# Java Member Inner class :

* 1. A non-static class that is created inside a class but outside a method is called **member inner class**.
  2. It is also known as a **regular inner class or Instance Inner class.**
  3. It can be declared with access modifiers like public, default, private, and protected.

class Outer

{

  class Inner

{

}

}

class Q01\_Instance\_Inner\_Class

**{**

    class A

**{**

**}**

**}**

javac Q01\_Instance\_Inner\_Class.java (Compile then)

    1.Q01\_Instance\_Inner\_Class.class

    2.Q01\_Instance\_Inner\_Class$A.class

Main method not found in class Q01\_Instance\_Inner\_Class, please define the main method as:

   public static void main(String[] args)

or a JavaFX application class must extend javafx.application.Application

class Q02\_Instance\_Inner\_Class

**{**

    Class A

**{**

**}**

    public static void main**(** String args**[])**

**{**

        System.out.println **(**"Vishal Soner"**);**

**}**

**}**

Vishal Soner

1. We can't Declare main method in inner class.

2. We can't Create Static method in inner class.

class Q03\_Instance\_Inner\_Class

**{**

    class A

**{**

        public static void main**(** String args**[])**

**{**

            System.out.println **(**"Vishal Soner"**);**

**}**

**}**

**}**

error: Illegal static declaration in inner class Q03\_Instance\_Inner\_Class.A

                public static void main( String args[])

class Q04\_Instance\_Inner\_Class

**{**

    class A

**{**

        void show**()**

**{**

            System.out.println **(**"Show Method"**);**

**}**

**}**

    public static void main**(** String args**[])**

**{**

        System.out.println **(**"Vishal Soner"**);**

**}**

**}**

Vishal Soner

class Q05\_Instance\_Inner\_Class

**{**

    int x **=** 10**;**

    public static void main**(** String args**[])**

**{**

        System.out.println **(**"Vishal Soner"**);**

        System.out.println  **(**"X : " **+** x**);**

**}**

**}**

error: non-static variable x cannot be referenced from a static context

  System.out.println ("X : " + x);

                              ^

class Q06\_Instance\_Inner\_Class

**{**

    int x **=** 10**;**

    void show**()**

**{**

        System.out.println **(**"Show Method"**);**

**}**

    public static void main**(** String args**[])**

**{**

        System.out.println **(**"Vishal Soner"**);**

        show**();**

**}**

**}**

error: non-static method show() cannot be referenced from a static context

                show();

                ^

class Q07\_Instance\_Inner\_Class

**{**

    int x **=** 10**;**

    void show**()**

**{**

        System.out.println **(**"Show Method"**);**

**}**

    public static void main**(** String args**[])**

**{**

        System.out.println **(**"Vishal Soner"**);**

        Q07\_Instance\_Inner\_Class q7 **=** **new** Q07\_Instance\_Inner\_Class**();**

        q7**.**show**();**

**}**

**}**

Vishal Soner

Show Method

class Q08\_Instance\_Inner\_Class

**{**

    int x **=** 10**;**

    void show**()**

**{**

        System.out.println **(**"Show Method"**);**

**}**

    class A

**{**

        void show1**()**

**{**

            System.out.println **(**"Show Method - 1"**);**

**}**

**}**

    public static void main**(** String args**[])**

**{**

        System.out.println **(**"Vishal Soner"**);**

        Q08\_Instance\_Inner\_Class q8 **=** **new** Q08\_Instance\_Inner\_Class**();**

        System.out.println **(**"X : " **+** q8**.**x **);**

        q8**.**show**();**

        q8**.**show1**();**

**}**

**}**

error: cannot find symbol

               q8.show1();

