Compiling and Running Java on Windows Command Prompt

Note: *If you want to work on DSVs lab computers, then you do not need to install and configure Java to run on command prompt, so you can jump to compiling and running Java using the command prompt section.*

In most cases, programmers use IDEs (integrated development environments) to develop java applications such as Eclipse, NetBeans, IntelliJ IDEA, Greenfoot, Blue J, etc. You will get IDEs installed on our lab computers if you want to use them.

How do we use the Windows command prompt to compile and run java codes?

Prerequisite

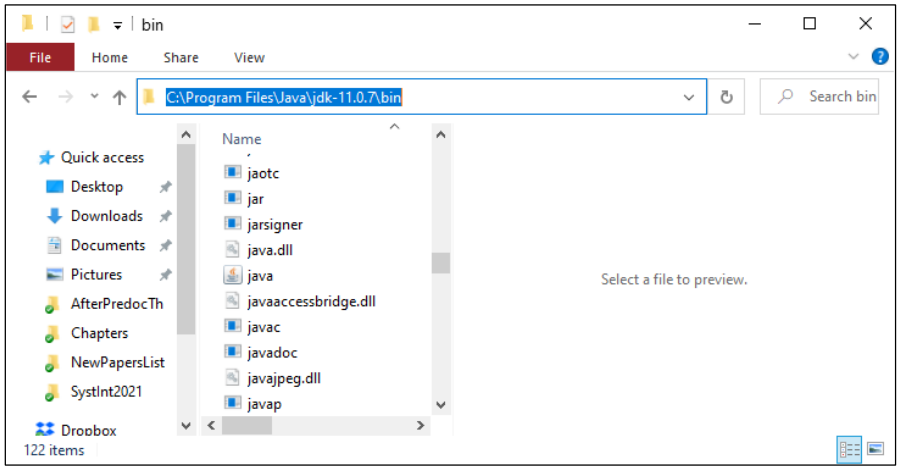
- Install Java, i.e., JDK (java development toolkit), which automatically
- installs JRE (Java runtime environment). [*Java is an object-oriented programming language developed 25 years ago by James Gosling and his team at Sun Microsystem. Oracle currently acquired Java*].
- Configure your computer so that your command prompt can find your java program
- Know how to use DOS or Windows Command Prompt

Installing java

- To install Java, visit Oracles official page and download the Java installer

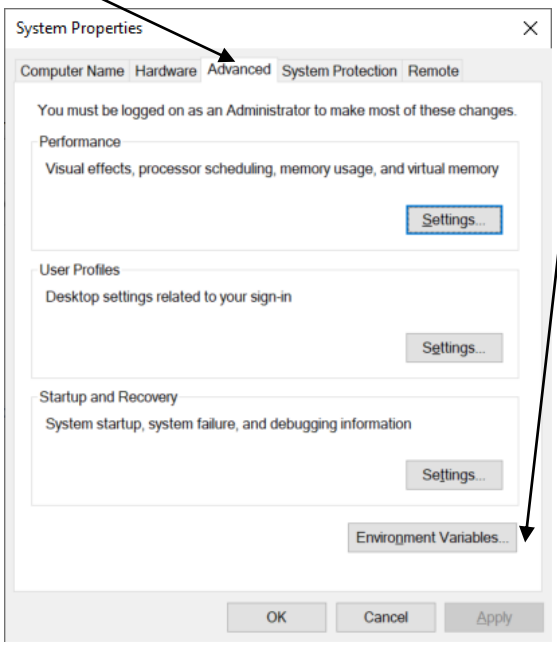
Configuring your computer so that Command Prompt run java (Setting Environment Variable)

