



JAVA-EU8-Week1-Notes

Today's Schedule

1. What is JAVA-JDK-JRE-JVM? PIQ (popular interview question)
2. Running Code from Console
3. IntelliJ Basics: Creating project, package, class, navigating through the program, some shortcuts
4. Print Statements and escape sequences
5. Information on How Replit Coding Lab works and GitHub Link for class codes

What is Computer Program?

Set of instructions to tell Computer (compiler, VM-virtual machine) what to do

Why are we learning JAVA?

Because it is OOP language, easier to simulate the world. Platform independent. Works with Selenium. JAVA cares a lot of using RAM. (memory)

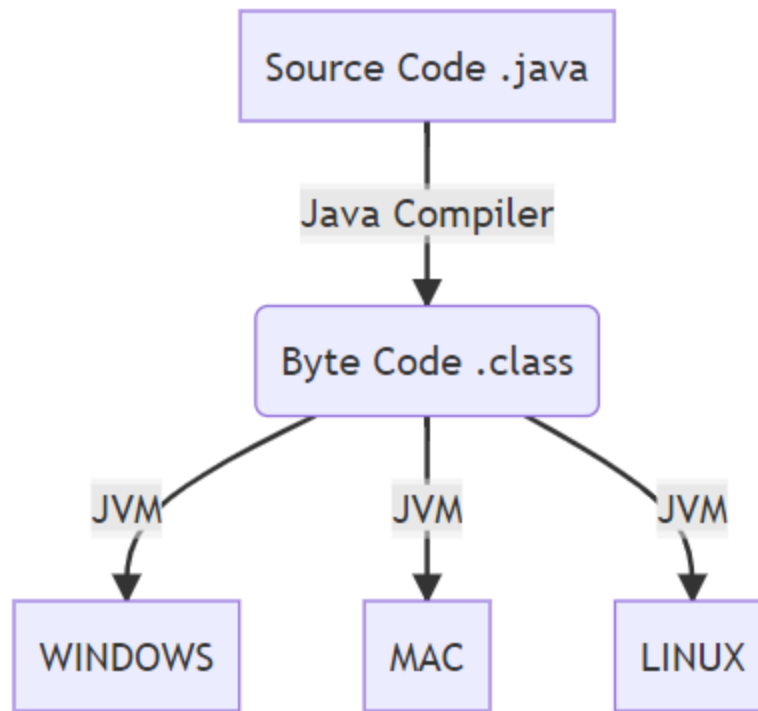
How does JAVA turn source code into machine code?

1. Java Compiler (javac) turn source into → byte code
 - a. byte code is between source code and machine code
2. Bytecode turns into Machine code and our JVM runs the program against different operating systems
3. is byte code platform specific? No, run it on MAC, Windows , Linux
4. That is why we call "JAVA write once, run anywhere"

Coding from Console

1. Open a text editor (sublime)
2. Save as your file to your desktop, name Hello.java
3. We will write our class name and main method:
 - a. why do we need main method? Because, it makes our code **executable**
4. Curly braces are very very important, it tells the compiler where our code starts and ends
5. " ; " semi column also very important, tells the compiler that line of code is finished

Diagram



6. Go to your console / terminal, we navigated to the folder where our Hello.java file is : (Desktop)
7. `cd Desktop`
8. `javac Hello.java` - > Byte code
9. `java Hello` - > JVM executed my codes

JDK - JRE - JVM

1. In order to run a JAVA Program we need to have JRE (Java Runtime Environment)
2. JRE has JVM in it (Java Virtual Machine + some libraries)
3. JDK (Java Development Kit) to write and develop our codes.

4. In order to see our ByteCodes in IntelliJ

a. IntelliJ IDE > out folder

Volunteer: JDK, development kit, development apps, JRE: to run the program we need it, JVM: virtual machine, runs the code, Java Compiler : Translator

JAVA compiler turns the source code into byte code

Common Technical Issues

'What if PowerShell does not recognize java or javac commands'

