Lab sheet 5

Exercise 1

Person class

```
package com.mycompany.testperson; public
class Person
{
   private String name;
   private int id;

   public Person(String name, int id)
   {
      this.name = name;
      this.id = id;
   }

   public String getName()
   {
      return name;
   }
   public void setName(String name)
   {
      this.name = name;
   }

   public int getId()
   {
      return id;
   }
```

```
    public void setId(int id)
    {
    this.id = id;
    }
  }
```

Student class

```
package com.mycompany.testperson; public
class Student extends Person
{
   private String course;

   public Student(String name, int id, String course)
   {
      super(name, id);
this.course = course;
   }

   public String getCourse()
   {
      return course;
   }

   public void setCourse(String course)
   {
      this.course = course;
   }
```

```
}
```

Lecturer class

```
package com.mycompany.testperson;
public class Lecturer extends Person
{
   private String programme;

   public Lecturer(String name, int id, String programme)
   {
      super(name, id);
```

```
    this.programme = programme;
  }

  public String getProgramme()
  {
    return programme;
  }

  public void setProgramme(String programme)
  {
    this.programme = programme;
  }
}
```

TestPerson (MAIN)

```
package com.mycompany.testperson;

public class TestPerson
{
  public static void main(String[] args)
  {
    Student student = new Student("John Doe", 1001, "Computer Science");

    Lecturer lecturer = new Lecturer("Jane Smith", 2001, "Engineering");

    System.out.println("Student Details:");
    System.out.println("Name: " + student.getName());
```

```
        System.out.println("ID: " + student.getId());
        System.out.println("Course: " + student.getCourse());

        System.out.println("\nLecturer Details:");
        System.out.println("Name: " + lecturer.getName());
        System.out.println("ID: " + lecturer.getId());
        System.out.println("Programme: " + lecturer.getProgramme());
    }
}
```

Exercise 02

Develop the following class execute and discuss the answer: Please note that each public class stored in separate files. Write down the answer.

```
public class Animal{}

public class Mammal extends Animal{}

public class Reptile extends Animal{}

public class Dog extends Mammal{

public static void main(String args[]){

Animal a = new Animal();

Mammal m = new Mammal();
```

```
Dog d = new Dog();

System.out.println(m instanceof Animal);

System.out.println(d instanceof Mammal);

System.out.println(d instanceof Animal);

}
}
```

OUTPUT

```
true true
true
```