

Lab Manual: 01

Lab Topic: Installing Java Development Kit (JDK)

Course Code: CSE110 (Object Oriented Programming)

Course Instructor: Mahamudul Hasan, Senior Lecturer, CSE

Lab Objective

- To Familiarize students with JDK installation
- Introducing basic program structure in Java

Lab Activities

A. Downloading and Installing JDK

- JDK is required to be installed in your machine to compile and execute a Java code.
- JDK means complete java development kit that includes JRE (Java Runtime Environment), compilers and various tools like JavaDoc, Java debugger etc
- We need to install JDK since we are going to write, compile and execute Javaprograms.
- To download JDK 1.8 go to the following link:<https://www.oracle.com/technetwork/java/javase/downloads/jdk8-downloads-2133151.html>
- After downloading, run the exe file. It will start the installation procedure.
- The procedure may take a few minutes depending on the configuration of your machine.
- Once the installation procedure is finished, we need to configure the PATH system variables so that Java code can be compiled and executed from anywhere in the hard disk.
- To do that, right click on This PC or My Computer icon on the desktop and then click properties. You will see the following window opens as shown in Figure1.

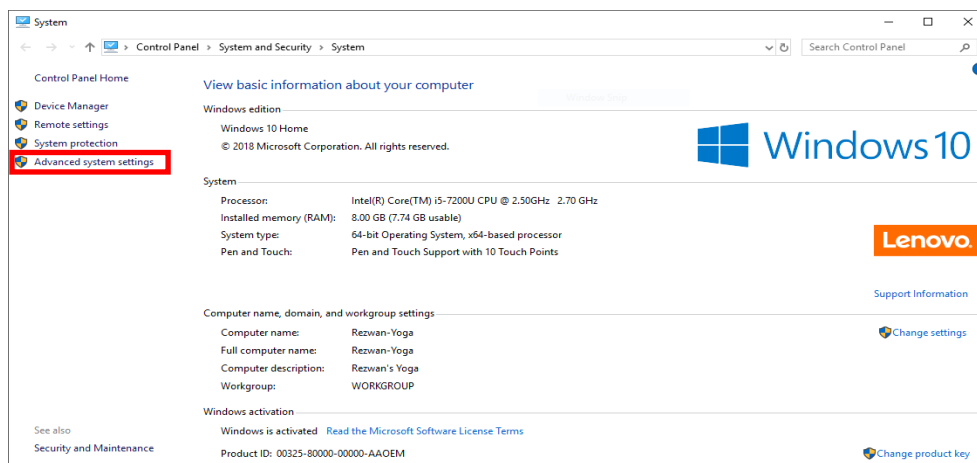
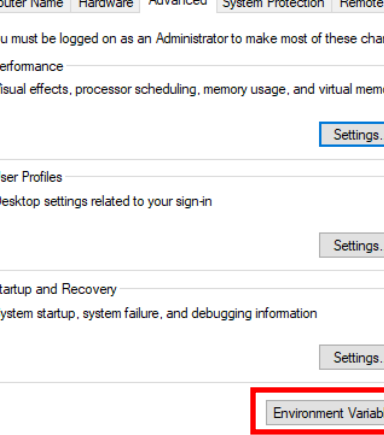
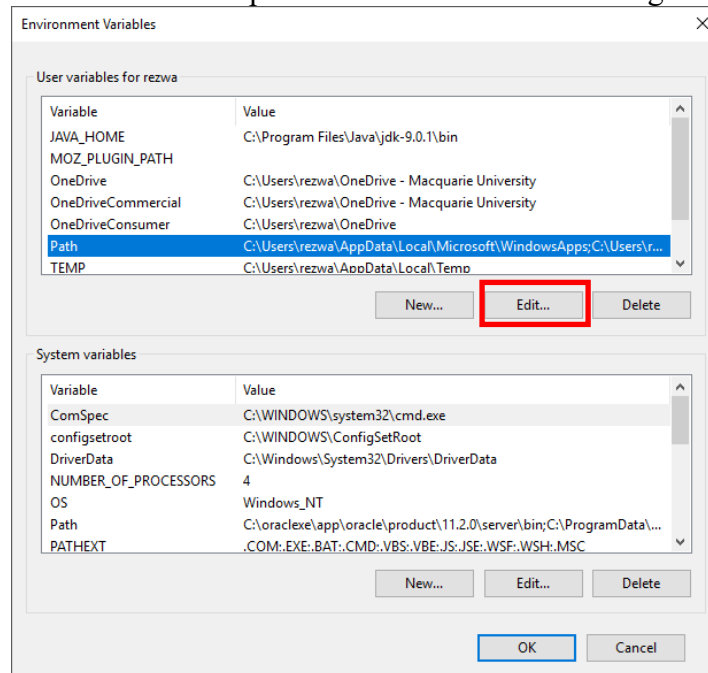


Figure 1: System Window

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- System Properties
- Computer Name Hardware **Advanced** System Protection Remote
- You must be logged on as an Administrator to make most of these changes.
- Performance
Visual effects, processor scheduling, memory usage, and virtual memory
- Settings...
- User Profiles
Desktop settings related to your sign-in
- Settings...
- Startup and Recovery
System startup, system failure, and debugging information
- Settings...
- Environment Variables...
- OK Cancel Apply

- Click on Environment Variables. It will open the window as shown in Figure3.