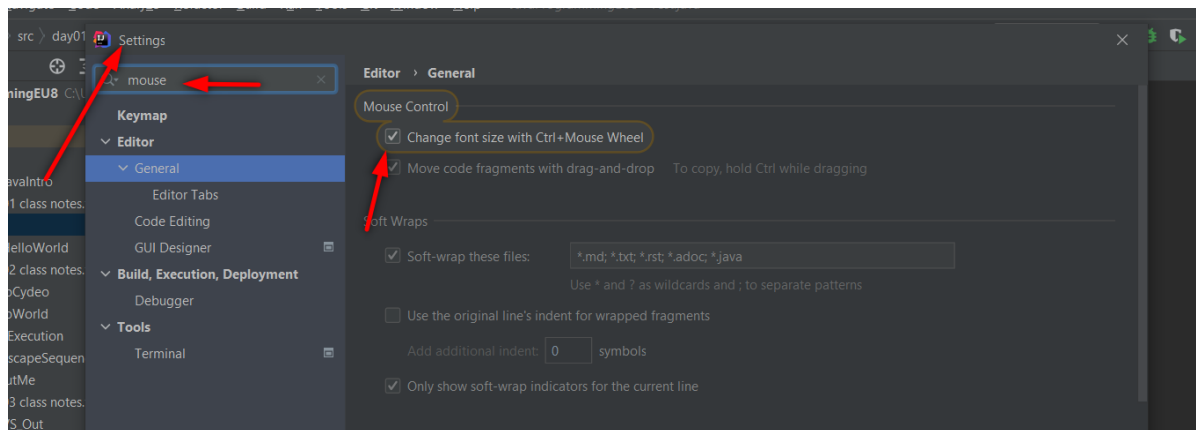
Where is my GitHub Link?

