Agile, Git, and Beyond

FSD: Lab Guide

Note: Please do not alter the version of the tools as it might lead to incompatibility.

This section will guide you to:

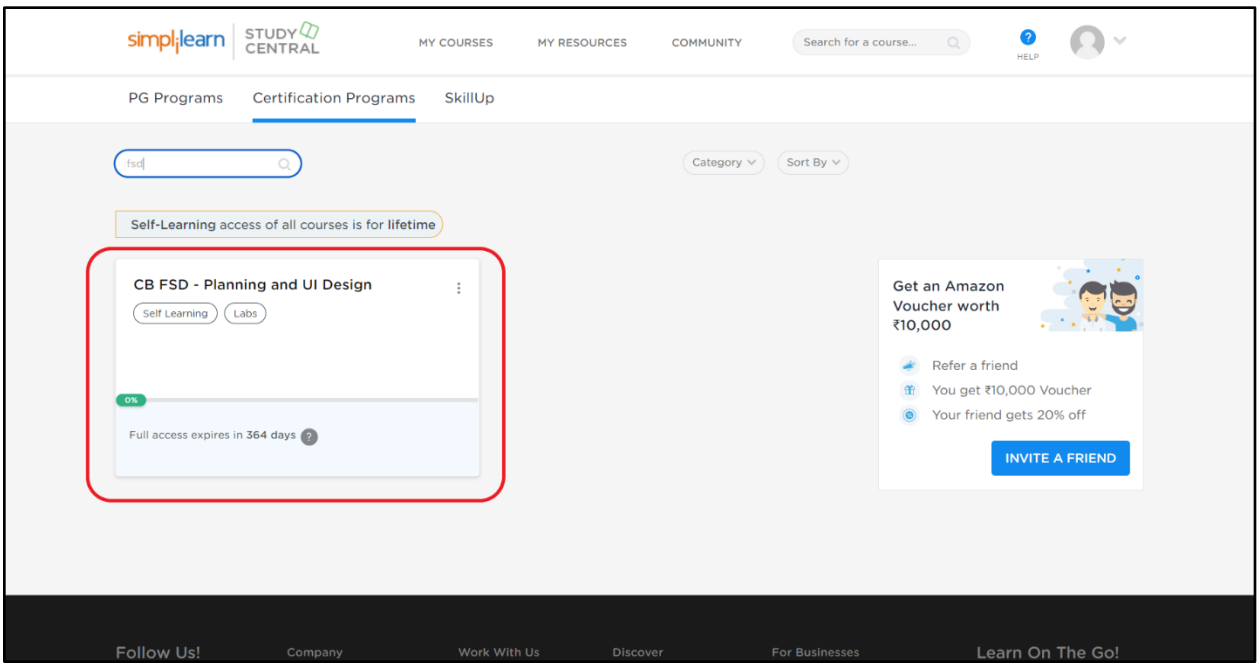
- Use labs to execute all demos included in this course

This lab has two subsections, namely:

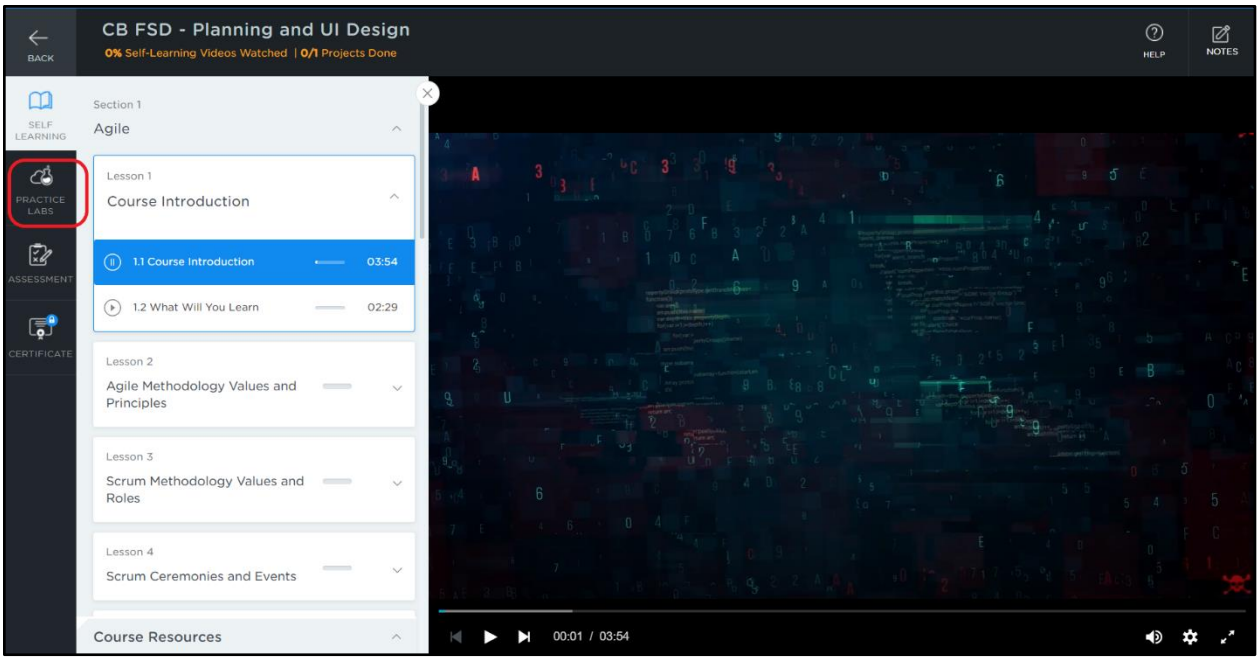
1. Starting practice labs on LMS
2. Using different IDEs and software

Step 1: Starting practice labs on LMS

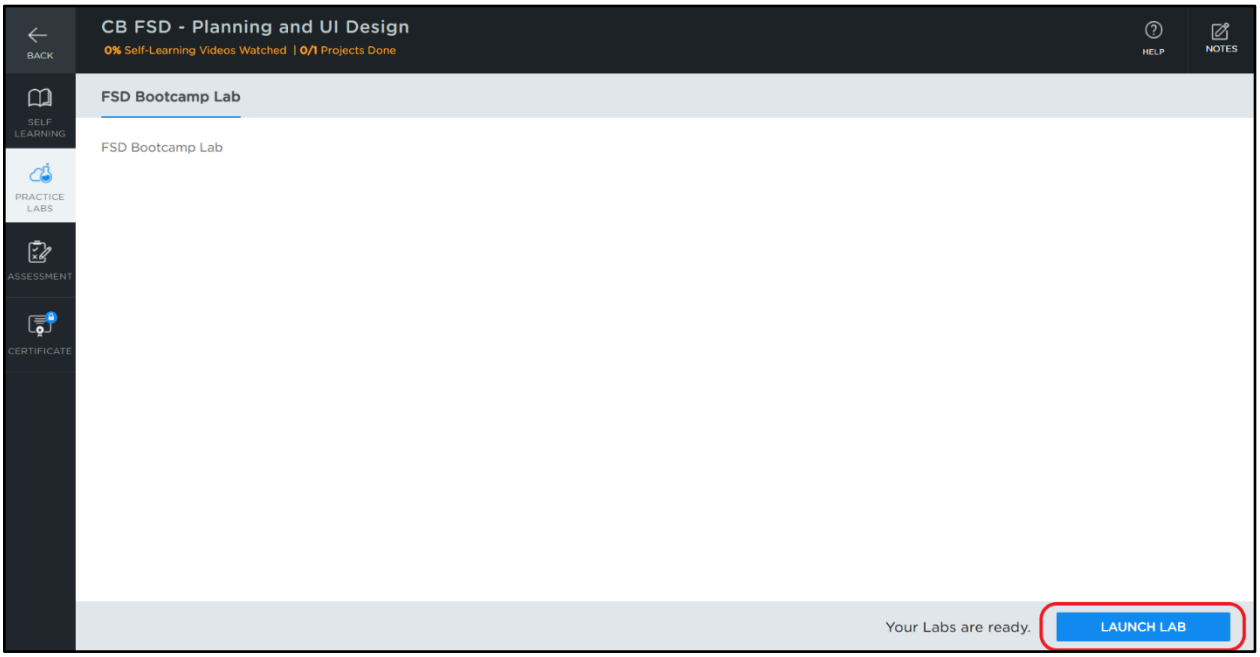
- Login to Simplilearn LMS
- Go to the respective course