1. Open the path (folder) where your JDK is located, as illustrated below

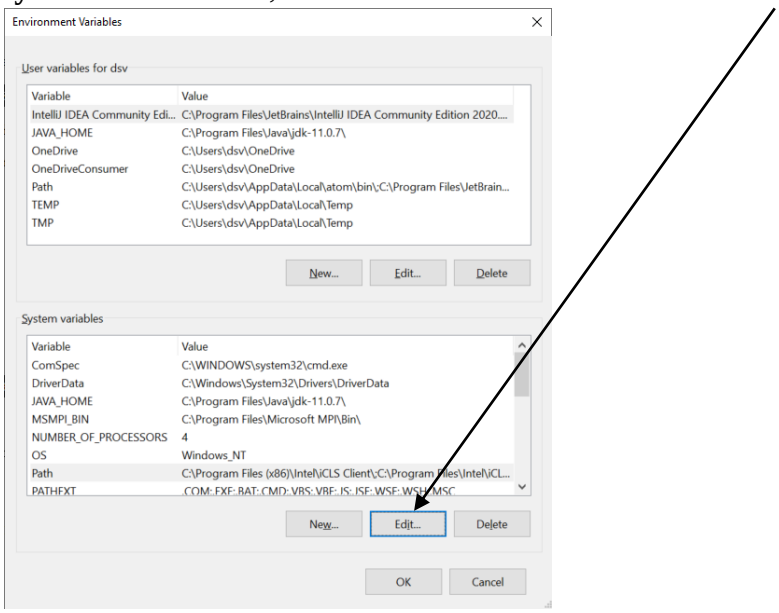


2. Copy the path "**C:\Program Files\Java\jdk-11.0.7\bin**" – this path is not necessarily the same for all computers because you may have a different version of JDK.
3. Click on the **Start** menu
4. Enter Computer (PC or My Computer)
5. Right click on (My PC, This PC, Den här datorn, etc. depending on your language setting)
6. Select **Properties**

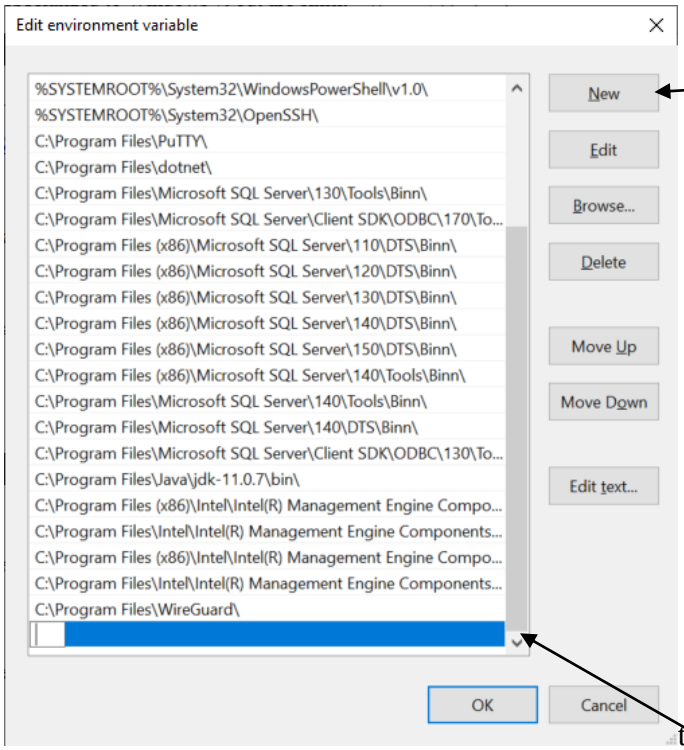
7. Click on **Advanced System Setting**
8. On the **Advanced** tab select **Environment Variables**



9. Under **System Variable** list, locate and select **Path** and click on **Edit**



10. In the **Edit environment** variable dialog box, click on the **New** button
11. Then paste the path you copied in step 2 in the empty new row created



the path will be pasted here

- Click **OK** three times

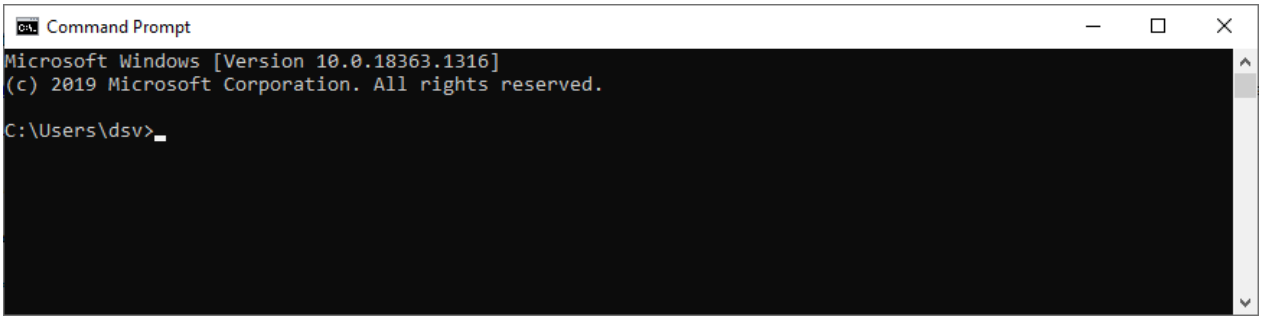
Compiling and Running Java Using Command Prompt