                 ^

class Q09\_Instance\_Inner\_Class

**{**

    int x **=** 10**;**

    void show**()**

**{**

        System.out.println **(**"Show Method - 0"**);**

**}**

    class A

**{**

        void show1**()**

**{**            System.out.println **(**"Show Method - 1"**);**         **}**

**}**

    public static void main**(** String args**[])**

**{**

        Q09\_Instance\_Inner\_Class q9 **=** **new** Q09\_Instance\_Inner\_Class**();**

        System.out.println **(**"X : " **+** q9**.**x**);**

        q9**.**show**();**

        Q09\_Instance\_Inner\_Class**.**A a1 **=** q9**.new** A**();**

        a1**.**show1**();**

**}**

**}**

X : 10

Show Method - 0

Show Method – 1

class Q10\_Instance\_Inner\_Class

**{**

    int x **=** 10**;**

    void show**()**

**{**

        System.out.println **(**"Show Method - 0"**);**

**}**

    class A

**{**

        void show1**()**

**{**

            System.out.println **(**"Show Method - 1"**);**

**}**

**}**

    public static void main**(** String args**[])**

**{**

        Q10\_Instance q10 **=** **new** Q10\_Instance**();**

        System.out.println **(**"X : " **+** q10**.**x**);**

        q10**.**show**();**

        A a1 **=** q10**.new** A**();**

        a1**.**show1**();**

**}**

**}**

X : 10

Show Method - 0

Show Method – 1

class A

**{**

    class B

**{**

        void show1**()**

**{**

            System.out.println **(**"Show Method - 1"**);**

**}**

**}**

**}**

class Q11\_Instance\_Inner\_Class

**{**

    public static void main**(** String args**[])**

**{**

        A a **=** **new** A**();**

        B b **=** a**.new** B**();**

        b**.**show1**();**

**}**

**}**

**error: cannot find symbol**

**B b = a.new B();**

**^**

class A

**{**

    class B

**{**

        void show1**()**

**{**

            System.out.println **(**"Show Method - 1"**);**

**}**

**}**

**}**

class Q12\_Instance\_Inner\_Class

**{**

    public static void main**(** String args**[])**

**{**

        A a **=** **new** A**();**

        A**.**B b **=** a**.new** B**();**

        b**.**show1**();**

**}**

**}**

Show Method - 1

class A

**{**

    int x **=** 10**;**

    void show1**()**

**{**

        System.out.println **(**"X : "  **+** x**);**

        B b **=** **new** B**();**

        b**.**show2**();**

**}**

    class B

**{**

        void show2**()**

**{**

            System.out.println **(**"Show Method - 2"**);**

**}**

**}**

**}**

class Q13\_Instance\_Inner\_Class

**{**

    public static void main**(** String args**[])**

**{**

        A a **=** **new** A**();**

        a**.**show1**();**

**}**

**}**

X : 10

Show Method - 2

1. **Instance Method/ Static Methdo, Static or Non-Static Data(Method or Variable) ko Direct access kar sakte he.**
2. **Static Method , Only Static Data(Method or Variable) ko Direct access kar sakte he.**

