Practical 4.

Exercise 1;

EmployeeObj.java | Employee.java

Source | History

```java
package com.mycompany.employeeobj;

public class Employee {
    private int empId;
    private String empName, empDesignation;

    //Getter and Setter methods
    public void setempId(int ei){
        empId = ei;
    }
    public int getempId(){
        return empId;
    }
    public void setempName(String en){
        empName = en;
    }
    public String getempName(){
        return empName;
    }
    public void setempDesignation(String ed){
        empDesignation = ed;
    }
    public String getempDesignation(){
        return empDesignation;
    }

}
```

EmployeeObj.java × Employee.java ×

Source History

```java
package com.mycompany.employeeobj;

public class EmployeeObj {

    public static void main(String[] args) {
        Employee Bogdan = new Employee();
            Bogdan.setempId( ei: 43568);
            Bogdan.setempName( en: "Mr.Bogdan");
            Bogdan.setempDesignation( ed: "Program Manager");

        Employee Bird = new Employee();
            Bird.setempId( ei: 23564);
            Bird.setempName( en: "Mr.Bird");
            Bird.setempDesignation( ed: "Project Manager");

        //Display Bogdan detail
        System.out.println("Employee ID: "+ Bogdan.getempId());
        System.out.println("Employee Name: "+ Bogdan.getempName());
        System.out.println("Employee Designation: "+Bogdan.getempDesignation());

        //Display Bird detail
        System.out.println( x: "");
        System.out.println("Employee ID: "+ Bird.getempId());
        System.out.println("Employee Name: "+ Bird.getempName());
        System.out.println("Employee Designation: "+ Bird.getempDesignation());
    }
}
```

```
--- exec-maven-plugin:3.0.0:exec (default-cli) @ EmployeeObj ---
Employee ID: 43568
Employee Name: Mr.Bogdan
Employee Designation: Program Manager

Employee ID: 23564
Employee Name: Mr.Bird
Employee Designation: Project Manager
------------------------------------------------------------------------
BUILD SUCCESS
------------------------------------------------------------------------
```

Exercise 2;

TestInheritance.java × SuperB.java × SubC.jav

Source History

```java
package com.mycompany.testinheritan

public class SuperB {
    int x;
    void setIt (int n){x=n;}
    void increase() {x=x+1;}
    void triple(){x=x*3;};
    int returnIt(){return x;}
}
```

TestInheritance.java | SuperB.java | SubC.java

Source | History

```java
package com.mycompany.testinheritance;

public class SubC extends SuperB {
    void triple(){x=x+3;} //override existing method
    void quadruple(){x=x*4;} // new method
}
```

TestInheritance.java | SuperB.java | SubC.java

Source | History

```java
package com.mycompany.testinheritance;

public class TestInheritance {

    public static void main(String[] args) {
        SuperB b=new SuperB();
        b.setIt( n: 2);
        b.increase();
        b.triple();

        System.out.println( x: b.returnIt());

        SubC c=new SubC();
        c.setIt( n: 2);
        c.increase();
        c.triple();
        System.out.println( x: c.returnIt());
    }
}
```

```
--- exec-maven-plugin:3.0.0:exec (default-cli) @ TestInheritance ---
9
6
------------------------------------------------------------------------
BUILD SUCCESS
------------------------------------------------------------------------
```

Exercise 3;

Test.java | Person.java | Student.java | Lect

Source | History

```
package com.mycompany.test;

public class Person{
    private String name;
    private int id;

    public Person(String n, int i){
        name = n;
        id = i;
    }

    public void setname(String n){
        name = n;
    }
    public String getname(){
        return name;
    }
    public void setid(int i){
        id = i;
    }
    public int getid(){
        return id;
    }
}
```

Test.java | Person.java | Student.java | Lecturer.java

Source | History

```
package com.mycompany.test;

public class Student extends Person{
    private String course;

    public Student(String n, int i, String c){
        super(n, i);
        course = c;
    }

    public void setcourse(String c){
        course = c;
    }
    public String getcourse(){
        return course;
    }
    public void display(){
        System.out.println("Student Name: "+getname());
        System.out.println("Student ID: "+getid());
        System.out.println("Course : "+getcourse());


    }
}
```

Test.java | Person.java | Student.java | Lecturer.java

Source | History

```java
package com.mycompany.test;

public class Lecturer extends Person{
    private String programme;

    public Lecturer(String n, int i, String p){
        super(n,i);
        programme = p;
    }
    public void setprogramme(String p){
        programme = p;
    }
    public String getprogramme(){
        return programme;
    }
    public void display(){
        System.out.println("Lecturer Name: Mr./Mrs. "+getname());
        System.out.println("Lecturer ID: "+getid());
        System.out.println("Programme : "+getprogramme());
    }
}
```

