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LAB 5

1.

```
public class Person {
```

```
    protected String name;
```

```
    protected String id;
```

```
    public Person(String name, String id) {
```

```
        this.name = name;
```

```
        this.id = id;
```

```
    }
```

```
    public String getName() {
```

```
        return name;
```

```
    }
```

```
    public void setName(String name) {
```

```
        this.name = name;
```

```
    }
```

```
    public String getId() {
```

```
        return id;
```

```
    }
```

```
    public void setId(String id) {
```

```
        this.id = id;
```

```
}  
}
```

```
public class Lecturer extends Person {
```

```
    private String prog;
```

```
    public Lecturer(String name, String id, String prog) {  
        super(name, id);  
        this.prog = prog;  
    }
```

```
    public String getProg() {  
        return prog;  
    }
```

```
    public void setProg(String prog) {  
        this.prog = prog;  
    }  
}
```

```
public class Student extends Person {
```

```
    private String course;
```

```
    public Student(String name, String id, String course) {  
        super(name, id);
```

```

        this.course = course;
    }

    public String getCourse() {
        return course;
    }

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

public class Test {

    public static void main(String[] args) {

        Lecturer lecturer = new Lecturer("Dr. Smith", "123456789", "Computer Science");
        System.out.println(lecturer.getName() + " is a lecturer in " + lecturer.getProg());

        Student student = new Student("John Doe", "987654321", "Computer Science");
        System.out.println(student.getName() + " is studying " + student.getCourse());
    }
}

```

2.

```

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); // true
```

```
        System.out.println(d instanceof Mammal); // true
```

```
        System.out.println(d instanceof Animal); // true
```

```
    }
```

```
}
```