Abstract class

A class declared with "abstract" keyword is called abstract class.
an Abstract class is nothing but an incomplete class where programmer can declare complete as well as incomplete methods in it.

programmer can declare incomplete methods as abstract method, by declaring keyword
called "abstract" Infront of method.

we cannot create object of abstract class, to create object of abstract class we need
to make use of concrete class.

Abstract classes are meant to function as templates.

Concrete class:
A class which provides definitions for all the incomplete methods which are
present in abstract class with the help of extends keywords is called concrete class.

Q1: Can 1 Class extends another Class? yes
Q2: Can 1 Abstract Class extends another Abstract Class? yes
Q3: is there constructor available in abstract class>
Yes, abstract classes in Java can have constructors. However, you can't create an instance of an abstract class directly. Instead, the abstract class constructor is called when an instance of a sub class is created

Q1: valid or not (can we declare only complete method in abstract class -> yes)

```
abstract public class Sample1
{
	public void m1()
	{
		System.out.println("method m1 complete in abstract class");
	}

	public void m2()    //method declaration
	{
		System.out.println("method m2 complete in abstract class");
	}
}
```

Ans: Valid

Q2: valid or not (can we declare only in-complete method in abstract class -> yes)

```
abstract public class Sample1
{
	abstract public void m1();

	abstract public void m1();
}
```

Ans: Valid

```
package Abstract_Concrete_Class;

// abstract class or incomplete class
abstract public class Sample1
{
	//complete method
	public void m1()    //method declaration
	{
		System.out.println("method m1 complete in abstract class");			//method body
	}

	public void m2()    //method declaration
	{
		System.out.println("method m2 complete in abstract class");			//method body
	}

	//incomplete method
	abstract public void m3() ;      //only method declaration

	//incomplete method
	abstract public void m4() ;      //only method declaration
}
```

```
package Abstract_Concrete_Class;
//concrete class  or complete class
public class Sample2 extends Sample1
{
	public void m3()
	{
		System.out.println("method m3 from abstract class completed in concrete class");
	}

	public void m4()
	{
		System.out.println("method m4 from abstract class completed in concrete class");
	}
}
```

```
package Abstract_Concrete_Class;
public class TestSample2
{
	public static void main(String[] args)
	{
		Sample2 s2=new Sample2();
		s2.m1();
		s2.m2();
		s2.m3();
		s2.m4();
	}
}
```