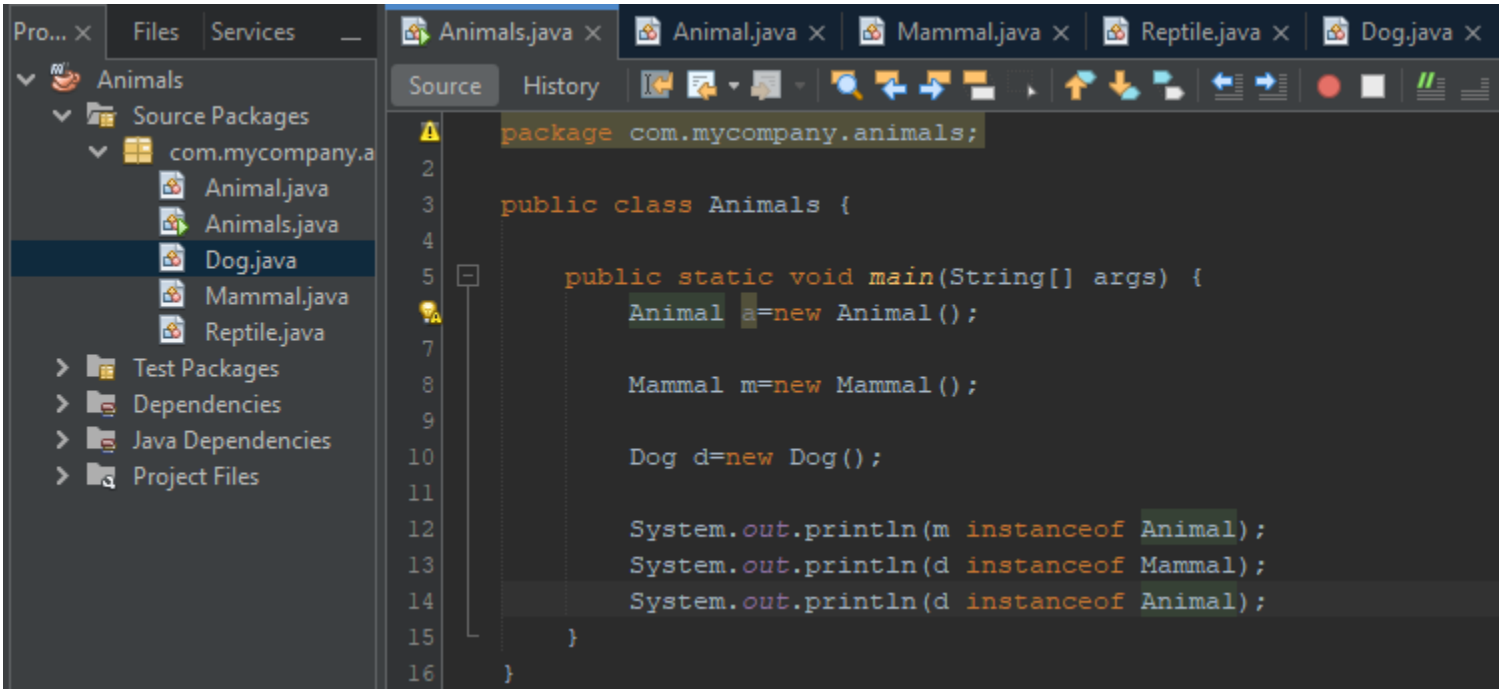
Test.java | Person.java | Student.java | Lecturer.java

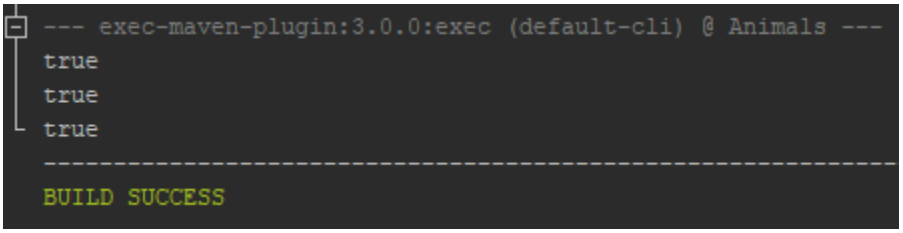
Source | History

```java
package com.mycompany.test;

public class Test {

    public static void main(String[] args) {
        Student st=new Student( n: "Chathuranga", i: 29214, c: "MIS");
        Lecturer lr=new Lecturer( n: "P.D.Silva", i: 45685, p: "Programming");

        st.display();
        System.out.println( x: "");
        lr.display();
    }
}
```

```
--- exec-maven-plugin:3.0.0:exec (default-cli) @ Test ---
Student Name: Chathuranga
Student ID: 29214
Course : MIS

Lecturer Name: Mr./Mrs. P.D.Silva
Lecturer ID: 45685
Programme : Programming
------------------------------------------------------------------------
BUILD SUCCESS
```

Exercise 4;


Pro... Files Services
Animals
Source Packages
com.mycompany.a
Animal.java
Animals.java
Dog.java
Mammal.java
Reptile.java
Test Packages
Dependencies
Java Dependencies
Project Files
Animals.java Animal.java Mammal.java Reptile.java Dog.java
Source History
package com.mycompany.animals;
public class Animals {
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);
}
}


--- exec-maven-plugin:3.0.0:exec (default-cli) @ Animals ---
true
true
true
BUILD SUCCESS