OOP

What is Object ?

Any physical entity which you can touch is an object.

So if we want to describe any object then what we do….look below table and understand

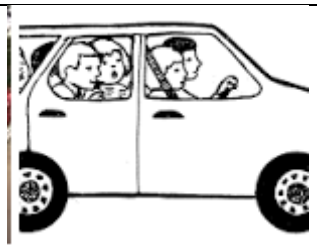
In below example we are going to describe given below 4 objects….

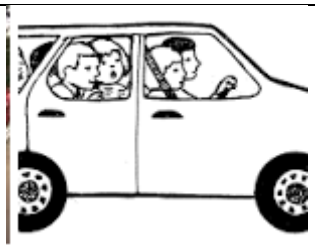
For example:

			
Mobile Description	***Doll Description***	***Company Description***	***Car Description***
Description: The above Mobile (object) has manufacturer	**The above Doll (object) has some name**	**The above Company (object) has some name**	**The above car (object) has some name**
The above Mobile (object) has OS	**The above Doll (object) has hairstyle**	**The above Company (object) has some city**	**The above car (object) has some model**
The above Mobile (object) has Hight	**The above Doll (object) has height**	**The above Company (object) has some pin code**	**The above car (object) has some color**
The above Mobile (object) has width	**The above Doll (object) has width**	**The above Company (object) has some seating capacity**	**The above car (object) has some seating capcity**
The above Mobile (object) has OS version	**The above Doll (object) has dress type**	**The above Company (object) has some address**	**The above car (object) has some bootspace**
The above Mobile (object) has Screen size	**The above Doll (object) has dress color**	**The above Company (object) has some phone number**	**The above car (object) has abs system**
The above Mobile (object) Has color		**The above Company (object) has some area**	
The above Mobile		**The above Company**	

(object) has Extendible RAM		**(object) has some state**	
The above Mobile (object) has External Memory		**The above Company (object) has some country**	
The above Mobile (object) has front camera			
The above Mobile (object) has rear camera			
And so on….			

In order to represent the above said objects in programming what we do is we identify their attributes and value given below

							
Mobile		***Doll***		***Company***		***Car***	
Attribute	***Value***	***Attribute***	***Value***	***Attribute***	***Value***	***Attribute***	***Value***
Manufacturer	**Nokia**	**Name**	**Barbie**	Name	ejagruti	Name	Maruti-Suzuki
OS	KitKat - Android	HairStyle	Bob Cut	City	Pune	Model	Alto
Height	10 Inches	Height	1 ft	PinCode	411052	Color	White
Width	4 inches	Width	6 inches	Capacity	35	Capacity	4
Version	4.2	Dress Type	frock	Address	B2-14 Motiram Nagar	Boot-space	200 ltr
Screen	4 by 6 inches	Dress Color	blue	Phone Number	24305431		
RAM	4 GB			Area	Warje		
Extendible RAM	16 GB						
Front Camera	Yes			State	Maharashtra		
Rear Camera	Yes			Country	India		

			
Mobile	***Doll***	***Company***	***Car***
Methods/Actions	***Methods/Actions***	***Methods/Actions***	***Methods/Actions***
MakeVoiceCall()	***Play()***	***ViewCompany()***	***DriveCar()***
MakeVideoCall()		***CallCompany()***	
CaptureSelfie()			
CapturePhoto()			
InstallVariousApps()			
SetAlarm()			
SetEvents()			

So every object has some predefined attributes and every attributes has some value associated with that. And every object can perform some operations/methods/actions.

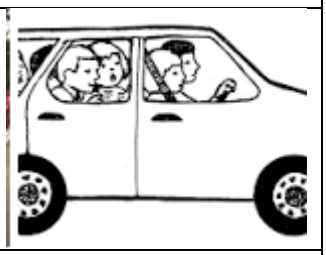
What is Class Then?