class A

**{**

    int x **=** 10**;**

    static void show1**()**

**{**

        System.out.println **(**"X : "  **+** x**);**

        B b **=** **new** B**();**

        b**.**show2**();**

**}**

    class B

**{**

        void show2**()**

**{**

            System.out.println **(**"Show Method - 2"**);**

**}**

**}**

**}**

class Q14\_Instance\_Inner\_Class

**{**

    public static void main**(** String args**[])**

**{**

        A a **=** **new** A**();**

        a**.**show1**();**

**}**

**}**

**error: non-static variable x cannot be referenced from a static context**

**System.out.println ("X : "  + x);**

**^**

**Q14\_Instance\_Inner\_Class.java:7: error: non-static variable this cannot be referenced from a static context**

**B b = new B();**

**^**

class A

{

    int x **=** 10**;**

    static void show1**()**

**{**

        A a **=** **new** A**();**

        System.out.println **(**"X : "  **+** a**.**x**);**

        A**.**B b **=** a**.new** B**();**

        b**.**show2**();**

**}**

    class B

**{**

        void show2**()**

**{**

            System.out.println **(**"Show Method - 2"**);**

**}**

**}**

**}**

class Q15\_Instance\_Inner\_Class

**{**

    public static void main**(** String args**[])**

**{**

        A a **=** **new** A**();**

        a**.**show1**();**

**}**

**}**

X : 10

Show Method – 2

class A

**{**

    class B

**{**

        void show1**()**

**{**

            System.out.println **(**"Show Method - 1"**);**

**}**

**}**

**}**

class Q16\_Instance\_Inner\_Class

**{**

    public static void main**(** String args**[])**

**{**

        A a **=** **new** A**();**

        A**.**B b **=** a**.new** B**();**

        b**.**show1**();**

**}**

**}**

Show Method – 1

class A

**{**

    class B

**{**

        class C

**{**

            void show1**()**

**{**

                System.out.println **(**"Show Method - 1"**);**

**}**

**}**

**}**

**}**

class Q17\_Instance\_Inner\_Class

**{**

    public static void main**(** String args**[])**

**{**

        A a **=** **new** A**();**

        A**.**B b **=** a**.new** B**();**

        A**.**B**.**C c **=** b**.new** C**();**

        c**.**show1**();**

**}**

**}**

Show Method – 1

class A

**{**

    int x **=** 10**;**

    static int y **=** 20**;**

    class B

**{**

        void show1**()**

**{**

            System.out.println **(**"X : " **+** x**);**

            System.out.println **(**"Y : " **+** y**);**

**}**

**}**

**}**

class Q18\_Instance\_Inner\_Class

**{**

    public static void main**(** String args**[])**

**{**

        A a **=** **new** A**();**

        A**.**B b **=** a**.new** B**();**

        b**.**show1**();**

**}**

**}**

X : 10

Y : 20

class A

**{**

    int x **=** 10**;**

    class B

**{**

        int x **=** 200**;**

        void show1**()**

**{**

            int x **=** 3000**;**

            System.out.println **(**"X : " **+** x**);**

            System.out.println **(**"X : " **+** **this.**x**);**

            System.out.println **(**"X : " **+** A**.**this**.**x**);**

            System.out.println **(**"X : " **+** B**.**this**.**x**);**

**}**

**}**

**}**

class Q19\_Instance\_Inner\_Class

**{**

    public static void main**(** String args**[])**

**{**

        A a **=** **new** A**();**

        A**.**B b **=** a**.new** B**();**

        b**.**show1**();**

**}**

**}**

X : 3000

X : 200

X : 10

X : 200

class A

**{**

    int x **=** 10**;**

**}**

class Q20\_Instance\_Inner\_Class

**{**

    public static void main**(** String args**[])**

**{**

        A a **=** **new** A**();**

        System.out.println **(**"X : " **+** a**.**x**);**

**}**

**}**

X : 10

class A

**{**

    private int x **=** 10**;**

**}**

class Q21\_Instance\_Inner\_Class

**{**

    public static void main**(** String args**[])**

**{**

        A a **=** **new** A**();**

        System.out.println **(**"X : " **+** a**.**x**);**

**}**

**}**

**error: x has private access in A**

**System.out.println ("X : " + a.x);**

**^**

class A

**{**

    private int x **=** 10**;**

    void show**()**

**{**

        System.out.println **(**"X : " **+** x**);**

**}**

**}**

class Q22\_Instance\_Inner\_Class

**{**

    public static void main**(** String args**[])**

**{**

        A a **=** **new** A**();**

        a**.**show**();**

**}**

**}**

X : 10

**Outer Class Ke Private Data Ko inner Class ke Ander use kar sakte he**

class A

**{**

    private int x **=** 10**;**

    class B

**{**

        void show**()**

**{**

            System.out.println **(**"X : " **+** x**);**

**}**

**}**

**}**

class Q23\_Instance\_Inner\_Class

**{**

    public static void main**(** String args**[])**

**{**

        A a **=** **new** A**();**

        a**.**show**();**

**}**

**}**

X : 10

1. **Hum Outer class ko Private nai Bana sakte he.**
2. **Inner Class ko Private Kar sakte he.**