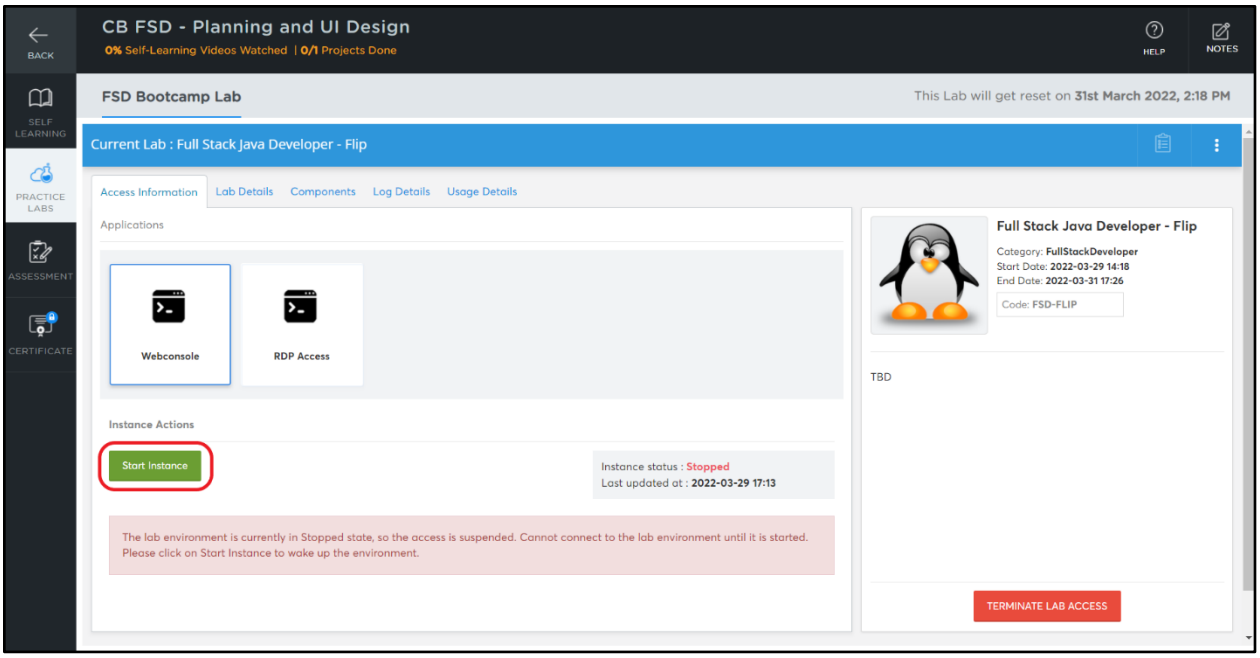
- On the left, you will find the course ToC page
- To its left, you will find the **PRACTICE LABS** tab
- Click on it

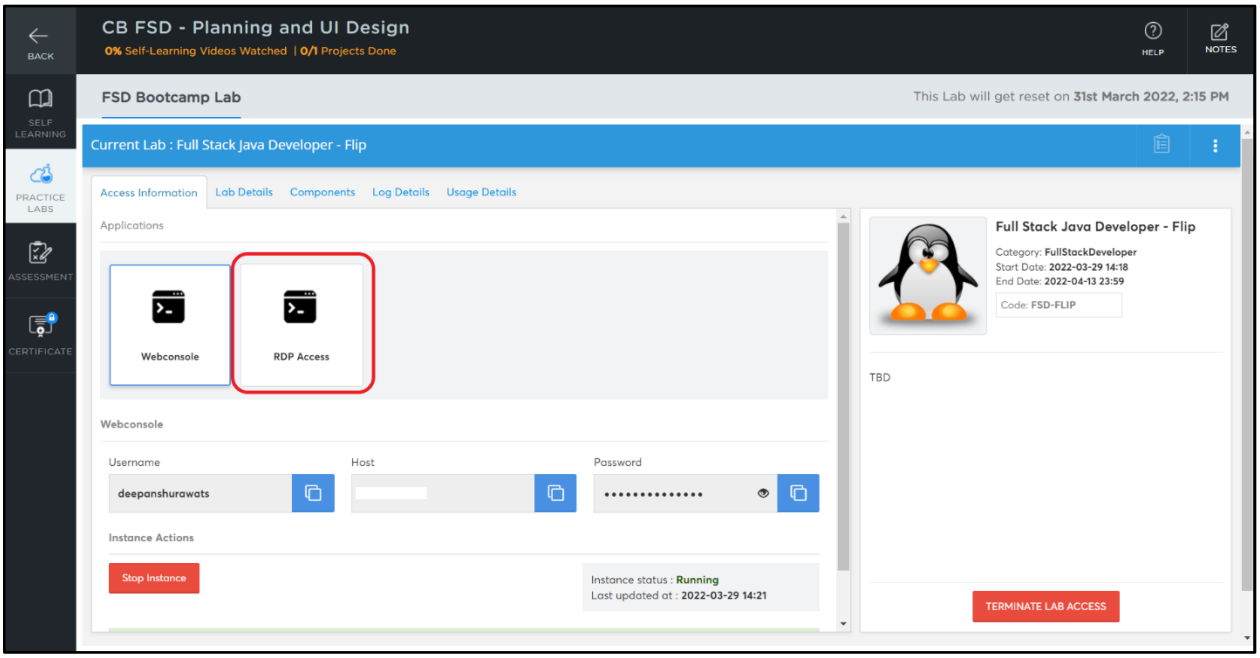


- As a new window opens, read the instructions and click on **LAUNCH LAB**
- This will launch practice labs for this course



- Click on Start Instance and select RPD Access


BACK
CB FSD - Planning and UI Design
0% Self-Learning Videos Watched | 0/1 Projects Done
HELP
NOTES
SELF LEARNING
PRACTICE LABS
ASSESSMENT
CERTIFICATE
FSD Bootcamp Lab
This Lab will get reset on 31st March 2022, 2:18 PM
Current Lab : Full Stack Java Developer - Flip
Access Information
Lab Details
Components
Log Details
Usage Details
Applications
Webconsole
RDP Access
Instance Actions
Start Instance
Instance status : Stopped
Last updated at : 2022-03-29 17:13
The lab environment is currently in Stopped state, so the access is suspended. Cannot connect to the lab environment until it is started.
Please click on Start Instance to wake up the environment.
Full Stack Java Developer - Flip
Category: FullStackDeveloper
Start Date: 2022-03-29 14:18
End Date: 2022-03-31 17:26
Code: FSD-FLIP
TBD
TERMINATE LAB ACCESS


