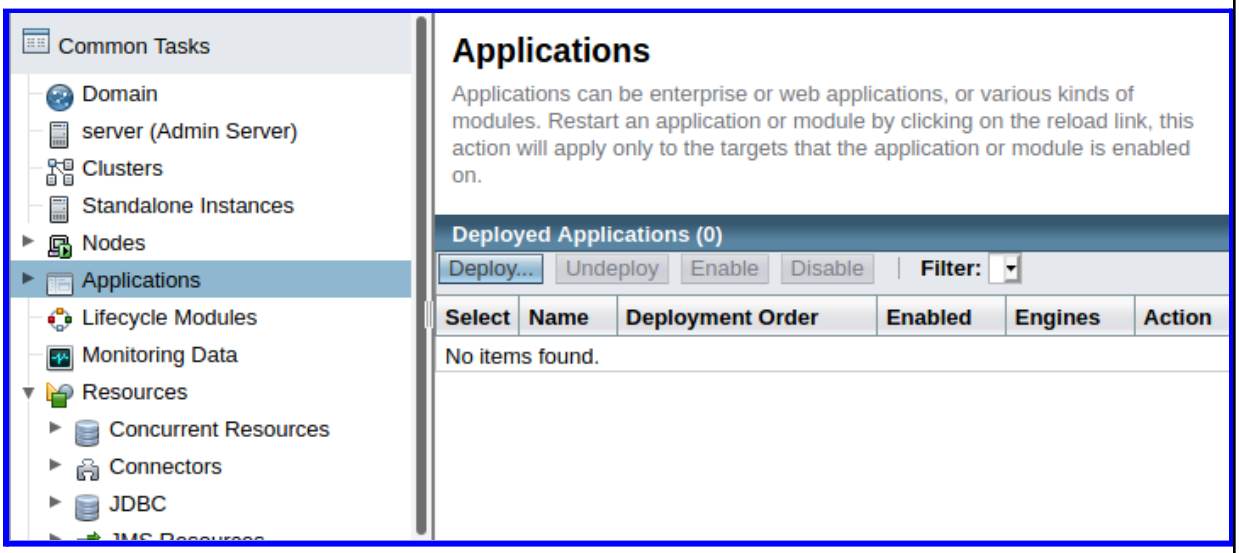


And finish

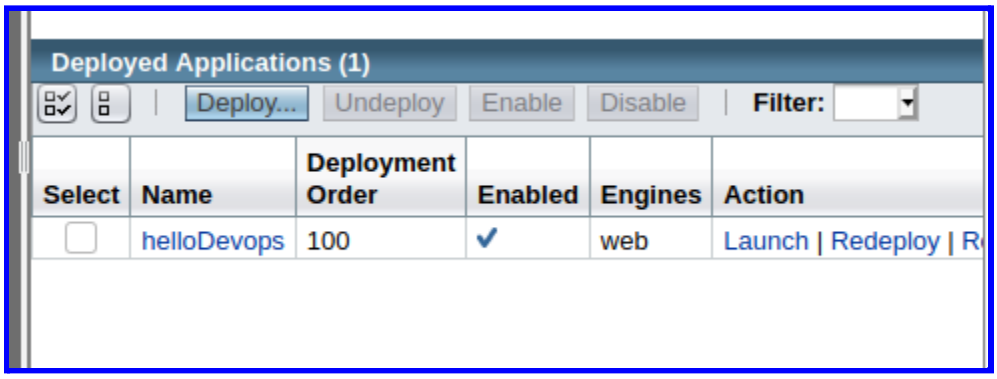
Deploy WAR file to GlassFish Server

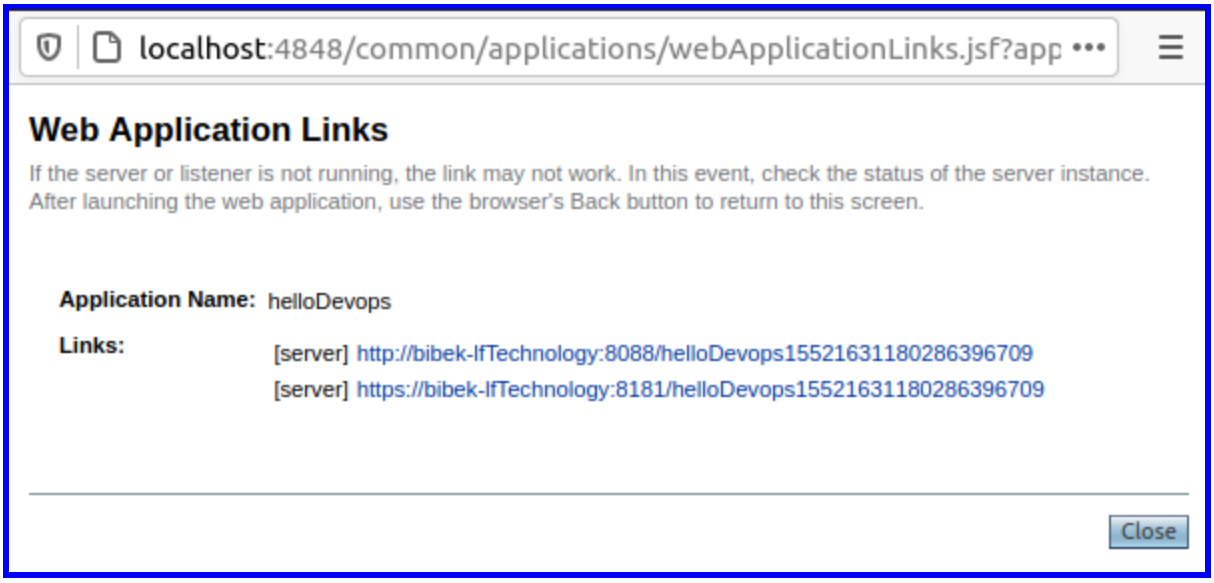
Browse the admin panel of glassfish to deploy the application

Go to applications >> deploy >> packaged filed to be uploaded >> browse the file from the destination >> ok



Then click on launch





Clicking on the first server we can get the deployed web page

In this way a maven servlet application can be deployed to the glassfish