**Outer Class Will be : default, public, final, abstract, starictfe**

**Inner Class Will be : Outer 5 +  private, static, protected**

private class A

**{**

    private int x **=** 10**;**

    class B

**{**

        void show**()**

**{**

            System.out.println **(**"X : " **+** x**);**

**}**

**}**

**}**

class Q24\_Instance\_Inner\_Class

**{**

    public static void main**(** String args**[])**

**{**

        A a **=** **new** A**();**

        a**.**show**();**

**}**

**}**

**error: modifier private not allowed here**

**private class A**

**^**

**Q24\_Instance\_Inner\_Class.java:28: error: cannot find symbol**

**a.show();**

**^**

**1. Hum Outer class ko Private nai Bana sakte he.**

**2. Inner Class ko Private Kar sakte he.**

**Outer Class Will be : default, public, final, abstract, starictfe**

**Inner Class Will be : Outer 5 +  private, static, protected**

class A

**{**

    private int x **=** 10**;**

    private class B

**{**

        void show**()**

**{**

            System.out.println **(**"X : " **+** x**);**

**}**

**}**

**}**

class Q25\_Instance\_Inner\_Class

**{**

    public static void main**(** String args**[])**

**{**

        A a **=** **new** A**();**

        System.out.println **(**"Private Inner Class"**);**

**}**

**}**

Private Inner Class

class A

**{**

    private int x **=** 10**;**

    private class B

**{**

        void show**()**

**{**

            System.out.println **(**"X : " **+** x**);**

**}**

**}**

**}**

class Q26\_Instance\_Inner\_Class

**{**

    public static void main**(** String args**[])**

**{**

        A a **=** **new** A**();**

        A**.**B b **=** a**.new** B**();**

        b**.**show**();**

**}**

**}**

**error: A.B has private access in A**

**A.B b = a.new B();**

**^**

**error: A.B has private access in A**

**A.B b = a.new B();**

**^**

class A

**{**

    private int x **=** 10**;**

    private class B

**{**

        void show2**()**

**{**

            System.out.println **(**"Class B"**);**

            System.out.println **(**"X : " **+** x**);**

**}**

**}**

    void show1**()**

**{**

        B b **=** **new** B**();**

        b**.**show2**();**

**}**

**}**

class Q27\_Instance\_Inner\_Class

**{**

    public static void main**(** String args**[])**

**{**

        A a **=** **new** A**();**

        a**.**show1**();**

**}**

**}**

Class B

X : 10

class A

**{**

    A**()**

**{**

        System.out.println **(**"Constructor"**);**

**}**

    void show1**()**

**{**

        System.out.println **(**"Show1 Method"**);**

**}**

**}**

class Q28\_Instance\_Inner\_Class

**{**

    public static void main**(** String args**[])**

**{**

        A a **=** **new** A**();**

        a**.**show1**();**

**}**

**}**

Constructor

Show1 Method

class A

**{**

    A**()**

**{**

        System.out.println **(**"Constructor"**);**

**}**

    void show1**()**

**{**

        System.out.println **(**"Show1 Method"**);**

**}**

**{**

        System.out.println **(**"Instance Block"**);**

**}**

**}**

class Q29\_Instance\_Inner\_Class

**{**

    public static void main**(** String args**[])**

**{**

        A a **=** **new** A**();**

        a**.**show1**();**

**}**

**}**

Instance Block

Constructor

Show1 Method

class A

**{**

    A**()**

**{**

        System.out.println **(**"Constructor"**);**

**}**

    void show1**()**