BACK
CB FSD - Planning and UI Design
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HELP
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SELF LEARNING
PRACTICE LABS
ASSESSMENT
CERTIFICATE
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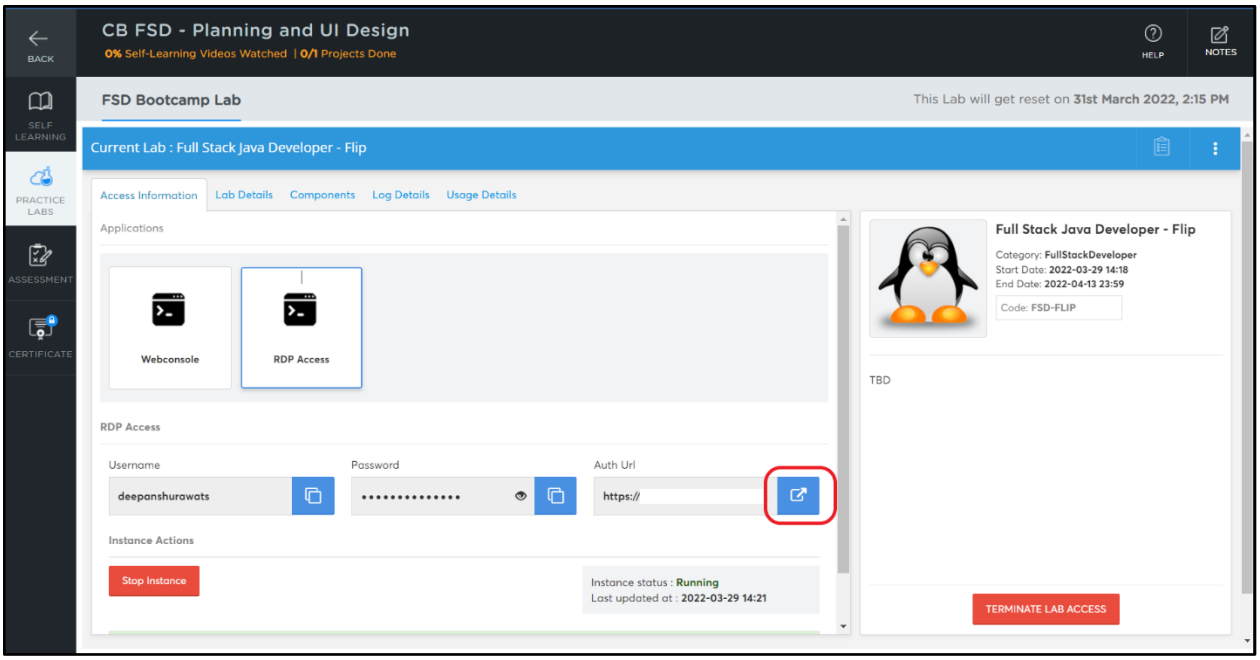
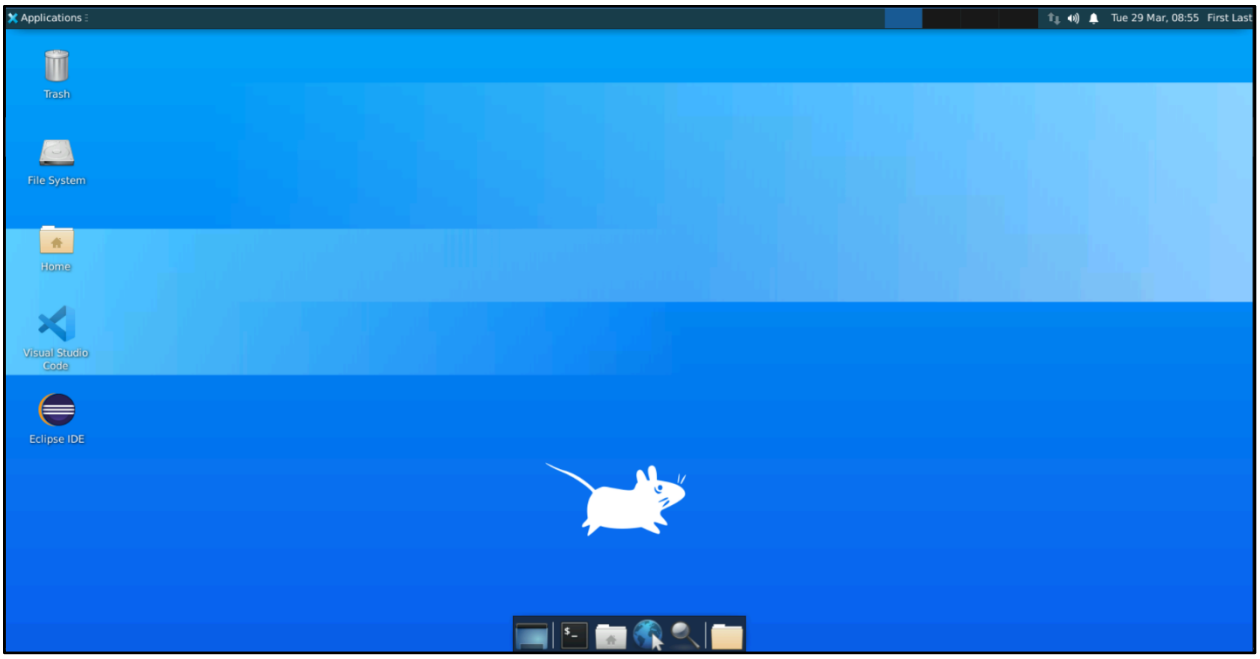
Current Lab : Full Stack Java Developer - Flip
Access Information
Lab Details
Components
Log Details
Usage Details
Applications
Webconsole
RDP Access
Webconsole
Username
deepanshurawats
Host
Password
Instance Actions
Stop Instance
Instance status : Running
Last updated at : 2022-03-29 14:21
Full Stack Java Developer - Flip
Category: FullStackDeveloper
Start Date: 2022-03-29 14:18
End Date: 2022-04-13 23:59
Code: FSD-FLIP
TBD
TERMINATE LAB ACCESS



- You will be able to access IDEs and software which are present in labs

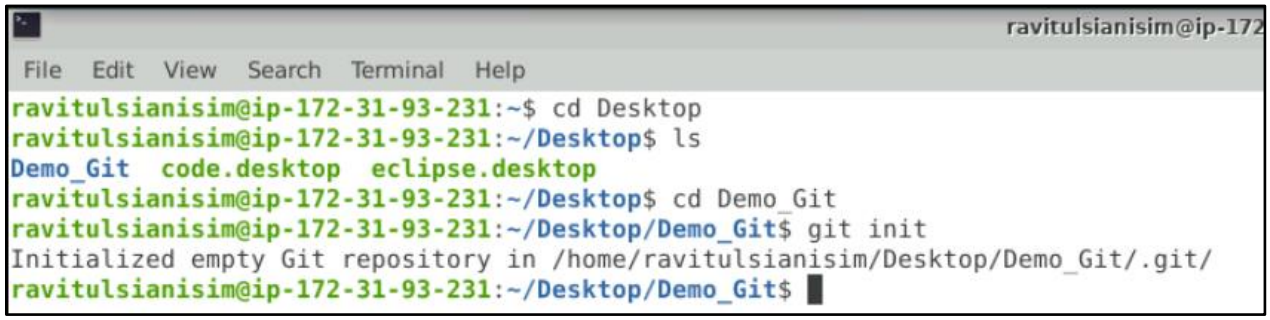


Step 2: Using different IDEs and software

Git:

- Git is already installed in the labs
- To check whether Git is installed properly or not:
  Create a folder named **Demo_Git** on your desktop and open it
  - Create the files: index.html and helloWorld.java
  - Open the terminal and navigate to the folder you have created
  - Execute the following command to initialize git repository:

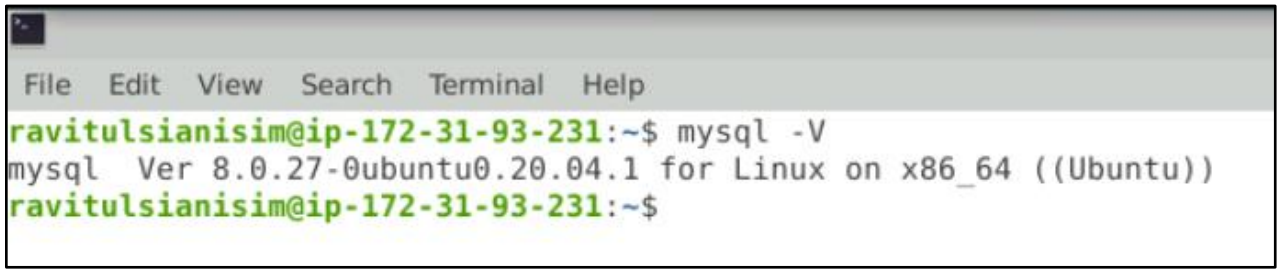
    git init



MySQL:

- MySQL is already installed in your practice labs
- To verify the installation:
  - Open the command-line interface
  - Type the following command:

    mysql -V



The command mentioned above displays the MySQL version installed in your practice labs

- In case you find that MySQL is not installed in your practice labs, you can install it using the following commands:

  sudo apt-get update
  sudo apt-get install mysql-server

Node JS:

