1 Inner class in java

Inner class means one class which is a member of another class. There are basically four types of inner classes in java.

1. Nested Inner class

2. Method Local inner classes

3. Anonymous inner classes

4. Static nested classes

1.1 Nornal Inner class

Regular Inner class or Nested Inner class can access any private instance variable of outer class. Like any other instance variable, we can have access modifier private, protected, public and default modifier. Like class, interface can also be nested and can have access specifiers.

```
1  class Outer1
2  {
3      class Inner
4      {
5          public void m1()
6          {
7              System.out.println("Inner class m1 method")
                   ;
8          }
9      }
10     public static void main(String[] args)
11     {   //1way
12         Outer1 out=new Outer1();
13         Outer1.Inner in1=out.new Inner();
14         in1.m1();
15         //way2
16         //Outer1.Inner in1=new Outer1().new Inner();
17         //in1.m1();
18     }
19 }
```

```
//Normal Inner class
D:\phani>javac Outer1.java

D:\phani>java Outer1
Inner class m1 method

.........................................
while compiling
it cereates two dot class files

1)Outer1.class
2)Outer1$Inner.class
```

<div align="center">Outer1.java</div>

```
1  class Outer1
2  {
3      class Inner
4      {
5          public void m1()
6          {
7              System.out.println("Inner class m1 method")
                   ;
8          }
9      }
10     public static void main(String[] args)
11     {   //1way
12         Outer1 out=new Outer1();
13         Outer1.Inner in1=out.new Inner();
```

```
//Inner main declaration

D:\phani>java Outer2.java
Error: Could not find or load main class

D:\phani>javac Outer2.java
Outer2.java:5: error: package Sytem does
            Sytem.out.println("outer
                  ^
Outer2.java:11: error: package Sytem does
                Sytem.out.println
                      ^
Outer2.java:9: error: Illegal static decl
            public static void main(S
                                    ^
```

```
14|            in1.m1();
15|            //way2
16|            //Outer1.Inner  in1=new  Outer1().new  Inner();
17|            //in1.m1();
18|        }
19| }
```

Outer1.java

modifier 'static' is only allowed in co
3 errors