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- Now, click on Edit. A new window pops up as shown in Figure4.

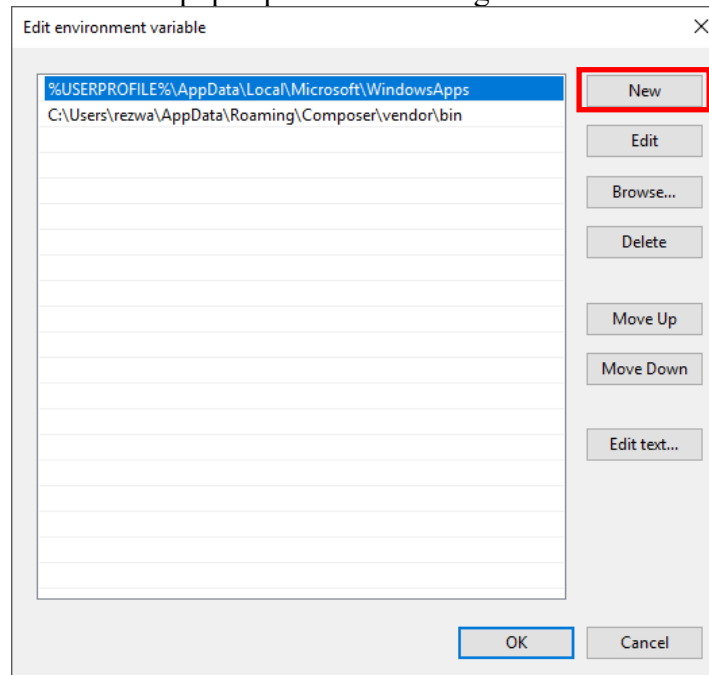


Figure 4: Edit environment variable Window

- Press New and then paste the path where the JDK has been installed. Usually, the path is - C:\ProgramFiles\Java\jdk-XXX\bin
- We are done and now it is time to compile and execute our first program.

B. Writing, Compiling and Executing the First Program

- Open notepad or notepad++ or any text editor of your choice.
- Write the following as it is shown below:

```
class Myfirstprogram{
    public static void main (String[] args){
        System.out.println("Hello World");
    } // main method ends
} // Main class ends
```

- Save the code as Sample.java inside a folder/directory.
- Now, open a command prompt. Suppose, your program is saved in the location-F:\java. Then, write the followings in the command prompt and press enter after every line as shown in Figure5.

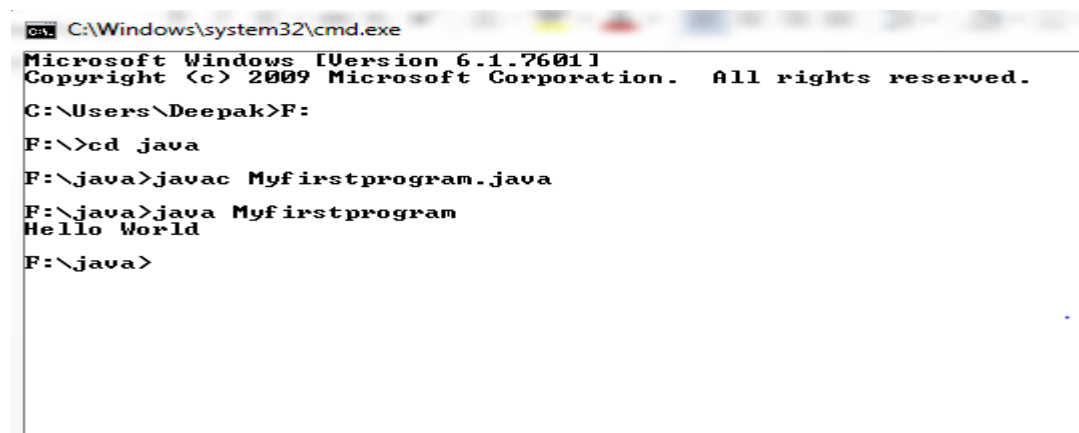


Figure 5: Compiling and Executing a Java Program

- *cd* (change directory) is used to change the directory from the current location.
- After coming to the location where the Sample.java is saved, compile the program using *javac*.
- Then execute the program using *java* command as shown in Figure5.