Chapter 11 Abstract class and Abstract Method in Java by Munawar

What does abstract (class) mean?

Abstract in English means existing in thought or as an idea without existence.

Abstract method

A method that is declared without an implementation.

Abstract void move To (double X, double Y)

Abstract class

If a class includes abstract methods, then the class itself must be declared abstract, as in:

Public abstract class Phone Model {

Abstract void switch off ();

// more code

}

When an abstract class is sub classed, the sub class usually provides implementations for all of the methods in parent class. If it doesn't it must be declared abstract.

An Example

 Shape   :

:   :

:   :

Circle   Rectangle   Rhombus

Note

It is possible to create reference of an abstract class it is not possible to create an object of an abstract class.

Source Code

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

abstract class Base{
    public Base(){
        System.out.println("I am Constructor of Base");
    }
    public void sayHello(){
        System.out.println("Hello");
    }
    abstract public void greet();
    abstract public void greet2();
}
class Derived extends Base{
    @Override
    public void greet(){
        System.out.println("Good morning");
    }
    public void greet2(){
        System.out.println("Good morning greet 2");
    }
}
abstract class derived2 extends Base{
    public void good(){
        System.out.println("I am Good in good method");
    }
}
public class Main {
    public static void main (String [] args) {
      //  derived2 derived=new derived2();
       // Derived der=new Derived();  // error is occur because it is
//abstract  class

    }

}
```

Thank You