<https://github.com/Cydeo-EU8/JavaProgramming>

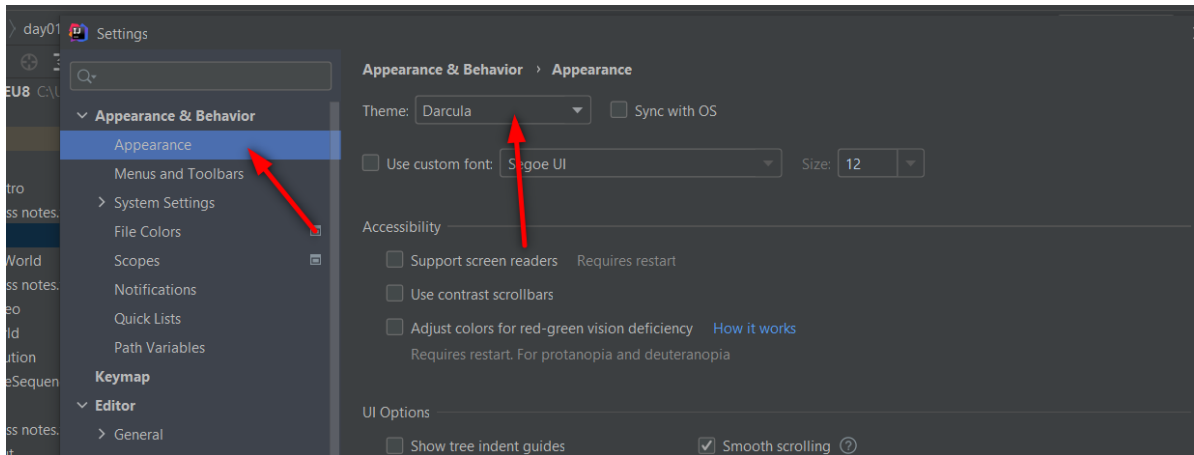
Coding with IntelliJ

IDE : Integrated Development Environment

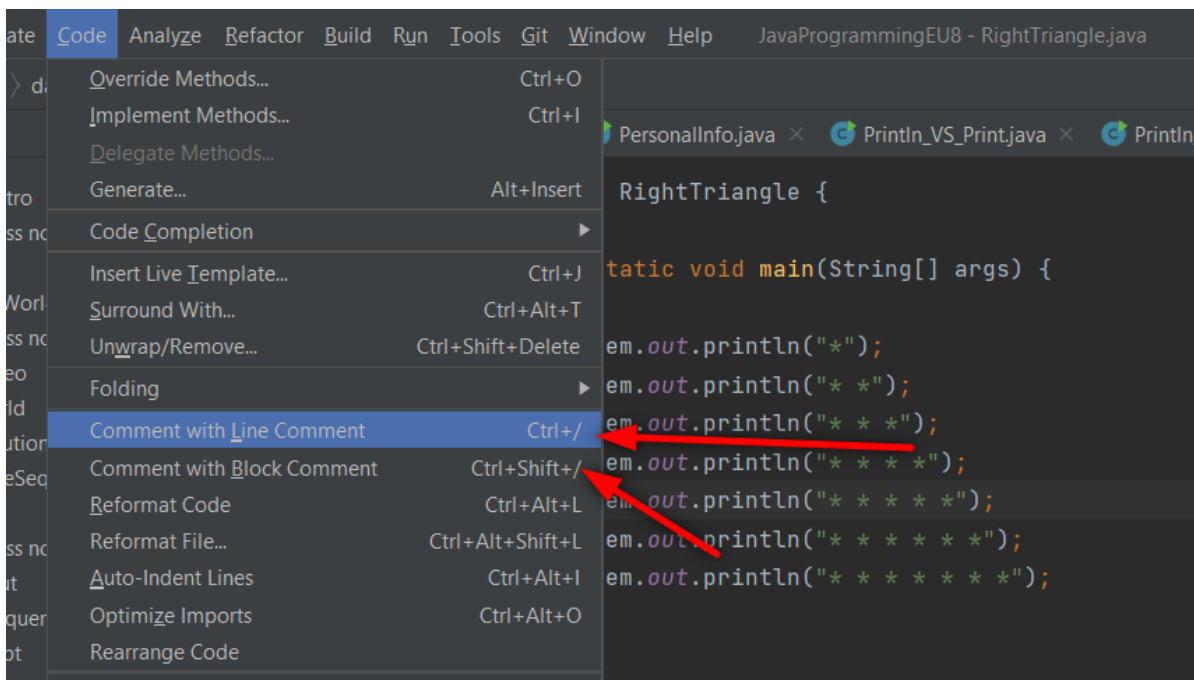
▼ How to zoom in and out using mouse



▼ How to make Dark Mode



▼ How to put single or multiple comments in IntelliJ



▼ How to find something in the project while using IntelliJ

CTRL + F : Looks into current page

CTRL + SHIFT + F : Looks into whole project

What is the difference between sublime and IDE? Why are we using IntelliJ instead of sublime?

IDE tools provide many useful tools that can find at the editor.

Printing on the Console with JAVA

println: appends to next line

print: does not append next line

▼ Escape sequences: MUST be given with double quote

A character preceded by a backslash (\) is an *escape sequence* and has special meaning to the compiler. The following table shows the Java escape sequences:

Escape Sequence	Description
\t	Insert a tab in the text at this point.
\b	Insert a backspace in the text at this point.
\n	Insert a newline in the text at this point.
\r	Insert a carriage return in the text at this point.
\f	Insert a form feed in the text at this point.
\'	Insert a single quote character in the text at this point.
\"	Insert a double quote character in the text at this point.
\\	Insert a backslash character in the text at this point.

▼ More info on Escape sequences

\f : Many of them became less and less useful over time, such as \f. This is called form feed, is used to indicate to a printer that it should start a new page. You may notice multiple escape characters used to control printers, since back in the day printers were ascii controlled.

▼ Questions from Drive:

▼ On Replit, it shows 'Continue working' even after submitting the work. is it normal?

Yes it is normal.

▼ It was said in the first day video that IT companies in US mostly prefer to use IntelliJ after 2015 instead of Eclipse. I wonder what is the real reasons that changes IT companies preferences through time? Does it stem from the

economical reasons (like license fees) mainly or IntelliJ has become better through time with new updates comparing to the Eclipse?

Depends on the company

▼ Questions from Live Class:

▼ Ali Turkoglu: Can we automatically send our codes to Github via IntelliJ like you and can we use Github to store our codes we will write?

Yes you will but you have to wait another 2 months. GitHub Lessons then you will be able to do it.

▼ do we need to know how to compile codes without an IDE or it was optional that you showed ?

No, IDEA tool is enough. The reason I showed to understand how JAVAC works.

▼ We already store our code in our IntelliJ. Why we need store in Github?

To share with others, also if something happens to your computer or you want to work from another PC, you can share your codes at GitHub.

▼ What to expect from Oscar's Live Class?

First I will review the same topics of the recordings

- verbally with some notes (Notion Documents or PDFs)
- some new exercises with the same topic

Second; some more challenging questions if we have time

If you are going to come to live sessions, PLEASE WATCH your recordings first

▼ I don't want you to go into your OUT folder

▼ Some Important Rules

1. Your class name and file name has to be same
2. At JAVA for every opening brackets "{" "(" you need to have closing brackets (balanced brackets)
3. you need to have semi column at each line of code ";"
4. You need to have main method to run your codes

Very Important: JAVA works top to bottom and left right