**Inner class** : sometime we declare a class inside another class called as inner classes. Inner classes concept introduced in 1.1 version to fix GUI bugs.

**Where to use inner classes** : Without existing one type of object, if there is no chance of existing another type of object then we should go for inner classes. Ex. :

Class University

{

Class department

{

}

}

University consists of several departments. Without existing university, there is no existence for department. Hence we have to declare department class inside university class. Same for car and engine. Car is outer class and engine is inner class.

Note : Without existing outer class object, there is no chance of existing inner class object.

Inner classes are of 4 categories :

1. Normal / regular
2. Method local inner classes (declared inside method)
3. Anonymous inner classes (without name)
4. Static nested classes

**Normal / regular inner classes** :

If we are declaring any named class directly inside a class without static modifier, such type of inner class is called regular / normal inner class.

Class Outer

{

Class Inner

{ public void m1() {} // normal method

}

Public static void main(String args[])

{

Syso(“in main”);

}

}

Create object of inner and outer class :

Outer o = new Outer();

Outer.Inner i = o.new Inner();

i.m1();

Note : Inside inner class, we cant declare any static members. Hence, we cannot declare main method and we cant run inner class directly from command prompt.

**Anonymous inner classes** (without name) : Sometimes we can declare inner class without name, such type of inner classes are called Anonymous inner classes. The main purpose of Anonymous inner classes is just for instant use i.e. one time usage.

3 types of anonymous inner classes : 1. anonymous inner class that extends a class 2. anonymous inner class that implement an interface 3. anonymous inner class that defined inside arguments.

1. anonymous inner class that extends a class

PopCorn p = new PopCorn() // anonymous inner class it is a class without name, it just extends a { //popcorn class. For that we are creating object with popcorn classes . . .//reference. So new object is object of anonymous inner class.

};

NOTE : . there are 2 types of anonymous things in java : 1. **Anonymous inner classes** and 2. **Anonymous Array**