Starting Command Prompt

- Click on the **Start** menu
- Enter **cmd,** then click on **Command Prompt**
- Or follow **Start** > **Windows System > Command Prompt (in Windows 10)**
  Or locate **Command Prompt** (in other Windows versions)

USING Command Prompt basic commands

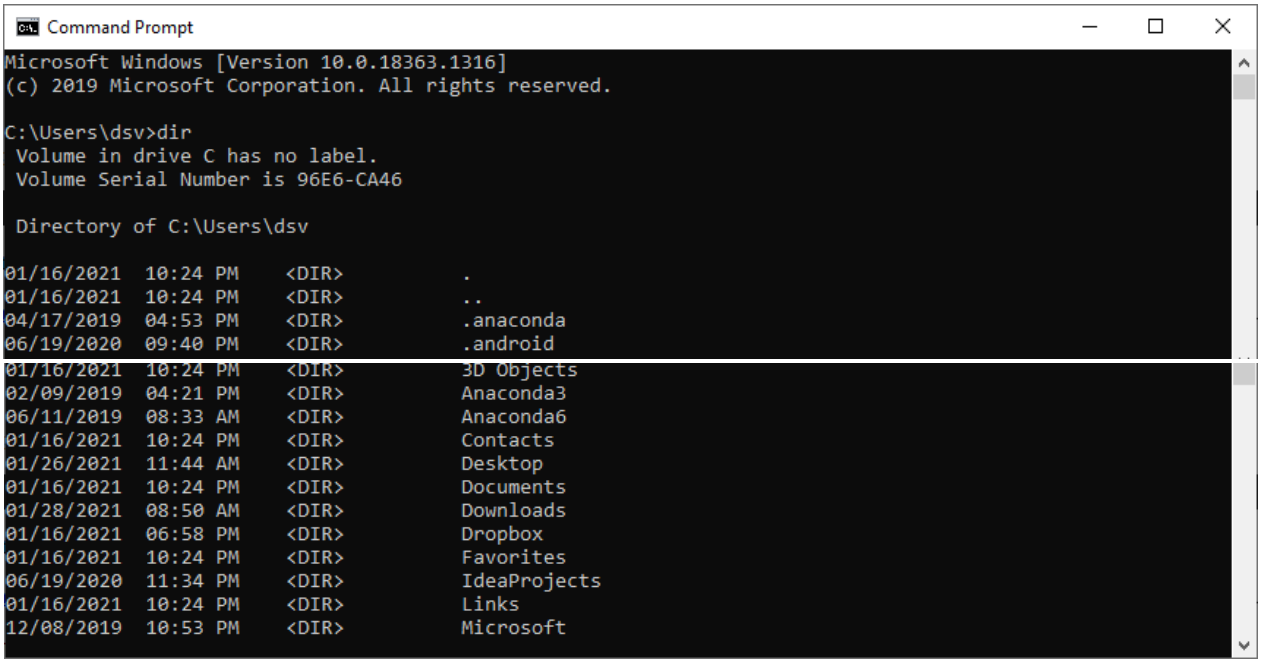
- After the **Command Prompt** is opened, you will see something similar to the following snapshot



- **C** – is the hard drive, **Users** is a folder (a directory) in the hard drive **C**, and **dsv** is a folder found in **Users** (which is, in this case, the current user name and it is the current directory).

dir Command Prompt

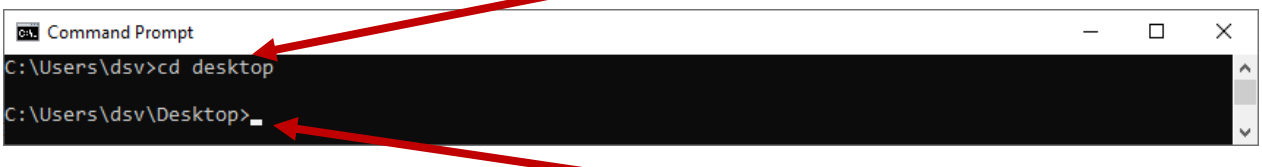
- To view the contents of the current directory, **dsv:** enter or type **dir** and press **Enter** key
- You will see the content of the folder **dsv. H**ere you will be able to see files, hidden files, and folders as illustrated below



cd Command Prompt (change current directory command)

The syntax of the change directory command is - cd [path], where [path is a fully qualified path to which you want to switch your current directory to. You can also change the directory to a folder (directory) which exists in the current directory], here we will switch to desktop.

