OOP Homework

Regina Biktimirova

03/03/2022 Batch4

**What is Class and Object in Java?**

Class in Java is a blueprint or template from which objects are created. We can think of the class as a sketch (prototype) of a car. It contains all the details about the engine, doors, windows, etc. Based on these descriptions we build the car. Car is the object. Object is instance of a class

**What are the class members in Java?**

Fields are also known as instance variables and defines all the attributes of the objects of that class. Methods are also known as functions of the class and defines behaviors of the objects of that class. Constructors are kind of special methods and enable us to create objects of the class. Blocks are known as static and instance blocks and get executed first by JVM

**What is local variable and instance variable and their differences?**

**Local variables:** variables that are created within the method. Scope for local variables: it stays within the method

**Instance variables:** variables that belongs to an object. The variables that are created right under the class. It can be used within the class.When we have instance variable and local variables which have same variable name, java accepts local variable as a priority

**What are the advantages of using methods in Java?**

The main advantage is code reusability. We can write a method once and use it multiple times. We do not have to rewrite the entire code each time.Methods make code more readable and easier to debug

**What is method overloading?**

In Java, two or more methods  may have the same name. This is allowed if they differ in parameters (different number of parameters, different types of parameters, or both). These methods are called overloaded methods and this feature is called method overloading.

Note: Multiple methods can have the same name if the number and/or type of parameters are different