- Node JS 17.2.0 version is installed in your practice labs
- To verify the installation:
  - Open the command-line interface
  - Type in the command:

    node -v

```
ravitulsianisim@ip-172-31-84-46:~$ node -v
v17.2.0
ravitulsianisim@ip-172-31-84-46:~$
```

- The command mentioned above displays the Node JS version installed in your practice lab

- If Node JS is not installed in your practice lab, you can install it by using the commands:

  sudo apt-get update
  sudo apt-get install nodejs

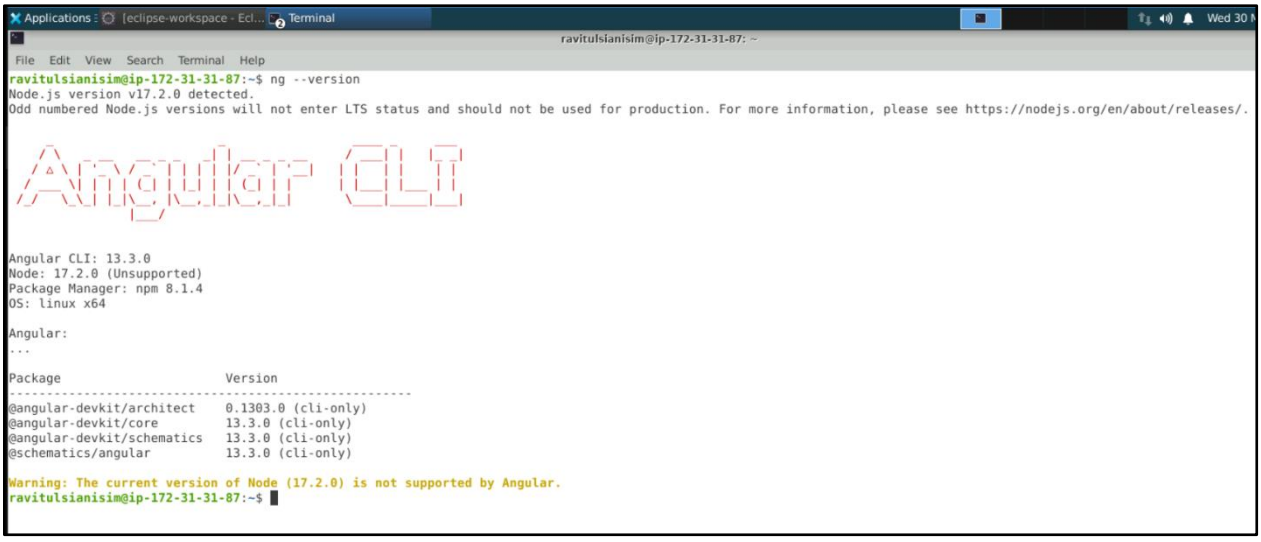
```
ravitulsianisim@ip-172-31-84-46:~$ sudo apt-get update
Hit:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal InRelease
Get:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-updates InRelease [114 kB]
Get:3 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-backports InRelease [108 kB]
Get:4 http://security.ubuntu.com/ubuntu focal-security InRelease [114 kB]
Get:5 http://packages.microsoft.com/repos/code stable InRelease [10.4 kB]
Ign:6 https://pkg.jenkins.io/debian binary/ InRelease
Get:7 https://pkg.jenkins.io/debian binary/ Release [2044 B]
Get:8 https://dl.google.com/linux/chrome/deb stable InRelease [1811 B]
Get:9 https://pkg.jenkins.io/debian binary/ Release.gpg [833 B]
Get:10 https://deb.nodesource.com/node_17.x focal InRelease [4583 B]
Get:11 http://repo.zabbix.com/zabbix/5.0/ubuntu focal InRelease [4958 B]
```

```
ravitulsianisim@ip-172-31-84-46:~$ sudo apt-get install nodejs
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following packages will be upgraded:
  nodejs
1 upgraded, 0 newly installed, 0 to remove and 197 not upgraded.
Need to get 27.1 MB of archives.
After this operation, 465 kB disk space will be freed.
Get:1 https://deb.nodesource.com/node_17.x focal/main amd64 nodejs amd64 17.9.0-deb-1nodesource1 [27.1 MB]
Fetched 27.1 MB in 1s (34.1 MB/s)
(Reading database ... 184160 files and directories currently installed.)
Preparing to unpack .../nodejs_17.9.0-deb-1nodesource1_amd64.deb ...
Unpacking nodejs (17.9.0-deb-1nodesource1) over (17.2.0-deb-1nodesource1) ...
Setting up nodejs (17.9.0-deb-1nodesource1) ...
Processing triggers for man-db (2.9.1-1) ...
```

Angular:

- Angular has been installed in your practice labs using *npm*
- To verify the installation:
    - Open the command-line interface
    - Type the command:

      ng --version

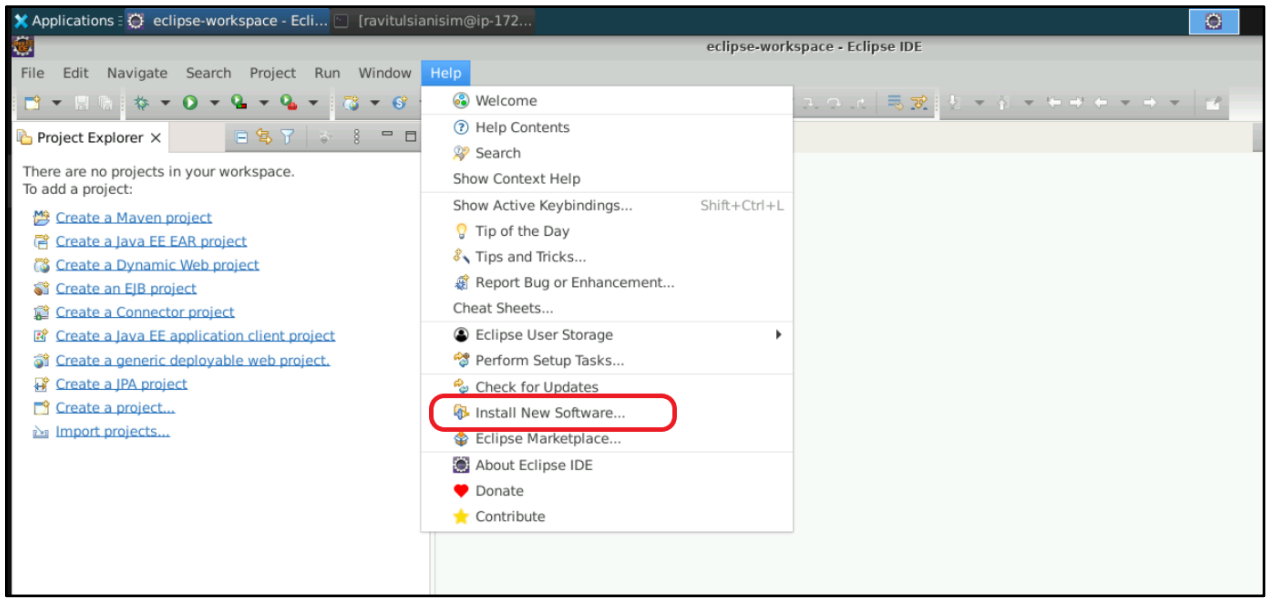


- In case Angular is not installed in your practice lab, you can install it using the command:

