

Pre-requisites:

1. JDK-8

```
sudo apt-get remove openjdk*
sudo apt update
sudo apt install openjdk-8-jdk openjdk-8-jre
java -version // it should have version start with 1.8... etc
```

2. Download MPJ Express & extract it in Downloads

3. Install Apache Netbeans (It will be Easier to work with Netbeans on Windows than Ubuntu)
Download NetBeans 8.2 With Glassfish 4.1.1

```
To Install :
sudo bash [file_name.sh]
```

*** For Jdk Path in setup Enter Path from :/usr/lib/jvm/[jdk] In my Case : /usr/lib/jvm/java-8-openjdk-amd64 Glassfish server version must be 4.1.1

Windows: NetBeans for Windows 8.2

REMOVE COPY WORD FROM EACH FILE NAME.

Assignment 1:

Terminal 1:

```
javac *.java
rmic AddServerImpl
```

Terminal 2:

```
rmiregistry
```

Terminal 3:

```
java AddServer
```

Terminal 4:

```
java AddClient 127.0.0.1 5 8 // The Number of Arguments are Specified after localhost address
```

Assignment 2: (Specify Path Properly Don't Just Copy Paste the Command ;)

Terminal:

```
export MPJ_HOME=/home/ubuntu/Downloads/mpj-v0_44
export PATH=$MPJ_HOME/bin:$PATH
javac -cp $MPJ_HOME/lib/mpj.jar ArrSum.java
$MPJ_HOME/bin/mpjrun.sh -np 4 ArrSum // Specified value of n=4 here
```

Assignment 3: (if You are getting error in this or next assignment then issue is with Java Version it works with Java 8 only as it is depreciated after Java 8 :)

Terminal 1:

```
idlj -fall ReverseModule.idl
javac *.java ReverseModule/*.java
orbd -ORBInitialPort 1056&
java ReverseServer -ORBInitialPort 1056&
```

Terminal 2:

```
java ReverseClient -ORBInitialPort 1056 -ORBInitialHost localhost
```

Assignment 4:

Terminal 1:

```
python client.py
```

Terminal 2:

```
python server.py
```

Assignment 4:

Commands to run Berkeley algo in Berkeley Folder(Short code)

Commands to run Berkeley algo in java

Terminal 1

```
javac *.java
rmiregistry
```

Terminal 2:

```
java Clock_One
```

Terminal 3:

```
java Clock_Two
```

Terminal 4:

```
java Clock_Three
```

Terminal 5:

```
java MainClock
```

Assignment 5:

Terminal

```
javac Tring.java  
java Tring
```

Assignment 6:

Terminal

```
javac Bully.java  
java Bully  
javac Ring.java  
java Ring
```

Assignment 7:

Youtube tutorial - 1

Youtube tutorial - 2

DS-lab

Netbeans Steps:

If netbeans version 8, Java 8 If version 16+, Java 11

Create project Java - web application Server - glass fish server Frameworks - none Finish

Right click on project New Webservice Package name

Right click on service Add operation Return type double Select Parameters add name and double

Inside created operation Replace return value

Right click on project Build Then deploy

Test operation

New project Same steps

Drag form from pallette into body of index.html Insert Form Action: CalculatorServlet

Input fields drag/ add (type, name, value) Last

Right click on 2nd project New Web Service Client Select web service of previous project Package default

Right click on second project New Servlet Note: same name as the form action name Add description checkbox tick

Add all methods from first project in the second project by dragging from newly created web service reference folder

In the response fields Add following

```
double num1, num2; num1 = Double.parseDouble(request.getParameter("number1"));
Same for num2
```

Add inside body tag `addition(num1, num2)`

Clean and build

Run first form file Add css if needed