Class:

Class is the group of objects with the similar functions or properties. In the Java, Class can be defined as the template for creating objects and define their functions or actions. It is an bult-in function of java for helping user to create an objects and conclude some functions in it. It is the base for object oriented programming. For real world e.g.: we can take airport as the class where the objects as airplanes with similar function of taking off , flying and landing.

Methods:

Method can be consider as the process of doing the things. In Java, Methods is collection of group of statement that are written together to perform a certain task or actions or function in a program. In Simple words, It is an algorithm for the certain program. In Java there are two methods : User defined which is made by the user themselves as per requirements And Pre-defined where the java itself have in the standard library where these built-in methods are kept and can be used by the user as per need. For e.g. main method in java for starting the execution.

Object:

Object can be taken as the existing entity around us. In Java, Object is an member of class in java which have own identity, state and functions. Object is the result of class. For real world e.g. cat is an object with the state as – color , size , gender and age and functions as – eating, sleeping, and meowing.

Constructor:

Constructor is person who create or construct something. In Java, Constructor is an special function in java that create and initialize the newly created objects. When the object is created in class then it is automatically called. In java, a constructor has the same name as class and with no return value. For e.g. public class Text{ public Text(){}} Here public Text() is an constructor.

Operator:

In simple, Operator are those who operates with some functions. In Java, operator is a symbol that is used to perform operations. For example: +, -, \*, / etc. We use operator to perform operation on variables and values. Like for adding some numerical vale . In java there are five types of operator they are:

1. Arithmetic operators
2. Assignment operators
3. Comparison operators
4. Logical operators
5. Bitwise operators

Variables:

Variable in simple concept is changeable or not constant. In Java, Variable is the container which stores the data. A variable is a memory location name for the data. Also, A variable is a name given to a memory location. You Can Name the variable as you need but consider the keyword of the java. You cannot use the keyword name for java variables. In java, variable is defined with the datatype for data to hold. For e.g. int Num1 = 2; In this Num1 is variable name.

Datatype:

Simply datatype is the type of data to be stored in variable. In java, Datatype is key for assigning the variable a data. We have to declare the what kind of data to store in certain variable in java. There are 8 types of data type in java:

1. Int datatype
2. Char datatype
3. Float datatype
4. Double datatype
5. Long datatype
6. Byte datatype
7. Boolean datatype
8. Short datatype

Function:

Function is certain actions performed by object. Java Program perform certain task with the objects using their own function. In Java, all function definitions must be inside classes. We also call functions methods. Let's look at an example of main function:

public class Main {

public static void main() {

// Do something here as action.

}

This set of instruction can be considered as main function.

Parameter:

Parameters are the variables that are listed as part of a method declaration. Each parameter must have a unique name and a defined data type. We use the term actual parameters to refer to the variables we use in the method call. For example, length and width are actual parameters. // Method definition public int mult(int x, int y) { return x \* y; } // Where the method mult is used int length = 10; int width = 5; int area = mult(length, width);

Main Function:

Main function is the final function of class for returning value. Class is incomplete without it. It is also the starting point of java virtual machine to start executing the java program. Without the main() method, JVM will not execute the program. The syntax of the main() method or function is :

Public static void main(String[] str){

//function or action here

}

Byte Code:

In Java, Bytecode is program code that has been compiled from source code into low-level code designed for a java interpreter. It is machine independent. It is only understood by java virtual machine. Byte code in java has the file extension of .class. It is the middle phase of running the java program. The bytecode is then changed into machine level code by interpreter.

Functional Programming:

Functional programming is purely function based program. It is highly based on mathematical functions.  It avoid concepts of shared state, mutable data observed in Object Oriented Programming. Some of the popular functional programming languages include: Lisp, Python, Erlang, Haskell, Clojure, etc.

Object Oriented programming:

Object-oriented programming is based on the idea of an object. An object is an entity with some data and operations. In this programming, the program is created by making class and object inside it with some relatable function. Difference of functional and OOP is that functional programming is about writing procedures or methods that perform operations on the data, while object-oriented programming is about creating objects that contain both data and methods. Significant object-oriented languages include Java, C++, C#, Python and Javascript.