**{**

        System.out.println **(**"Show1 Method"**);**

**}**

**{**

        System.out.println **(**"Instance Block"**);**

**}**

    static

**{**

        System.out.println **(**"Static Block"**);**

**}**

**}**

class Q30\_Instance\_Inner\_Class

**{**

    public static void main**(** String args**[])**

**{**

        A a **=** **new** A**();**

        a**.**show1**();**

**}**

**}**

Static Block

Instance Block

Constructor

Show1 Method

class A

**{**

    A**()**

**{**

        System.out.println **(**"Constructor"**);**

**}**

    void show1**()**

**{**

        System.out.println **(**"Show1 Method"**);**

**}**

**{**

        System.out.println **(**"Instance Block"**);**

**}**

    static

**{**

        System.out.println **(**"Static Block"**);**

**}**

**}**

class Q31\_Instance\_Inner\_Class

**{**

    public static void main**(** String args**[])**

**{**

        A a **=** **new** A**();**

        a**.**show1**();**

        a**.**show1**();**

**}**

**}**

Static Block

Instance Block

Constructor

Show1 Method

Show1 Method

class A

**{**

    A**()**

**{**

        System.out.println **(**"Constructor"**);**

**}**

**}**

class Q32\_Instance\_Inner\_Class

**{**

    public static void main**(** String args**[])**

**{**

**new** A**();**

**}**

**}**

Constructor

class A

**{**

    A**()**

**{**

        System.out.println **(**"Constructor"**);**

**}**

**{**

        System.out.println **(**"Instance Block"**);**

**}**

**}**

class Q33\_Instance\_Inner\_Class

**{**

    public static void main**(** String args**[])**

**{**

**new** A**();**

**}**

**}**

Instance Block

Constructor

class A

**{**

    class B

**{**

        void show**()**

**{**

            System.out.println **(**"Show Method"**);**

**}**

**}**

**}**

class Q34\_Instance\_Inner\_Class

**{**

    public static void main**(** String args**[])**

**{**

**new** A**().new** B**().**show**();**

**}**

**}**

show Method

class A

**{**

    class B

**{**

        void show**()**

**{**

            System.out.println **(**"Show Method"**);**

**}**

**}**

**}**

class Q35\_Instance\_Inner\_Class

**{**

    public static void main**(** String args**[])**

**{**

        A**.**B b **=** **new** A**().new** B**();**

        b**.**show**();**

**}**

**}**

show Method

class A

**{**

    class B

**{**

        class C

**{**

            void show**()**

**{**

                System.out.println **(**"Show Method"**);**

**}**

**}**

**}**

**}**

class Q36\_Instance\_Inner\_Class

**{**

    public static void main**(** String args**[])**

**{**

**new** A**().new** B**().new** C**().**show**();**

**}**

**}**

show Method

1. **We can't create Static Block in Instance Inner Class.**
2. **But We can create Instance Block in Instance Inner Class.**

class A

**{**

    static

**{**

        System.out.println **(**"A - Static Block"**);**

**}**

    class B

**{**

        static

**{**

            System.out.println **(**"B - Static Block"**);**

**}**

**}**

**}**

class Q37\_Instance\_Inner\_Class

**{**

    public static void main**(** String args**[])**

**{**

        A a **=** **new** A**();**

        A**.**B b **=** a**.new** B**();**

**}**

**}**

**error: Illegal static declaration in inner class A.B**

**static**

**^**

1. **We can't create Static Block in Instance Inner Class.**
2. **But We can create Instance Block in Instance Inner Class.**

