

Subject: Programming in Java (Theory cum Tutorial)
Subject Code: IT1013

Theory cum Tutorial mapping (Ist week planner)

Expectation at end of Week 1: Capable of understanding and installing jdk and Netbeans IDE.
Capable of understanding, writing and executing a basic java program with object orientation skills.

Levels: Basic (No extra skills needed), Intermediate: Extra book reference or networking(online/offline) needed.

Instruction to students:Students can bring their own laptops but may be advised strictly to continue till the end of the course without any excuses.Both for theory and tutorial classes. So the students can execute the codes we teach at the end of the class(may be we will provide 15 min to access laptops..Instructors can decide based on their needs of the class)

Note: The order of coverage could suit the faculty style....

1. Introduction to Object Oriented Programming.
2. How is it different from Procedural languages?
3. Properties of OOP (Abstraction, Encapsulation, Inheritance, Polymorphism). Level: Basic
4. Properties of Java(Intro to all Buzz words). Installation requirements(JDK, JRE, JVM).
5. What is a standalone application and an Applet with real example insight. Level: Basic
6. Basic skeleton of Java Program with introduction to classes and methods.With explanation of whole skeleton with basic intro to array and command line arguments(if needed).
7. Rules of naming Classes, methods, variables, constants(Final) in java, How to name a File in java?(Like the name of the public class is the name of the file and also there can be only one public class and a basic level of intro to what is public).
8. Introduction to Compile time and Runtime. Second emphasis on Byte code and its relevance to JVM and comparison with .exe of other languages. How to compile and run (in CMD prompt and IDE(with introduction to Netbeans IDE)).
8. What is Standard input, Standard Output and Standard Error.
7. What are the basic ways of giving inputs(Command line arguments, and Scanner). Note: Scanner just to introduce how to use.

Tutorial Week1:

1. Program1: Apply an Object oriented paradigm (hint:classes) using java to develop a stand alone application without a method to print "I am enjoying my program in JAVA and I swear I will put all my sincere efforts to grow each day technically" Level: Basic
2. Program 2: Apply an Object oriented paradigm using java to develop a stand alone application to print what the user demands using methods Hint: Single class.Level: Basic

3. Program 3: Apply an Object oriented paradigm using java to develop a stand alone application to call a method to do the same but from another class. Hint: more than one class needed. Level: Basic
4. Program 4: Apply an Object oriented paradigm using java to develop a stand alone application for Number conversion in java. (may be for this we would introduce the basic data types) Level: Intermediate