FIRST WEEK ON ROUND-5-JAVA CLASS

**Introduction to Java Programming and Java Virtual Machine (JVM) Basics.**

For a beginner in programming it's really important to understand certain terms. Programming is the implementation of logic to facilitate specified computing operations and functionality. To be able to program we need to use a language that would differ from application, domain and model of programming. There are many different kinds of languages in programming, one of them is called Java language.

To be able to code in java language. We need to make some installations in our computer that will help us. We will need to download a recent version of Java, an appropriate version of JDK matching with our java version, and an IDE (Integrated Development Environnement) of our choice.

The java version installed in our computer will helps us to make our computer ready to receive or generate any code creates by using java language in any computer. We so need to download a recent and appropriate version that runs with our computer operating system.

The JDK (Java Development Kit), is a development kit that will help us to create, compile and run a java code. The JDK is a complete set that contains a JRE, a Javac compiler, java doc, java debugger and others tools.

The JRE (Java Runtime Environnement) includes in our JDK contains a JVM (Java Virtual Machine) which is the virtual machine installed in our physical computer in order to help us to run the java files creates by ourselves, and compile to be a byte code by the Javac compiler. Because JVM doesn’t understand Java source code, we need to have javac compiler that compiles “java files to obtain “.class files that contains the byte codes understood by the JVM.

JVM makes java portable (write once, run anywhere). Each operating system has different JVM, however the output they produce after execution of byte code is same across all operating systems.

**Structure of a java program: how to write helloworld on java**

The program is writing on lines each line corresponds on one execution

Line 1- “package sct”: package declaration statement it defines the namespace in which classes are stored, it organizes classes base on functionality. If we forget the line 1 the class will be store to the default storage.

Line 2: class: this line uses the keyword “class” it used to declare a name of the class in our case we use the name helloworld. It also can be the keyword public private or default, when we want to assign to an existing class.

Line 3: it's the comments section, where we can add a comment.

Line 4: Main,

Line 5: System.out.printin: here inside the “ “ we writ “helloworld.” The hello world is String literal set as argument to printing method.

**Git and GitHub**

Per Wikipedia Git is a distributed version-control system for tracking changes in source code during software development.[8] It is designed for coordinating work among programmers, but it can be used to track changes in any set of files

GitHub is a Git repository hosting service, but it adds many of its own features.

The key difference between Git and GitHub is that Git is an open-source tool developer install locally to manage source code, while GitHub is an online service to which developers who use Git can connect and upload or download resources. While Git is a command line tool, GitHub provides a Web-based graphical interface. It also provides access control and several collaboration features, such as a wikis and basic task management tools for every project.