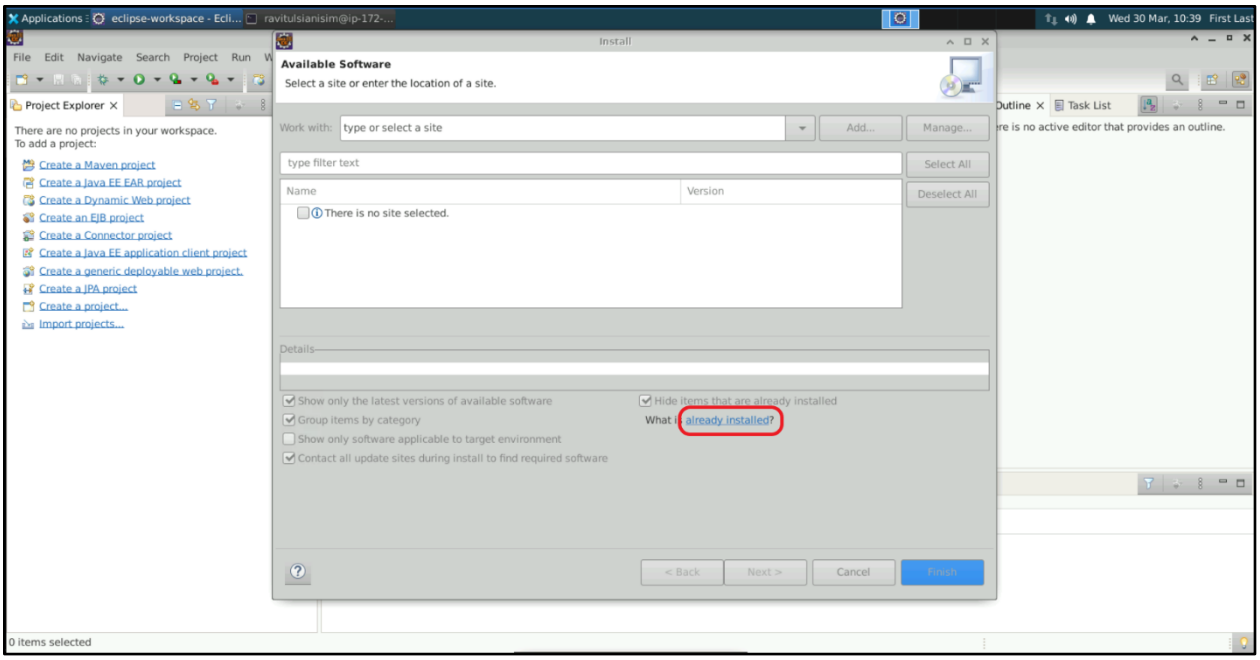
  sudo npm install -g @angular/cli

Cucumber:

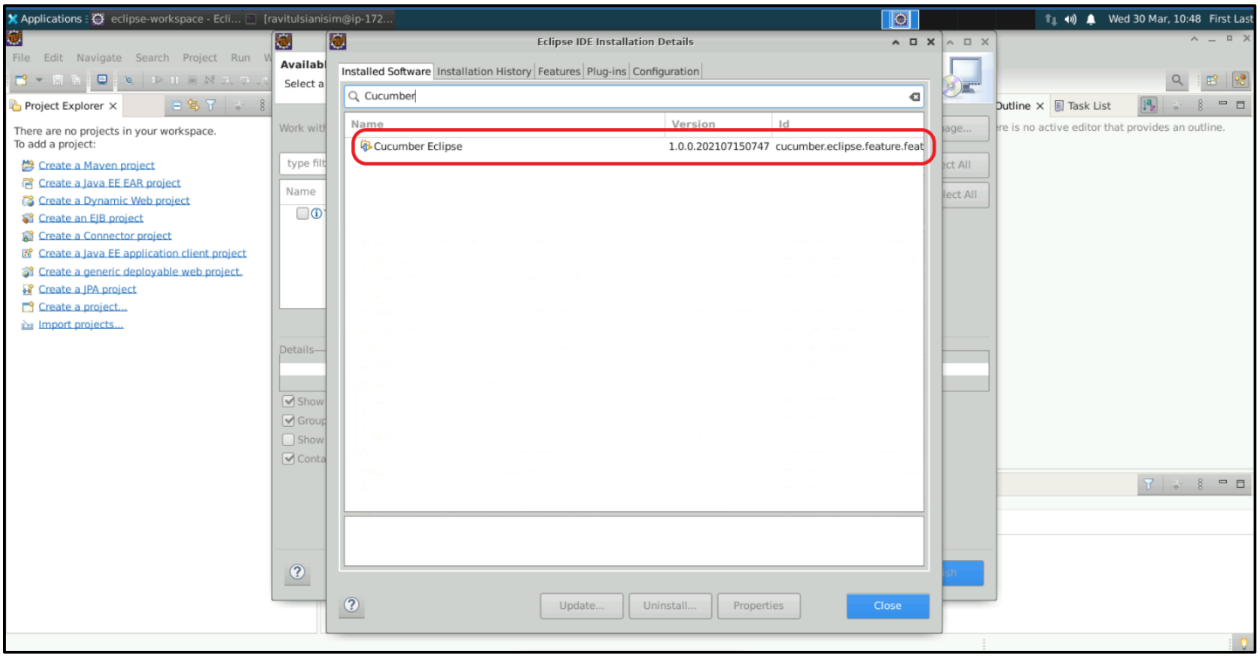
- Cucumber is installed as an Eclipse plugin in your practice lab
- To verify the installation:
  - Open the Eclipse environment from your desktop
  - Click the **Help** tab and select **Install New Software**



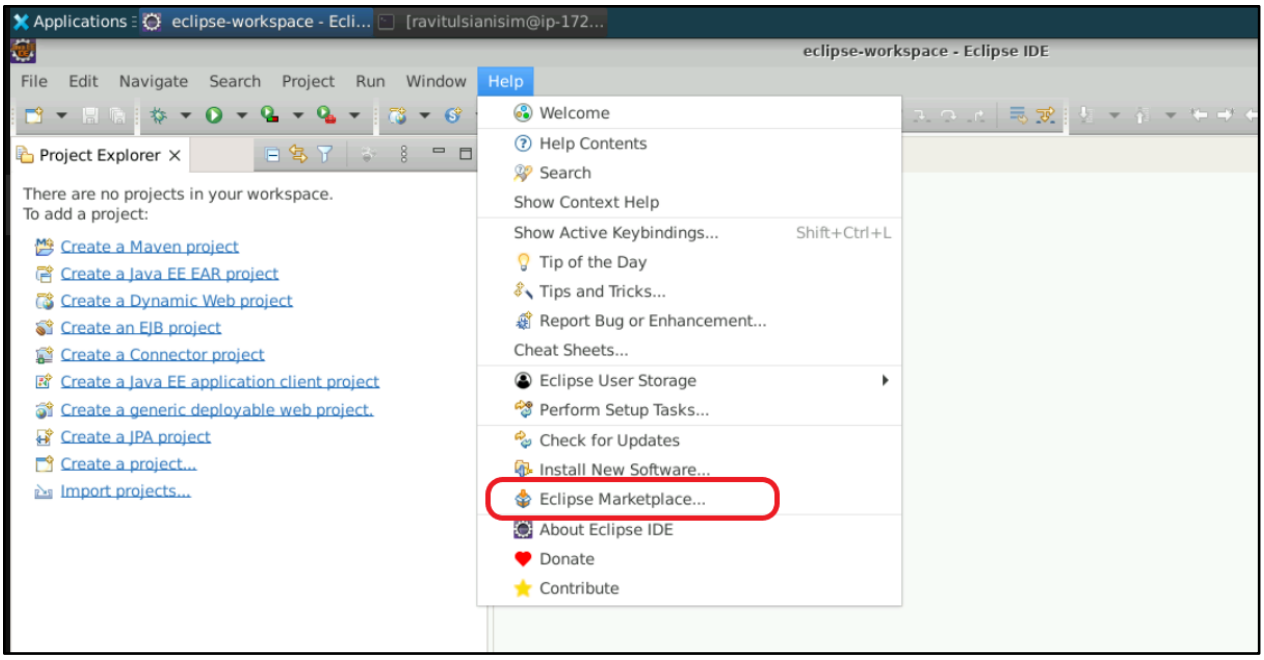
  - In the next window, click on **Already Installed**