class A

**{**

**{**

        System.out.println **(**"A - Instance Block"**);**

**}**

    class B

**{**

**{**

            System.out.println **(**"B - Instance Block"**);**

**}**

**}**

**}**

class Q38\_Instance\_Inner\_Class

**{**

    public static void main**(** String args**[])**

**{**

        A a **=** **new** A**();**

        A**.**B b **=** a**.new** B**();**

**}**

**}**

A - Instance Block

B - Instance Block

class A

**{**

**{**

        System.out.println **(**"A - Instance Block"**);**

**}**

    A**()**

**{**

        System.out.println **(**"A - Constructor"**);**

**}**

    class B

**{**

**{**

            System.out.println **(**"B - Instance Block"**);**

**}**

        B**()**

**{**

            System.out.println **(**"B - Constructor"**);**

**}**

**}**

**}**

class Q39\_Instance\_Inner\_Class

**{**

    public static void main**(** String args**[])**

**{**

        A a **=** **new** A**();**

        A**.**B b **=** a**.new** B**();**

**}**

**}**

A - Instance Block

A - Constructor

B - Instance Block

B - Constructor

class A

**{**

    void show1**()**

**{**

        System.out.println **(**"A - Show1 Method"**);**

**}**

**}**

class B **extends** A

**{**

    void show2**()**

**{**

        System.out.println **(**"B - Show2 Method"**);**

**}**

**}**

class Q40\_Instance\_Inner\_Class

**{**

    public static void main**(** String args**[])**

**{**

        B b **=** **new** B**();**

        b**.**show1**();**

        b**.**show2**();**

**}**

**}**

A - Show1 Method

B - Show2 Method

class A

**{**

    class B

**{**

        void show1**()**

**{**

            System.out.println **(**"B - Show1 Method"**);**

**}**

**}**

    class C **extends** B

**{**

        void show2**()**

**{**

            System.out.println **(**"C - Show2 Method"**);**

**}**

**}**

**}**

class Q41\_Instance\_Inner\_Class

**{**

    public static void main**(** String args**[])**

**{**

        A a **=** **new** A**();**

        A**.**C c **=** a**.new** C**();**

        c**.**show1**();**

        c**.**show2**();**

**}**

**}**

B - Show1 Method

C - Show2 Method

class A

**{**

    A**()**

**{**

        System.out.println **(**"A - Constructor"**);**

**}**

**}**

class B **extends** A

**{**

    B**()**

**{**

        System.out.println **(**"B - Constructor"**);**

**}**

**}**

class C **extends** B

**{**

    C**()**

**{**

        System.out.println **(**"C - Constructor"**);**

**}**

**}**

class Q42\_Instance\_Inner\_Class

**{**

    public static void main**(** String args**[])**

**{**

        C c **=** **new** C**();**

**}**

**}**

A - Constructor

B - Constructor

C - Constructor

class A

**{**

    class B

**{**

        B**()**

**{**

            System.out.println **(**"B - Constructor"**);**

**}**

**}**

    class C **extends** B

**{**

        C**()**

**{**

            System.out.println **(**"C - Constructor"**);**

**}**

**}**

**}**

class Q43\_Instance\_Inner\_Class

**{**

    public static void main**(** String args**[])**

**{**

        A a **=** **new** A**();**

        A**.**C c **=** a**.new** C**();**

**}**

**}**

B - Constructor

C - Constructor

abstract class A

**{**

    void show**()**

**{**

        System.out.println **(**"Abstract Show"**);**

**}**

**}**

class Q44\_Instance\_Inner\_Class

**{**

    public static void main**(** String args**[])**

**{**

        A a **=** **new** A**();**

**}**

**}**

**error: A is abstract; cannot be instantiated**

**A a = new A();**

**^**

abstract class A

**{**

    void show**()**

**{**

        System.out.println **(**"A - Abstract Show"**);**

**}**

**}**

class B **extends** A

**{}**

class Q45\_Instance\_Inner\_Class

**{**

    public static void main**(** String args**[])**

**{**

        B b **=** **new** B**();**

        b**.**show**();**

**}**

**}**

A - Abstract Show

abstract class A

**{**

    class B

**{**

        void show**()**

**{**

            System.out.println **(**"A - Abstract Show"**);**

**}**

**}**

**}**

class C **extends** A

**{}**

class Q46\_Instance\_Inner\_Class

**{**

    public static void main**(** String args**[])**

