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# Implement OOPS using JAVA with Data Structures and Beyond

FSD: Lab Guide - Phase 1



Get Certified. Get Ahead.

This section will guide you to:

- Use labs to execute all demos included in this course

This lab guide has two subsections, namely:

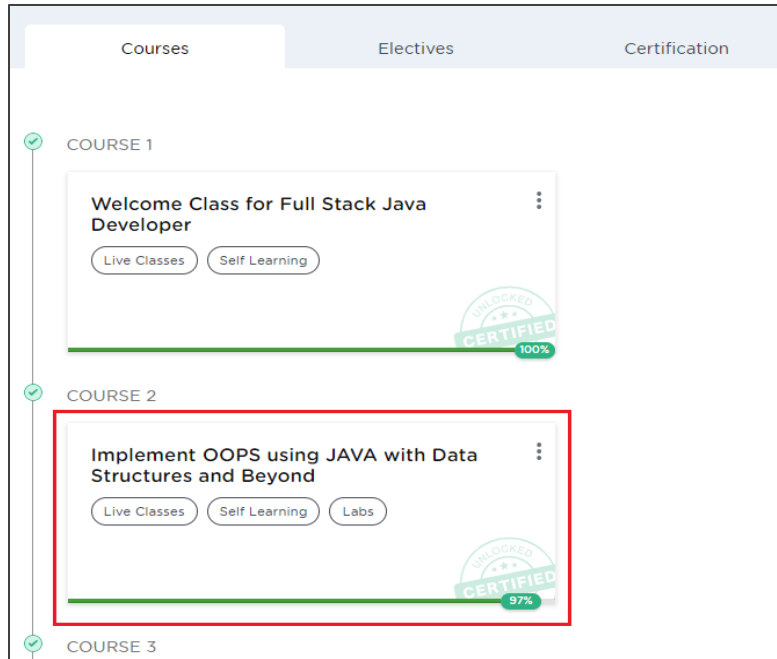
1. Starting practice labs on LMS
2. Using different IDEs and software required for Phase 1

### Step 1: Starting practice labs on LMS

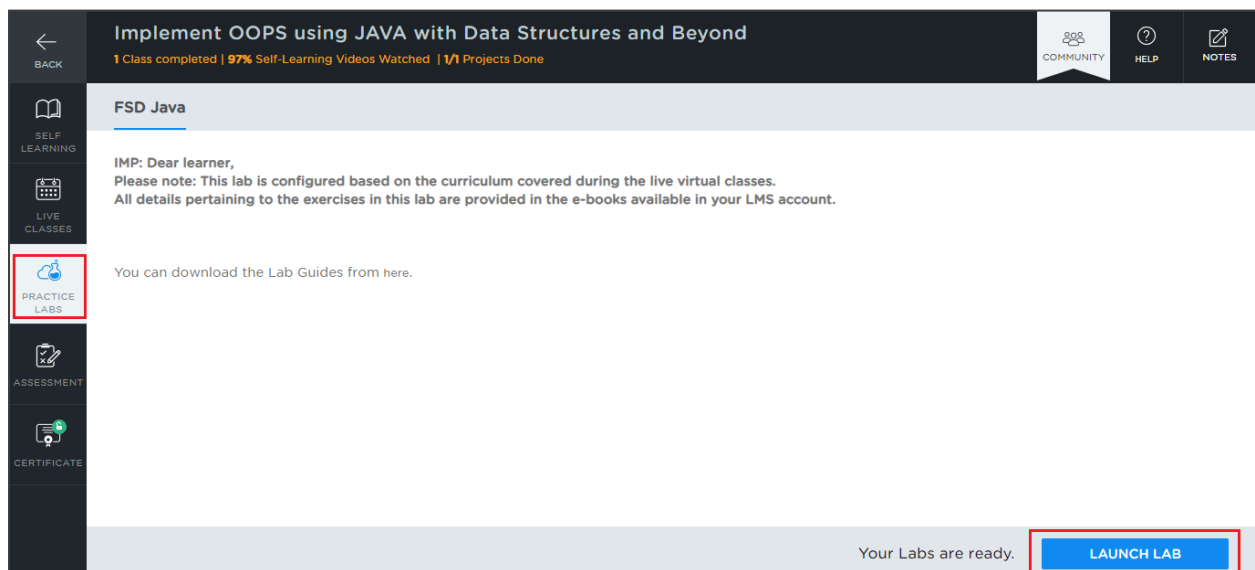
- Login to Simplilearn LMS
- Select Master Program and then Go to Program