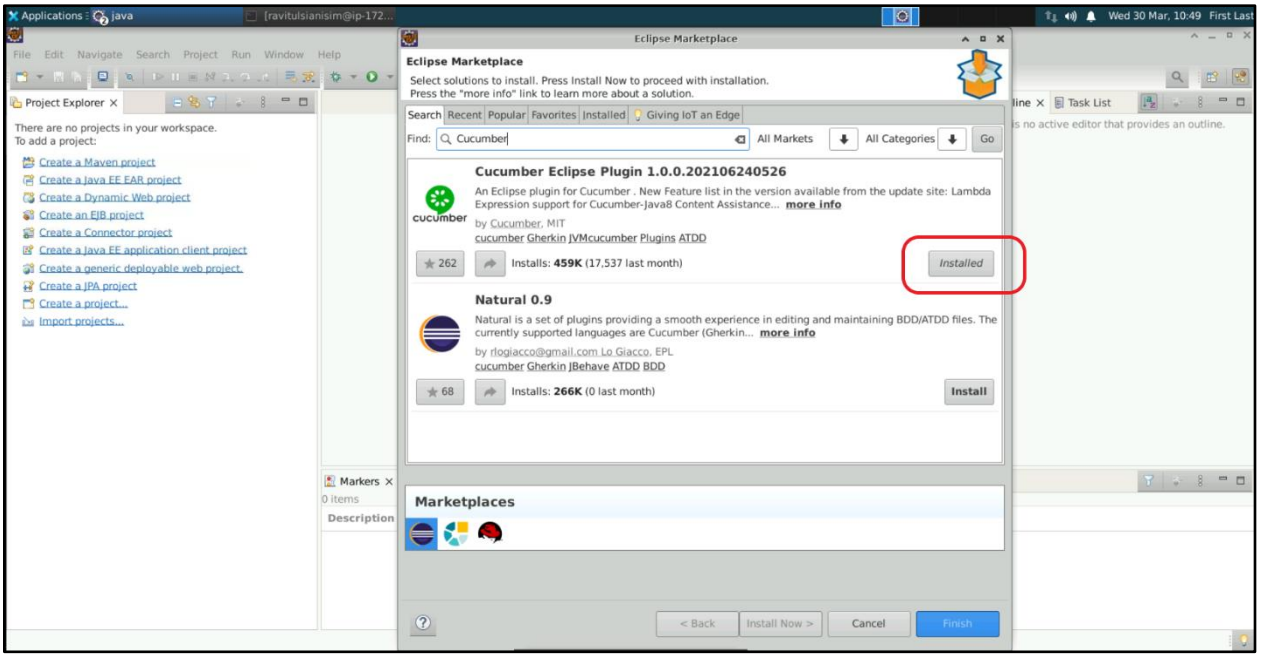
- In the **filter text** field, type **Cucumber**



- In case Cucumber is not installed in your practice lab, you can install it following these steps:
  - Open the Eclipse environment from your desktop, navigate to the **Help** tab, and click on **Eclipse Marketplace**



- Type **Cucumber** in the **Find** field and click on **Go**
- In the next window, you will see the Cucumber tool
- Click on the **Install** button it to start the installation



Core Java:

- Java is already installed in the labs
- Open the terminal and type **java** to find whether Java is installed or not

```
ravitulsianisim@ip-172-31-31-87:~$ java -version
openjdk version "11.0.11" 2021-04-20
OpenJDK Runtime Environment (build 11.0.11+9-Ubuntu-0ubuntu2.20.04)
OpenJDK 64-Bit Server VM (build 11.0.11+9-Ubuntu-0ubuntu2.20.04, mixed mode, sharing)
ravitulsianisim@ip-172-31-31-87:~$
```

- If Java is not installed in your system, then
  Type the following commands:

  sudo apt-get install openjdk-8-jdk
  sudo apt-get install openjdk-8-jre

Maven:

Maven is already installed in your practice labs

- You can use the following command to verify the installation:

  mvn -v

```
ravitulsianisim@ip-172-31-31-87:~$ mvn -v
Apache Maven 3.6.3
Maven home: /usr/share/maven
Java version: 11.0.11, vendor: Ubuntu, runtime: /usr/lib/jvm/java-11-openjdk-amd64
Default locale: en, platform encoding: UTF-8
OS name: "linux", version: "5.11.0-1022-aws", arch: "amd64", family: "unix"
ravitulsianisim@ip-172-31-31-87:~$
```

- In case Maven is not installed in your system, you can install it using the commands:

  sudo apt-get update
  sudo apt install maven

MongoDB:

- To verify the installation:
    - Open the command-line interface
    - Type the command:

mongod --version

```
ravitulsianisim@ip-172-31-31-87:~$ mongod --version
db version v3.6.8
git version: 8e540c0b6db93ce994cc548f000900bdc740f80a
OpenSSL version: OpenSSL 1.1.1f  31 Mar 2020
allocator: tcmalloc
modules: none
build environment:
    distarch: x86_64
    target_arch: x86_64
ravitulsianisim@ip-172-31-31-87:~$
```

- In case MongoDB is not installed in your practice lab, you can install it using the commands:

sudo apt-get update

```
ravitulsianisim@ip-172-31-31-87:~$ sudo apt-get update
Hit:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal InRelease
Hit:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-updates InRelease
Hit:3 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-backports InRelease
Hit:4 http://security.ubuntu.com/ubuntu focal-security InRelease
Hit:5 http://packages.microsoft.com/repos/code stable InRelease
Hit:6 https://deb.nodesource.com/node_17.x focal InRelease
Hit:7 https://dl.google.com/linux/chrome/deb stable InRelease
Ign:8 https://pkg.jenkins.io/debian binary/ InRelease
Hit:9 https://pkg.jenkins.io/debian binary/ Release
Hit:10 http://repo.zabbix.com/zabbix/5.0/ubuntu focal InRelease
Reading package lists... Done
ravitulsianisim@ip-172-31-31-87:~$
```

sudo apt-get install -y mongodb-org

```
ravitulsianisim@ip-172-31-31-87:~$ sudo apt-get install -y mongodb-org
Reading package lists... Done
Building dependency tree
Reading state information... Done
```

sudo apt install mongodb-server-core

```
ravitulsianisim@ip-172-31-31-87:~$ sudo apt install mongodb-server-core
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
  libboost-filesystem1.71.0 libboost-program-options1.71.0 libgoogle-perftools4 libtcmalloc-minimal4 libyaml-cpp0.6
The following NEW packages will be installed:
  libboost-filesystem1.71.0 libboost-program-options1.71.0 libgoogle-perftools4 libtcmalloc-minimal4 libyaml-cpp0.6 mongodb-server-core
0 upgraded, 6 newly installed, 0 to remove and 194 not upgraded.
Need to get 22.6 MB of archives.
After this operation, 84.4 MB of additional disk space will be used.
Do you want to continue? [Y/n] Y
Get:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal/main amd64 libboost-filesystem1.71.0 amd64 1.71.0-6ubuntu6 [242 kB]
Get:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal/main amd64 libboost-program-options1.71.0 amd64 1.71.0-6ubuntu6 [342 kB]
Get:3 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal/main amd64 libtcmalloc-minimal4 amd64 2.7-1ubuntu2 [93.0 kB]
Get:4 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal/main amd64 libgoogle-perftools4 amd64 2.7-1ubuntu2 [195 kB]
Get:5 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal/main amd64 libyaml-cpp0.6 amd64 0.6.2-4ubuntu1 [124 kB]
Get:6 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-updates/universe amd64 mongodb-server-core amd64 1:3.6.9+really3.6.8+90~g8e540c0b6d-0ubuntu5.3 [21.6 MB]
Fetched 22.6 MB in 0s (79.2 MB/s)
```

JUnit:

JUnit is already installed in your practice labs as a .jar file, and you can find it in the directory */usr/share/java*

- Use the following command to navigate to the above-mentioned directory:

  cd /usr/share/java/
  ls

```
ravitulsianisim@ip-172-31-31-87:~$ cd /usr/share/java/
ravitulsianisim@ip-172-31-31-87:/usr/share/java$
ravitulsianisim@ip-172-31-31-87:/usr/share/java$ ls
```

```
junit-3.8.2.jar
junit.jar
```

- In case JUnit is not installed in your practice lab, you can install it using the command:

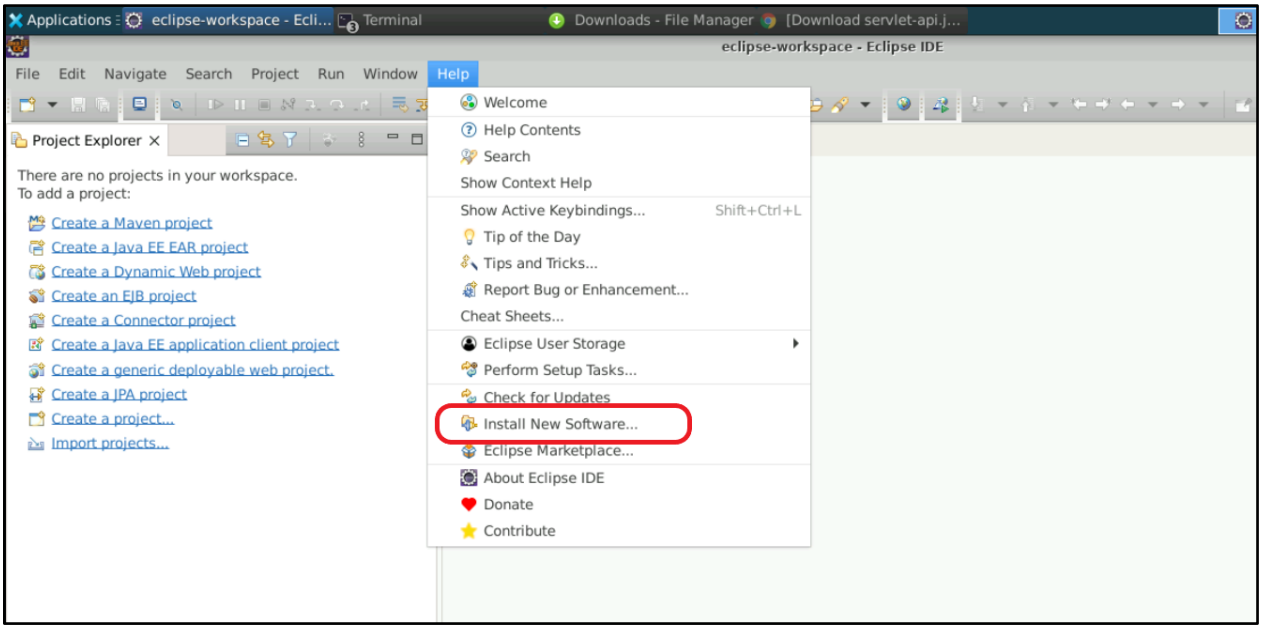
  sudo apt-get install junit

```
ravitulsianisim@ip-172-31-31-87:~$ sudo apt-get install junit
Reading package lists... Done
Building dependency tree
Reading state information... Done
Suggested packages:
  junit-doc
The following NEW packages will be installed:
  junit
0 upgraded, 1 newly installed, 0 to remove and 188 not upgraded.
Need to get 108 kB of archives.
After this operation, 159 kB of additional disk space will be used.
Get:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal/universe amd64 junit all 3.8.2-9 [108 kB]
Fetched 108 kB in 0s (5799 kB/s)
Selecting previously unselected package junit.
(Reading database ... 185096 files and directories currently installed.)
Preparing to unpack .../archives/junit_3.8.2-9_all.deb ...
Unpacking junit (3.8.2-9) ...
Setting up junit (3.8.2-9) ...
Processing triggers for man-db (2.9.1-1) ...
```

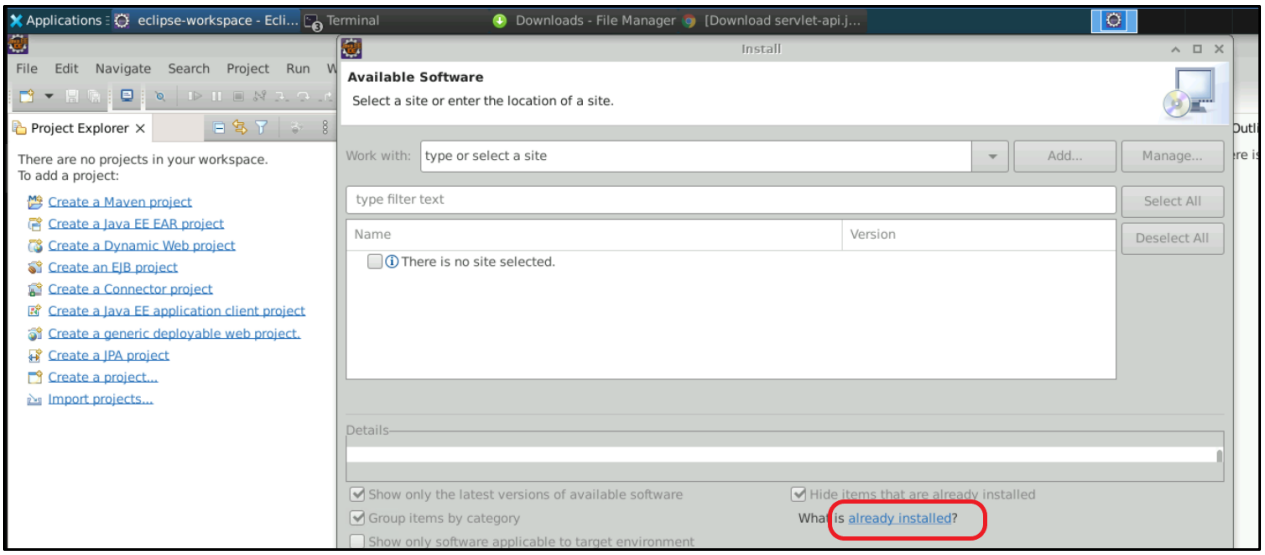
Spring Tool Suite & Spring Boot:

Spring and its packages are already installed in your practice labs

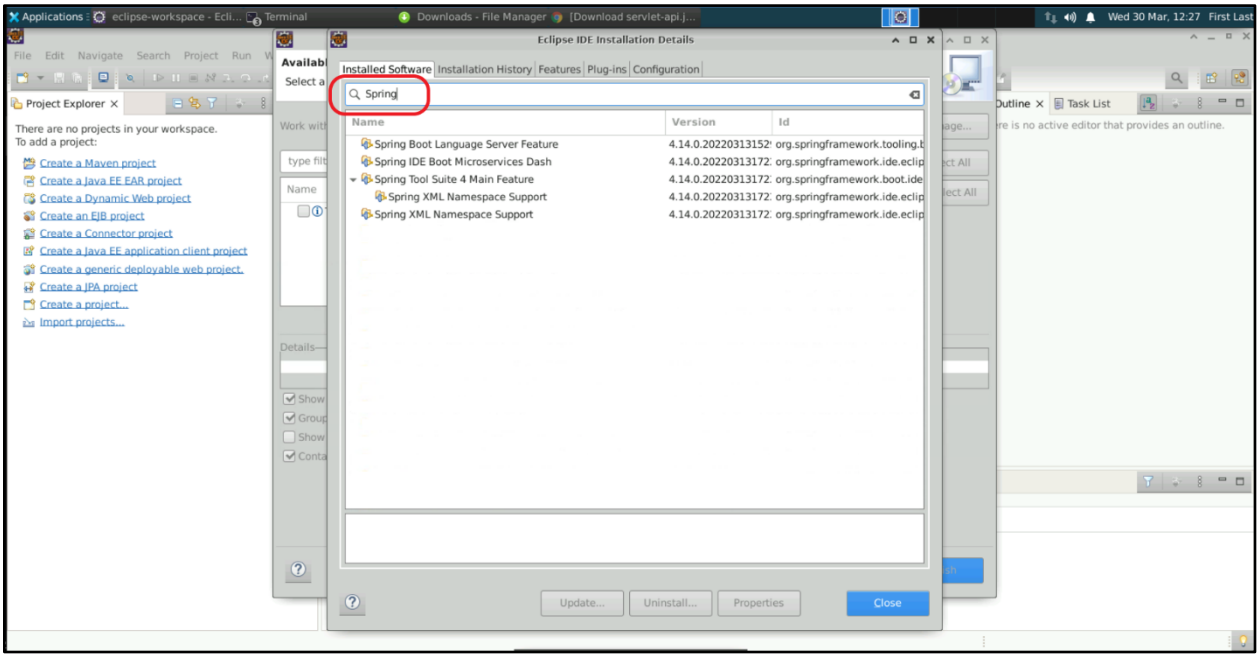
- To verify the installation:
  - Open the Eclipse environment from your desktop
  - Go to the **Help** tab and select **Install New Software**



