NIELIT Gorakhpur

Course Name: A Level (2nd Sem) **Subject: JAVA**

Topic :Inner class in Java **Date: 27-05-20**

In Java, it is possible to define a class within another class, such classes are known as nested classes (inner classes).Java inner classes implements encapsulation.

Types of inner class:

1)Static Nested Class:

If the nested class i.e the class defined within another class, has static modifier applied in it, then it is called as static nested class. Since it is, static nested classes can access only static members of its outer class i.e it cannot refer to non-static members of its enclosing class directly. Because of this restriction, static nested class is rarely used.

```
class SN{
  static int data=30;
  static class Inner{
   void msg()
{
System.out.println(+data);
}   }
  public static void main(String args[]){
SN.Inner obj=new SN.Inner();
obj.msg();
  }  }
```

2)Java Member inner class:

A non-static class that is created inside a class but outside a method is called member inner class.

```
class MI{
 private int data=30;
 class Inner{
  void msg()
{
System.out.println("+data);
}
 }
 public static void main(String args[]){
MI obj=new MI();
MI.Inner in=obj.newInner();
in.msg();
 }  }
```

3)anonymous inner class in Java:

A class that has no name is known as anonymous inner class in java. It should be used if you have to override method of class or interface.

```
abstract class Person{
  abstract void college();
}
class TA{
 public static void main(String args[]){
  Person p=new Person(){
  void college()
{
System.out.println("NIELIT");
}
  };
p.college();
 } }
```

4)Java Local inner class:

A class i.e. created inside a method is called local inner class in java.Local inner class cannot be invoked from outside the method.

```
public class li{
 private int data=30;
 void display()
{
  class Local
{
   void msg()
{
System.out.println(data);
}
  }
  Local l=new Local();
l.msg();
 }
 public static void main(String args[])
{
 li obj=new li();
obj.display();
 } }
```