**ABSTRACT CLASSES**

Data abstraction is the process of hiding certain details and showing only the essential information to the user. Abstraction can be achieved using abstract classes.

The **abstract class** is a restricted class that cannot be used to create objects. To access it, it must be inherited by another class.

The **abstract method** can only be used in the abstract class and does not have a body. The body is provided by the subclass (which inherits the abstract class).

An abstract class can have both abstract and regular methods:

abstract class Animal {

public abstract void animalSound();

public void sleep() {

System.out.println(“sleeping”);

}

}

class Pig extends Animal {

public void animalSound() {

System.out.println(“pig sound”);

}

}

class MainClass {

public static void main(String[] args) {

Pig pig1 = new Pig();

pig1.animalSound();

pig1.sleep();

}

}

Basically, abstract classes are like interfaces, but with a bit more functionality and freedom.

Important: abstract classes can have constructors. This is useful because when any class extends an abstract class, the constructor of the sub class will invoke the constructor of its super class. (implicitly or explicitly).