Object Oriented Programming : → (C#, Java, Python)

* Classes & Objects & Methods
* Real World Entity → Student

C → POP
C#, J, P } OOP

Student (Entity) — USN, name, marks } Properties / Characteristics / Attributes

```
public class Student {
    int USN;
    String name;
    int marks;
}
```

Class: It is a blueprint or template or prototype to create real-world entities called objects or instances or references.

* Class has no memory of it's own. It belongs to the static or Stack Memory.

Object: An object is an instance of a class.
It is the key with the help of which we can access all the data inside a class.

All are same (Object | Instance | Reference)

```
ClassName obj = new ClassName();
```

{ new keyword is used for object creation }

* { Objects occupy the Heap Memory of the OS. So, we should not create unnecessary objects because it will slow down the application. }

(DRY:) (Don't Repeat Yourself / Don't Write Redundant) code

* Method: A function in Java is called a method because it describes the behaviour of an object.

evaluate() → Surya has FAILED
→ Ramya has PASSED } behaviour

C (Functions) ≡ Java (Methods)

Constructor: → A constructor is a special method used to create / initialize / instantiate / or invoke objects of a class.

Rules: → (I) A constructor has no return type.
(II) It is of two types: (i) Default / No argument (ii) Parameterized
(III) Default constructor is created by the JVM (compiler) when we don't create it.
(IV) Parameterized constructor is created by the user.
(V) The syntax is: ClassName()
(VI) It should be same name as the class.
(VII) When we create parameterized constructor, the default constructor is destroyed!