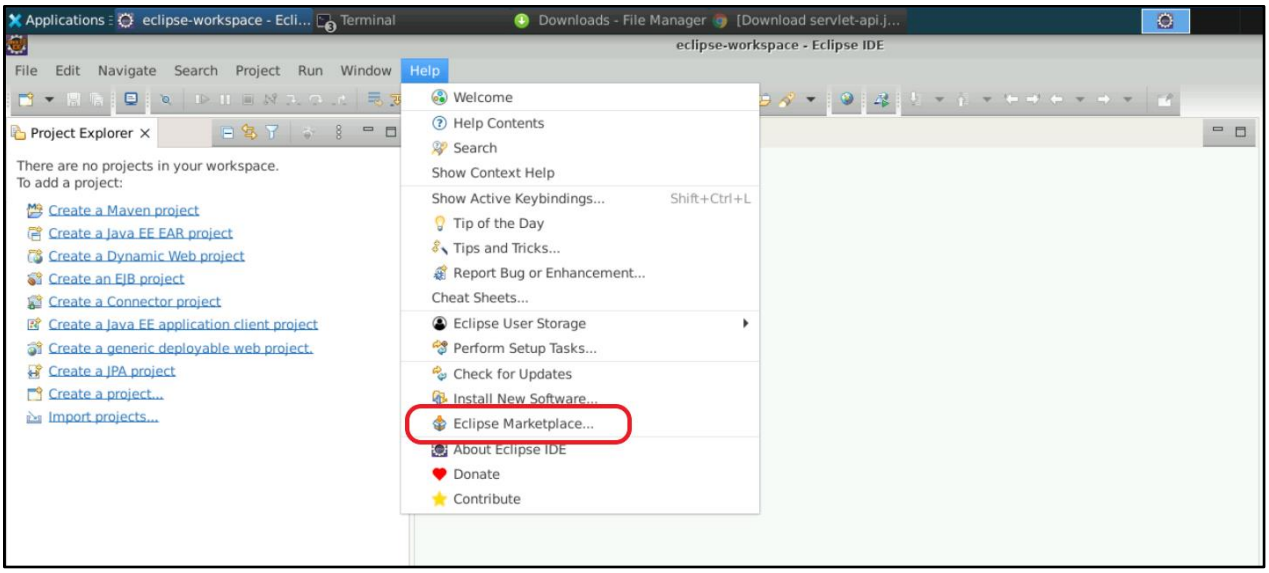
- In the next window, click on **Already Installed**



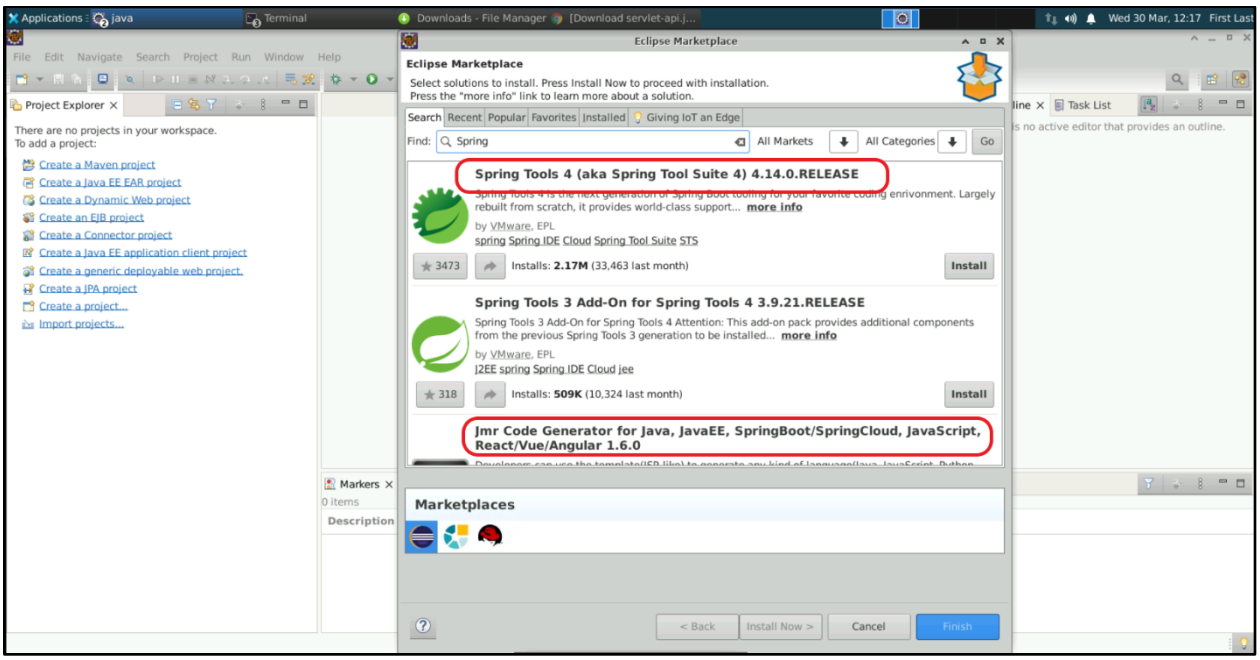
- In the **filter text** field, type **Spring**



- In case Spring packages are not installed in your practice lab, you can install them following these steps:
  - Open the Eclipse environment from your desktop, go to the **Help** tab, and click on **Eclipse Marketplace**



- Type **Spring** in the **Find** field and click on **Go**
- You'll find Spring Tool Suite and Spring Boot listed there
- Click on the **install** button against the package that you want to install



Docker:

- Docker version 20.10.11 is already installed in your practice lab
- To verify the installation:

- Open the command-line interface
- Type the command:

  docker --version

```
ravitulsianisim@ip-172-31-31-87:~$ docker --version
Docker version 20.10.11, build dea9396
ravitulsianisim@ip-172-31-31-87:~$
```

- In case Docker is not installed in your practice lab, you can install it following these steps:
  - Set up the Docker repository using the following commands:

    sudo apt-get update

    sudo apt-get install apt-transport-https ca-certificates curl software-properties-common

    curl -fsSL https://download.docker.com/linux/ubuntu/gpg | sudo apt-key add –

    sudo add-apt-repository "deb [arch=amd64] https://download.docker.com/linux/ubuntu $(lsb_release -cs) stable"

  - Install Docker using the command:

    sudo apt-get install docker-ce

AWS:

- AWS is already installed in your practice labs

  aws --version

```
ravitulsianisim@ip-172-31-31-87:~$ aws --version

aws-cli/2.4.6 Python/3.8.8 Linux/5.11.0-1022-aws exe/x86_64.ubuntu.20 prompt/off
ravitulsianisim@ip-172-31-31-87:~$
```

- In case JUnit is not installed in your practice lab, you can install it using the command:

  sudo apt-get install awscli

```
ravitulsianisim@ip-172-31-31-87:~$ sudo apt-get install awscli
Reading package lists... Done
Building dependency tree... 50%
Building dependency tree
Reading state information... Done
awscli is already the newest version (1.18.69-1ubuntu0.20.04.1).
0 upgraded, 0 newly installed, 0 to remove and 191 not upgraded.
ravitulsianisim@ip-172-31-31-87:~$
```

Jenkins:

- Jenkins is already installed in your practice labs

- You will find it in the directory */usr/share*

- Use the following commands to navigate to the above-mentioned directory:

  cd /usr/share
  ls

```
ravitulsianisim@ip-172-31-31-87:~$ cd /usr/share
ravitulsianisim@ip-172-31-31-87:/usr/share$ ls
```

- In case Jenkins is not installed in your practice lab, you can install it using the commands:

  sudo apt update
  sudo apt install jenkins