

Working with OOPS :

Class and Object :

Class:

- 1.class is a keyword, By using class keyword , we defined our own data type is called user defined data type
2. In the class we can declare a variable called fields , which are used to store the data
3. We can also define functions called methods, which are used to manipulate the values
- 4.Default modifier for the class is “default”
- 5.the class member can be initialized
- 6.Class is a template or class is a collection of states and behavior

Syn: [modifiers] <class > <ClassName>

```
{  
    Fields  
    Methods  
};]
```

Eg: class Student

```
{  
    int sno;  
    String sname;  
    int stot;  
}
```

Object:

> As we know that class is a logical representation, it doesn't occupy any space to store the data, To store the data and to access members of the class then we required to create a physical representation of the class called an “Object”

> In simple words an object is an instance of a class

Note : To Create an Object of the class then we must required

- 1.Referenc variable
- 2.new and constructor

Syn for Reference Variable :

<ClassName > <ref.variablename>;

Eg: Student s;

1. For Reference variable memory is allocated with in the stack
2. It will have two partitions i.e type and hcode , Type is holding class type name where as hashcode is holding an identity of an object.

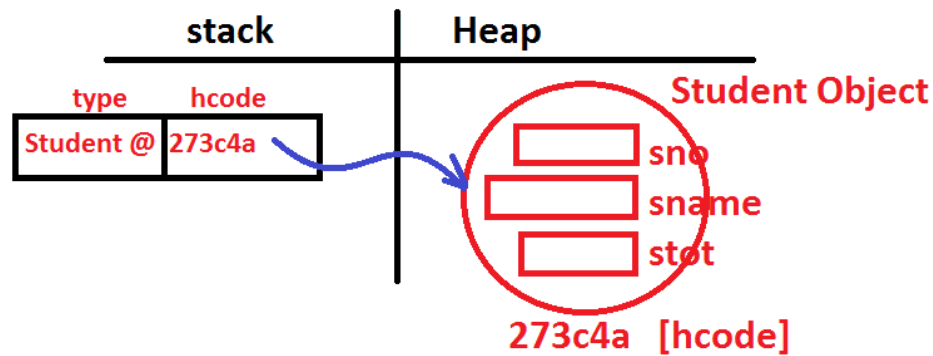
Syn For Object Creation:

Syn: <ref.vname> = new <ClassName>([list of args]);

Eg: s=new Student(); constructor

- 1.Constructor is an initializer method, which is used to instantiation and initialization
- 2.to invoke the constructor we must required “new” keyword
- 3.Whenever constructor is invoked then only an Object of the class is instantiated in the heap in memory
- 4.Whatever the non static variable are existed in the class for those variable memory is allocated with in the object.

Image :



Ex1:

```
class Sample
{
}
```

```
class ObjectDemo
{
    public static void main(String args[])
    {
        Sample s; // s is reference variable
        s=new Sample( );
        System.out.println(s);

        Sample s2=new Sample();
        System.out.println(s2);

    }
}
```

Eg:

SSSIT Computer Education
Besides R.S Brothers Show Room
Kphb – Hyderabad : 9866144861

Java

```
class Test
{
    int x;
}
class ObjectDemo2
{
    public static void main(String args[ ])
    {
        Test t=new Test( );
        t.x=10;
        // System.out.println(x);
        System.out.println("x val is : "+t.x);
    }
}

//Testing.java
class Testing
{
    int x;

    public static void main(String args[])
    {
        Testing t=new Testing();
        t.x=111;
        System.out.println("x val is : "+t.x);
    }
}
```
