

### \*\*\*\*\*Assignment 1\*\*\*\*\*

OS Required : Ubuntu

Installations :- java jdk

link: <https://www.oracle.com/in/java/technologies/downloads/#jdk20-windows>

Steps

- 1)open cmd prompt
- 2) `javac Server.java`
- 3)`java Server`
- 4)Open another cmd prompt
- 5)`javac Client.java`
- 6)`java Client`

### \*\*\*\*\*Assignment 2\*\*\*\*\*

OS Required : Ubuntu

Installations :- java jdk v1.6 or above

Steps:

1: make all files needed (ReverseModule.idl,ReverseImpl.java,ReverseServer.java,ReverseClient.java)

**For Server**

1. idlj -fall ReverseModule.idl
2. javac \*.java ReverseModule/\*.java
3. orbd -ORBInitialPort 1050&
4. java ReverseServer -ORBInitialPort 1050 -ORBInitialHost localhost&

**For Client**

java ReverseClient -ORBInitialPort 1050 -ORBInitialHost localhost

### \*\*\*\*\*Assignment 3\*\*\*\*\*

OS Required : Ubuntu

Softwares Required - gcc compiler,mpi library

Procedure:

1. Install the gcc compiler on ubuntu if not installed (to check if gcc compiler is installed or not run this command - "gcc --version"). Install the husing the command "sudo apt install build-essentials"
2. Install the mpi library using the following command - "sudo apt install mpich"
3. To execute the file , open the terminal in the folder where the file resides.
4. Execute the following commands one by one -
  - i. mpicc arr\_sum.c -o mpi\_sum
  - ii. mpirun -np 4 ./mpi\_sum
5. The output will be displayed.

### \*\*\*\*\*Assignment 4\*\*\*\*\*

OS Required : Ubuntu

Software Required :- Python 3.7 or above

link :- <https://www.python.org/downloads/>

Steps

- 1)open cmd prompt

- 2) `python server.py`
- 3) Open another cmd prompt
- 4) `python client.py`

#### \*\*\*\*\*Assignment 5\*\*\*\*\*

OS Required : Ubuntu

Softwares Required – Python v3.7 or later

Procedure:

1. Make sure Python is installed. If not, install python (v3.7 or above)
2. For executing the program, open terminal in the folder where the python file resides.
3. Type the following command -  
    python3 token-ring.py
4. The output will be displayed.

#### \*\*\*\*\*Assignment 6\*\*\*\*\*

OS Required : Ubuntu

Softwares Required – Python v3.7

Procedure:

1. Make sure Python is installed. If not, install python (v3.7 or above)
2. For executing the program, open terminal in the folder where the python file resides.
3. Type the following command -  
    python3 bully\_ring.py
4. The output will be displayed.

#### \*\*\*\*\*Assignment 7\*\*\*\*\*

OS Required : Windows

Software required:- Node.js

link : <https://nodejs.org/en/download>

Steps

- 1) open cmd prompt
- 2) “npm install”
- 3) “cd server”
- 4) “npm install”
- 5) `npm install nodemon`
- 6) `nodemon server/index.js`
- 7) open another terminal
- 8) `npm start app.js`
- 9) open any browser
- 10) enter url 'localhost:3000/users'