**{**

        C c **=** **new** C**();**

        C**.**B b **=** c**.new** B**();**

        b**.**show**();**

**}**

**}**

A - Abstract Show

abstract class A

**{**

    class B

**{**

        void show**()**

**{**

            System.out.println **(**"A - Abstract Show"**);**

**}**

**}**

**}**

class B **extends** A

**{}**

class Q47\_Instance\_Inner\_Class

**{**

    public static void main**(** String args**[])**

**{**

        B b1 **=** **new** B**();**

        B**.**B b2 **=** b1**.new** B**();**

        b2**.**show**();**

**}**

**}**

A - Abstract Show

class A

**{**

    class A

**{**

        void show**()**

**{**

            System.out.println **(**"A - Abstract Show"**);**

**}**

**}**

**}**

class Q48\_Instance\_Inner\_Class

**{**

    public static void main**(** String args**[])**

**{**

        A a **=** **new** A**();**

**}**

**}**

**error: class A is already defined in package unnamed package**

**class A**

**^**

class A

**{**

    abstract class B

**{**

        void show**()**

**{**

            System.out.println **(**"A - Abstract Show"**);**

**}**

**}**

**}**

class Q49\_Instance\_Inner\_Class

**{**

    public static void main**(** String args**[])**

**{**

        A a **=** **new** A**();**

        A**.**B b **=** a**.new** B**();**

**}**

**}**

**error: A.B is abstract; cannot be instantiated**

**A.B b = a.new B();**

**^**

class A

**{**

    abstract class B

**{**

        void show**()**

**{**

            System.out.println **(**"A - B - Abstract Show"**);**

**}**

**}**

    class C **extends** B

**{}**

**}**

class Q50\_Instance\_Inner\_Class

**{**

    public static void main**(** String args**[])**

**{**

        A a **=** **new** A**();**

        A**.**C c **=** a**.new** C**();**

        c**.**show**();**

**}**

**}**

A - B - Abstract Show

class A

**{**

    class B

**{**

        abstract void show**();**

**}**

**}**

class Q51\_Instance\_Inner\_Class

**{**

    public static void main**(** String args**[])**

**{**

        A a **=** **new** A**();**

**}**

**}**

**error: A.B is not abstract and does not override abstract method show() in A.B**

**class B**

**^**

class A

**{**

    abstract class B

**{**

        abstract void show**();**

**}**

**}**

class Q52\_Instance\_Inner\_Class

**{**

    public static void main**(** String args**[])**

**{**

        A a **=** **new** A**();**

**}**

**}**

Blank

class A

**{**

    abstract class B

**{**

        abstract void show**();**

**}**

    class C **extends** B

**{}**

**}**

class Q53\_Instance\_Inner\_Class

**{**

    public static void main**(** String args**[])**

**{**

        A a **=** **new** A**();**

        A**.**C c **=** a**.new** C**();**

**}**

**}**

**A.C is not abstract and does not override abstract method show() in A.B**

**class C extends B**

**^**

class Q54\_Instance\_Inner\_Class

**{**

    class A

**{**

        void show**()**

**{**

            System**.**out**.**println**(**"Show Method"**);**

**}**

**}**

    public static void main**(** String args**[])**

**{**

        A a **=** **new** A**();**

        a**.**show**();**

**}**

**}**

 error: non-static variable this cannot be referenced from a static context

                A a = new A();

                      ^

class Q55\_Instance\_Inner\_Class

**{**

    static class A

**{**

        void show**()**

**{**

            System**.**out**.**println**(**"Show Method"**);**

**}**

**}**

    public static void main**(** String args**[])**

**{**

        A a **=** **new** A**();**

        a**.**show**();**

**}**

**}**

show Method

--------------------------------------------------------------------------------------

class Q56\_Instance\_Inner\_Class

**{**

    static class A

**{**

        static int x **=** 100**;**

        static void show**()**

**{**

            System**.**out**.**println**(**"Show Method"**);**

**}**

**}**

    public static void main**(** String args**[])**

**{**

        A a **=** **new** A**();**

        a**.**show**();**

**}**

**}**

show Method

Ham Static Class ke andar Static variable and Method bana sakte he,

But

Static Method ke andara Static Variable Nai bana sakte.