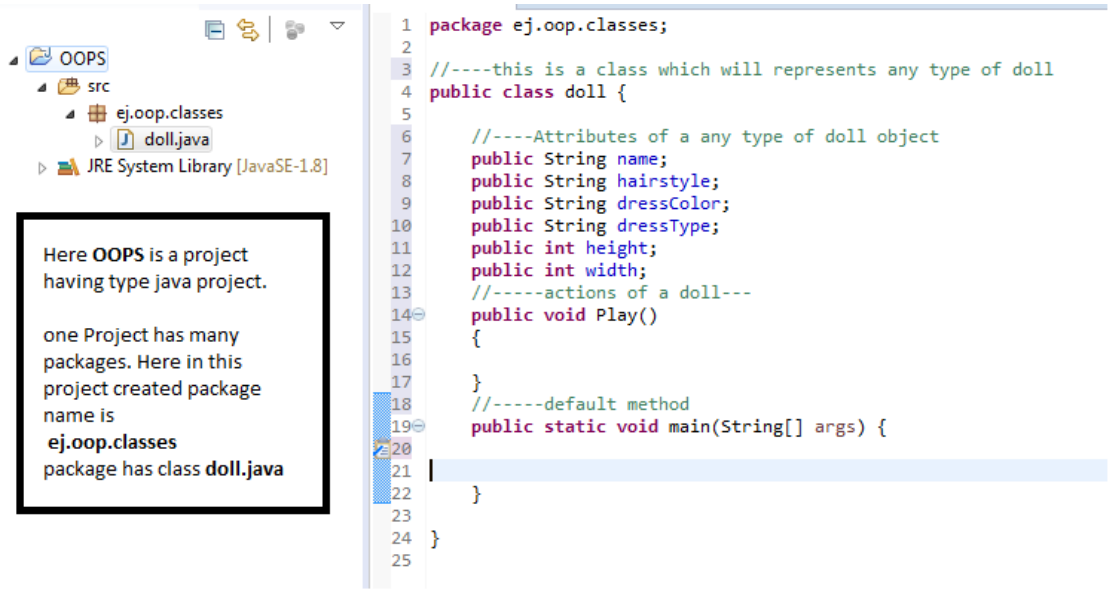
Class is a blue print which will describe the attributes and methods of that object.

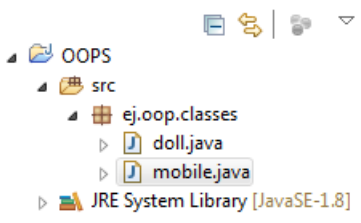
Class Name: Mobile			
 Redmi Note 4 Dark Grey, 64 Gb	 Apple iPhone SE (Space Grey,...	 Apple iPhone X 256GB (Space...	 Redmi 4 (Black, 32 GB)
Object-1	Object-2	Obect-3	Object-4
All Above Objects are having same attribute Name but their values are different. All the above 4 objects are belonging to Mobile Class			

Class Name: Doll

			
Object-1	Object-2	Obect-3	Object-4
All Above Objects are having same attribute Name but their values are different. All the above 4 objects are belonging to Doll Class			

Class Name: Car			
			
Object-1	Object-2	Obect-3	Object-4
All Above Objects are having same attribute Name but their values are different. All the above 4 objects are belonging to Doll Class			





Here public , private, protected are the visibility types. Which tells program that which variables and which methods make visible while programming.

```java
package ej.oop.classes;

//----this is a class which will represents any type of doll
public class mobile {

    //----Attributes of a any type of mobile object
    public String manufacturer;
    private String os;
    protected boolean frontcamera;
    protected boolean rearcamera;
    public static int height;
    public static int width;
    public double version;
    public String screen;
    public int RAM;
    int extendible_ram;

    //-----actions of a mobile---
    public void MakeVideoCall()
    {   }
    public void MakeVoiceCall()
    {   }
    public void captureSelfie()
    {   }
    public void CapturePhoto()
    {   }
    public void SetAlarms()
    {   }
    public void SetEvents()
    {  }
    //-----default method
    public static void main(String[] args) {
        // TODO Auto-generated method stub

    }

}
```