The screenshot shows the Simplilearn LMS interface. At the top, there's a navigation bar with 'simplilearn' and 'STUDY CENTRAL' logos, and links for 'MY COURSES', 'MY RESOURCES', and 'COMMUNITY'. A search bar is on the right. Below the navigation bar, the 'Master's Programs' section is highlighted with a red box. The main content area features a card for 'Full Stack Java Developer' under the 'SOFTWARE DEVELOPMENT' category. The card shows '4/6 Courses Completed' and 'Your Current Cohort MS FSD FEB 2022 Cohort 1'. A red box highlights the 'GO TO PROGRAM' button, which also displays '39 weeks remaining' and a question mark icon. At the bottom, a progress bar shows 56% and 67% completion markers.

- Click on the respective course (However, since all the courses/phases have same lab, so it can be launched from anyone of them.)



- On the left side, click on **PRACTICE LABS** tab
- As a new window opens, read the instructions and click on **LAUNCH LAB**



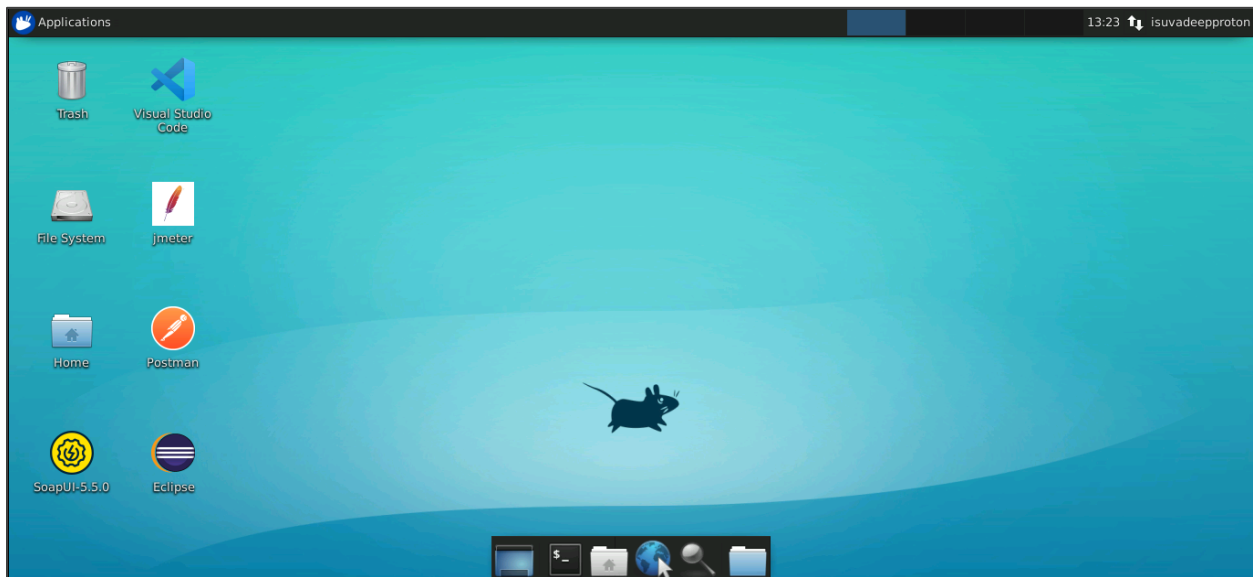
- Select RDP Access and Start Instance

The screenshot shows the 'FSD Java' lab interface. The top navigation bar includes 'BACK', 'SELF LEARNING', 'LIVE CLASSES', 'PRACTICE LABS', 'ASSESSMENT', and 'CERTIFICATE'. The main header displays 'Implement OOPS using JAVA with Data Structures and Beyond' with progress indicators: '1 Class completed | 97% Self-Learning Videos Watched | 1/1 Projects Done'. The lab title is 'FSD Java' and it notes 'This Lab will get reset on 23rd January 2022, 5:25 PM'. The current lab is 'Full Stack Java Developer'. The 'Access Information' tab is active, showing 'Applications' with 'Webconsole' and 'RDP Access' buttons. The 'RDP Access' button is highlighted with a red box. Below, the 'Instance Actions' section shows a 'Start Instance' button highlighted with a green box. The instance status is 'Stopped' and last updated at '2022-05-12 13:37'. A sidebar on the right shows the lab details, including a penguin icon, category 'FullStackDeveloper', start/end dates, and a code field with 'FSD'.