--------------------------------------------------------------------------------------

class Q57\_Instance\_Inner\_Class

**{**

    class A

**{**

        int x **=** 100**;**

        void show**()**

**{**

            System**.**out**.**println**(**"Show Method"**);**

**}**

**}**

    public static void main**(** String args**[])**

**{**

        Q56\_Instance\_Inner\_Class**.**A a **=** **new** Q56\_Instance\_Inner\_Class**.**A**();**

        a**.**show**();**

**}**

**}**

show Method

--------------------------------------------------------------------------------------

class Q58\_Instance\_Inner\_Class

**{**

    static class A

**{**

        public static void main**(** String args**[])**

**{**

            System**.**out**.**println**(**"Main Class - 2"**);**

**}**

**}**

    public static void main**(** String args**[])**

**{**

        System**.**out**.**println**(**"Main Class - 1"**);**

        A a **=** **new** A**();**

**}**

**}**

Compile : javac Q58\_Instance\_Inner\_Class.java

// 01       Run : java Q58\_Instance\_Inner\_Class

Main Class - 1

// 02       Run : java Q58\_Instance\_Inner\_Class$A

Main Class - 2

After Comepile

Q58\_Instance\_Inner\_Class.class

Q58\_Instance\_Inner\_Class$A.class

class Q59\_Instance\_Inner\_Class

**{**

    static class A

**{**

        public static void main**(** String args**[])**

**{**

            System**.**out**.**println**(**"Main Class - 2"**);**

**}**

**}**

    public static void main**(** String args**[])**

**{**

        System**.**out**.**println**(**"Main Class - 1"**);**

        Q59\_Instance\_Inner\_Class**.**A  a  **=** **new**  Q59\_Instance\_Inner\_Class**.**A**();**

        //if We Call Main method Implicitly It can't Allow.

        a**.**main**();**

**}**

**}**

error: method main in class A cannot be applied to given types;

                a.main();

                 ^

class A

**{**

    static class B

**{**

        public static void main**(** String args**[])**

**{**

            System**.**out**.**println**(**"Main Class - 2"**);**

**}**

**}**

**}**

class Q60\_Instance\_Inner\_Class

**{**

    public static void main**(** String args**[])**

**{**

        System**.**out**.**println**(**"Main Class - 1"**);**

        A a **=** **new** A**();**

        A**.**B b **=** **new** A**.**B**();**

**}**

**}**

Compile : javac Q60\_Instance\_Inner\_Class.java

// 01  :  Run java Q60\_Instance\_Inner\_Class

Main Class - 1

// 02  :  Run java A$B

Main Class - 2

// 03  :  Run java A

Error: Main method not found in class A, please define the main method as:

After Compile :

A.class

A$B.class

Q60\_Instance\_Inner\_Class.class

class A

**{**

    class B

**{**

        public static void main**(** String args**[])**

**{**

            System**.**out**.**println**(**"Main Class - 2"**);**

**}**

**}**

**}**

class Q61\_Instance\_Inner\_Class

**{**

    public static void main**(** String args**[])**

**{**

        System**.**out**.**println**(**"Main Class - 1"**);**

        A a **=** **new** A**();**

        A**.**B b **=** **new** A**.**B**();**

**}**

**}**

Compile : javac Q61\_Instance\_Inner\_Class.java

error: Illegal static declaration in inner class A.B

                public static void main( String args[])

                                   ^

  modifier 'static' is only allowed in constant variable declarations

Q61\_Instance\_Inner\_Class.java:20: error: an enclosing instance that contains A.B is required

                A.B b = new A.B();

                        ^

Java Not Allow to Create Static Method in Inner Class.

Java Allow to Create Static Method in Static Inner Class.

class A

**{**

    class B

**{**

        static void Show**(** String args**[])**

**{**

            System**.**out**.**println**(**"Show Method"**);**

**}**

**}**

**}**

class Q62\_Instance\_Inner\_Class

**{**

    public static void main**(** String args**[])**

**{**

        System**.**out**.**println**(**"Main Class - 1"**);**

        A a **=** **new** A**();**

        A**.**B b **=** **new** A**.**B**();**

**}**

**}**

error: Illegal static declaration in inner class A.B

                static void Show( String args[])

                            ^