- Enter the following in the command line: **cd desktop**



Now the current directory is changed to **desktop**; this way, you can navigate forward to subfolders (subdirectories)

- To switch back to the previous directory, enter: **cd..** and press **Enter** key
- Change your current directory to desktop

mkdir Command Prompt

Create **myfirstjava** folder under the desktop

- Enter the following code: mkdir **myfirstjava**

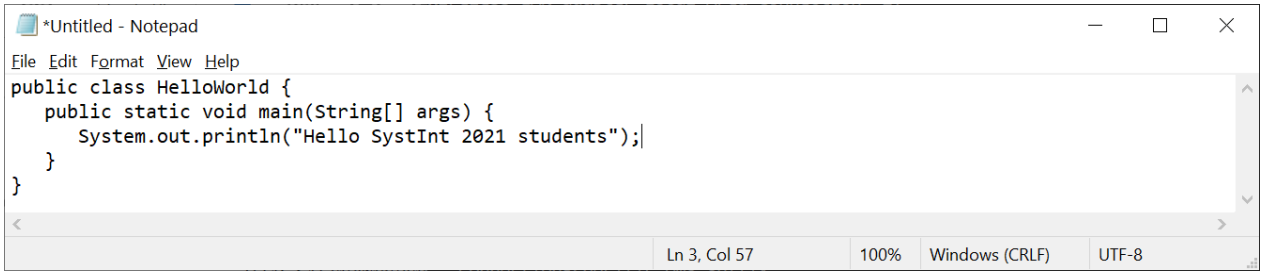
- Us the **dir** command to see if your current directory (desktop – contains **myfirstjava** folder)
- Change your current directory to **myfirstjava**

Create your first java code

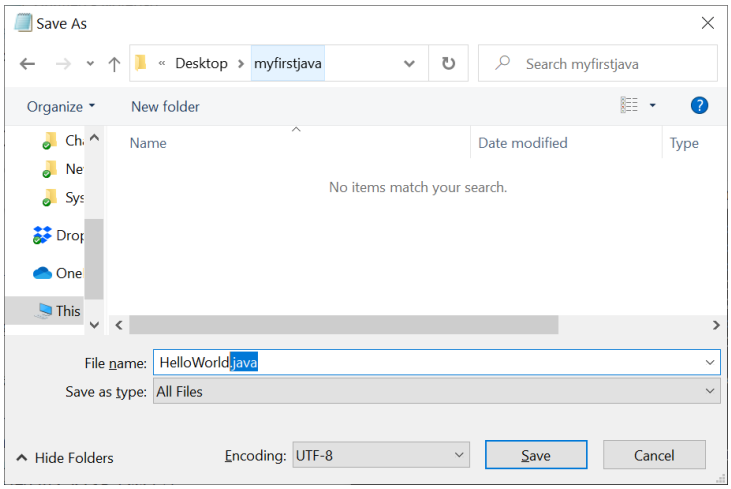
- Start a **Note Pad** application, then copy the following simple java code to your **Note Pad** application. As illustrated below. You must save the file with the same name as the class name and with the .java extension

```
public class HelloWorld {

  public static void main(String[] args) {

        System.out.println("Hello SystInt 2021 students");

  }

}
```

- To save the file with the .java extension, follow the following step



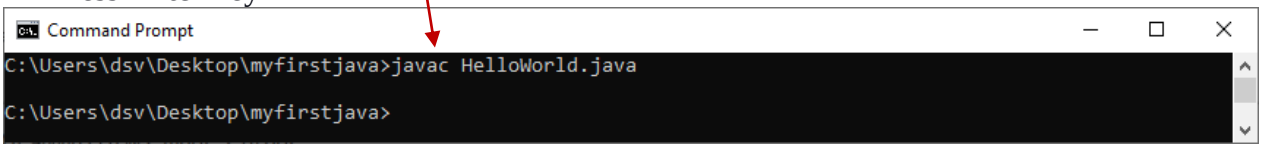
- **File > Save As.. >** change the Save as type to **All Files.**
- Browse to **myfirstjava** folder
- Enter the file name **HellowWorld.java** as illustrated below.



- Click on the **Save** button

Compiling your first java code

- Switch to the Command Prompt window
- Make sure that your current directory is **myfirstjava** folder
- Enter **javac HelloWorld.java** in the command prompt (the file name must be the same as the class name, and it is case sensitive)
- Press **Enter** key



Running your compiled java program

You will find a complied java bytecode, HelloWorld.class in your folder, and this is the machine-readable Java code that runs on your machine.

- Enter **java HelloWorld** in the command prompt and then
- Press **Enter** key
- Your command prompt will run the java code and displays the output as illustrated below