

Chapter 10 Inheritance in Java by Munawar

Inheritance is used to borrow properties & methods from an existing class.

Phone ==> Smartphone

Super class ==> sub class sub class extends super class

Declaring inheritance in Java

Inheritance in Java is declared using extends keyword.

Super class

Sub class

Sub class extends super class

More Example

Vehicle

Animal

Vehicle

Animal

Car

dog

track

cat

When a class inherits from a superclass it inherits parts of superclass methods and field's java doesn't supports multiple inheritance i.e. two classes cannot be super classes for a sub class.

Code Example

Inheritance in Java is declared using extends keyword.

```
Public class Dog extends Animal {
```

```
// Code
```

```
}
```

Quick Quiz

Create a class Animal and derive another class Dog from it.

Source Code

```
import javax.swing.plaf.synth.SynthTextAreaUI;
import java.util.Scanner;

class base{
    int x;

    public int getX() {
        System.out.println("I am getting x :");
        return x;
    }

    public void setX(int x) {
        System.out.println("I am setting x :");
        this.x = x;
    }

    public void DipslayMe(){
        System.out.println("Hello I am DisplayME Function.");
    }
}

class Derived extends base{
    int y;

    public int getY() {
        return y;
    }

    public void setY(int y) {
        this.y = y;
    }
}

// Quick Quiz
class Animal{
    String name;
    int types=5;
    public Animal(){
        this.name="Cat";
        this.types=5;
    }
    public void animalDisplay(){
        System.out.println(name);
    }
}
```

```

}

class dog extends Animal{
    public void dog() {
        System.out.println("I am Dog");
    }
}

public class Main {
    public static void main(String[] args) {
        // creating an object for base class
        base b= new base();
        b.setX(5);
        System.out.println(b.getX());

        // creating an object for base class
        Derived d=new Derived();
        d.setX(10);
        System.out.println(d.getX());

        d.setY(30);
        System.out.println(d.getY());

        Animal ani=new Animal();
        ani.animalDisplay();

        dog dag=new dog();
    }
}

```

```

}

```

Thank You