- Click on Auth URL button

The screenshot shows the 'FSD Java' lab interface with the 'RDP Access' tab selected. The 'RDP Access' section displays fields for 'Username' (isuvadeeproton), 'Password' (masked), and 'Auth Url' (https://isuvadeeprotonSIO005.si). The 'Auth Url' field has a blue link icon highlighted with a red box. The 'Instance Actions' section shows a 'Stop Instance' button. The instance status is 'Running' and last updated at '2022-05-18 18:46'. The sidebar on the right shows the lab details, including a penguin icon, category 'FullStackDeveloper', start/end dates, and a code field with 'FSD'.

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



## Step 2: Using different IDEs and software required for Phase 1

### Java:

- Java 1.8 is already installed in the labs
- Open the terminal and type **java** to find whether Java is installed or not

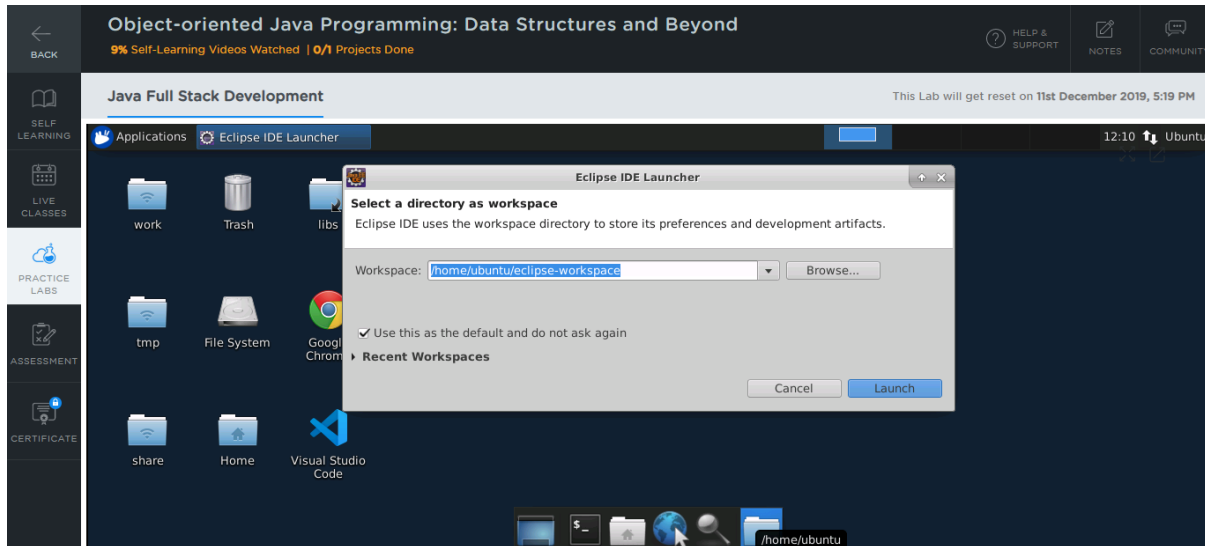
```
nehavaidyasimpl@ip-172-31-81-156:~$ java -version
openjdk version "1.8.0_275"
OpenJDK Runtime Environment (build 1.8.0_275-8u275-b01-0ubuntu1~16.04-b01)
OpenJDK 64-Bit Server VM (build 25.275-b01, mixed mode)
nehavaidyasimpl@ip-172-31-81-156:~$
```

- 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
```

### Eclipse:

- Double-click on the Eclipse icon
- Select a directory where you want to save your programs
- Select the **Use this as the default and do not ask again** checkbox and click on **Launch**



## 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*

```
ubuntu@ip-172-31-81-240:~$ cd /home/ubuntu/Desktop
ubuntu@ip-172-31-81-240:~/Desktop$ cd Demo_Git
ubuntu@ip-172-31-81-240:~/Desktop/Demo_Git$ git init
Initialized empty Git repository in /home/ubuntu/Desktop/Demo_Git/.git/
ubuntu@ip-172-31-81-240:~/Desktop/Demo_Git$
```

## Node JS:

- Node JS 12.18.2 version is installed in your practice labs

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

`node -v`

```
nehavaidyasimpl@ip-172-31-81-156:~$ node -v
v12.18.2
nehavaidyasimpl@ip-172-31-81-156:~$
```

- 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`