

Practical 04

T.A. Sandali Sewmini

Student ID-27745

Exercise 01:

// create getter and setter methods



```
package com.mycompany.dfg;
```

```
public class Employee
```

```
{
```

```
    private int empid;
```

```
    private String empname;
```

```
    private String designation;
```

```
    public void setempid(int empid)
```

```
    {
```

```
        this.empid=empid;
```

```
    }
```

```
    public int getempid()
```

```
    {
```

```
        return empid;
```

```
    }
```

```
public void setempname(String empname)
{
    this.empname=empname;
}
public String getempname()
{
    return empname;
}
public void setdesignation(String designation)
{
    this.designation=designation;
}
public String getdesignation()
{
    return designation;
}
}
```



```
package com.mycompany.dfgh;

public class Dfgh {

    public static void main(String[] args)
    {
        Employee e1=new Employee();
        e1.setempid(123);
        e1.setempname("Mr.Bodgan");
        e1.setdesignation("Engineer");

        Employee e2=new Employee();
        e2.setempid(456);
        e2.setempname("Mr.Bird");
        e2.setdesignation("Manager");

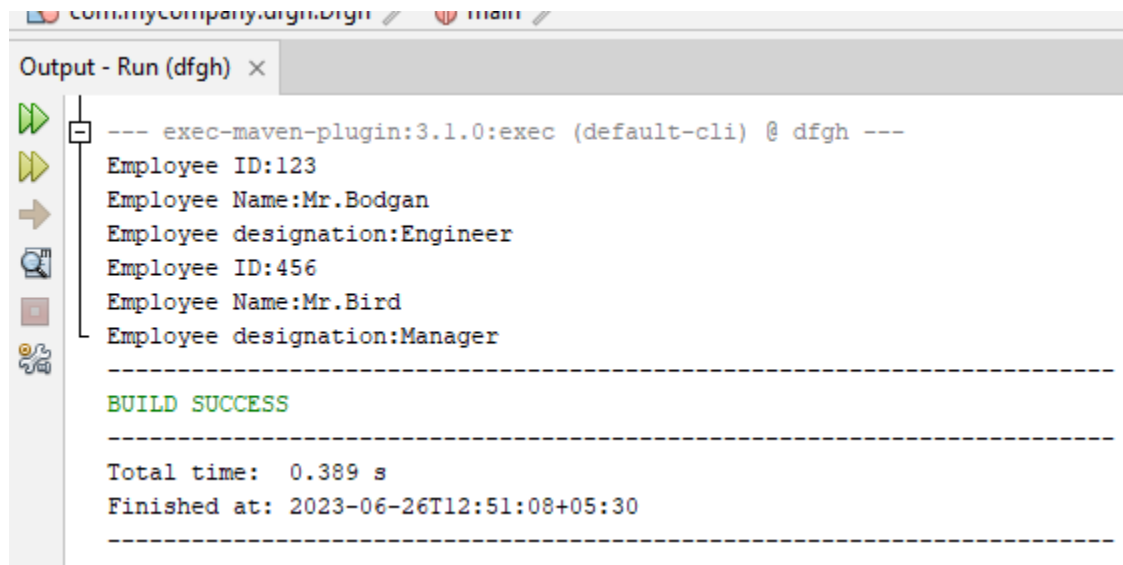
        System.out.println("Employee ID:"+e1.getempid());
        System.out.println("Employee Name:"+e1.getempname());
        System.out.println("Employee designation:"+e1.getdesignation());

        System.out.println("Employee ID:"+e2.getempid());
        System.out.println("Employee Name:"+e2.getempname());
```

```
System.out.println("Employee designation:"+e2.getdesignation());
```

```
}
```

```
}
```



```
CompanyCompany.dfgn.dfgn  main
Output - Run (dfgh) x
--- exec-maven-plugin:3.1.0:exec (default-cli) @ dfgh ---
Employee ID:123
Employee Name:Mr.Bodgan
Employee designation:Engineer
Employee ID:456
Employee Name:Mr.Bird
Employee designation:Manager
-----
BUILD SUCCESS
-----
Total time: 0.389 s
Finished at: 2023-06-26T12:51:08+05:30
-----
```

Exercise 02:

Super class(parent class)

```
package com.mycompany.TestInheritance;
```

```
public class SuperB {
```

```
    int x;
```

```
    public void setIt (int n)
```

```
    {
        x=n;
```

```
    public void increase ()
```

```
    {
        x=x+1;
```

```
    public void triple ()
```

```
x=x*3;
}
public int returnIt ()
    return x;
}
```

SubC-sub class(child class)

```
package com.mycompany.TestInheritance;

public class SubC extends SuperB {

    @Override
    public void triple ()
    {
        X=x*3;
    }

    public void quadruple ()
    {
        x=x*4;
    }
}
```

```
Package com.mycompany.Testinheritance;

public class TestInheritance {

    public static void main(String[] args) {

        SuperB b = new SuperB();

        b.setIt(2);

        b.increase();

        b.triple();

        System.out.println( b.returnIt() );
    }
}
```

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

Exercise-03

Main method-

```
package com.mycompany.test;  
  
public class TEST {  
  
    public static void main(String[] args)  
    {  
        Student s1 = new Student();  
        s1.setname("Anne");  
        s1.setid(12345);  
        s1.setCourse("Computer Science");  
  
        // Creating a Lecturer object  
        Lecturer L1 = new Lecturer();  
        L1.setname("Jane");
```

```
L1.setid(54321);
L1.setProgramme("Software Engineering");

// Printing information of the Student object
System.out.println("Student Name: " + s1.getname());
System.out.println("Student ID: " + s1.getid());
System.out.println("Student Course: " + s1.getCourse());

// Printing information of the Lecturer object
System.out.println("\nLecturer Name: " + L1.getname());
System.out.println("Lecturer ID: " + L1.getid());
System.out.println("Lecturer Programme: " + L1.getProgramme());

}
}
```

Person class-

```
package com.mycompany.test;

public class Person
{
    protected String name;
    protected int id;
```

```
public void setname(String name) {  
    this.name = name;  
}
```

```
public String getname() {  
    return name;  
}
```

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

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

Student class-

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

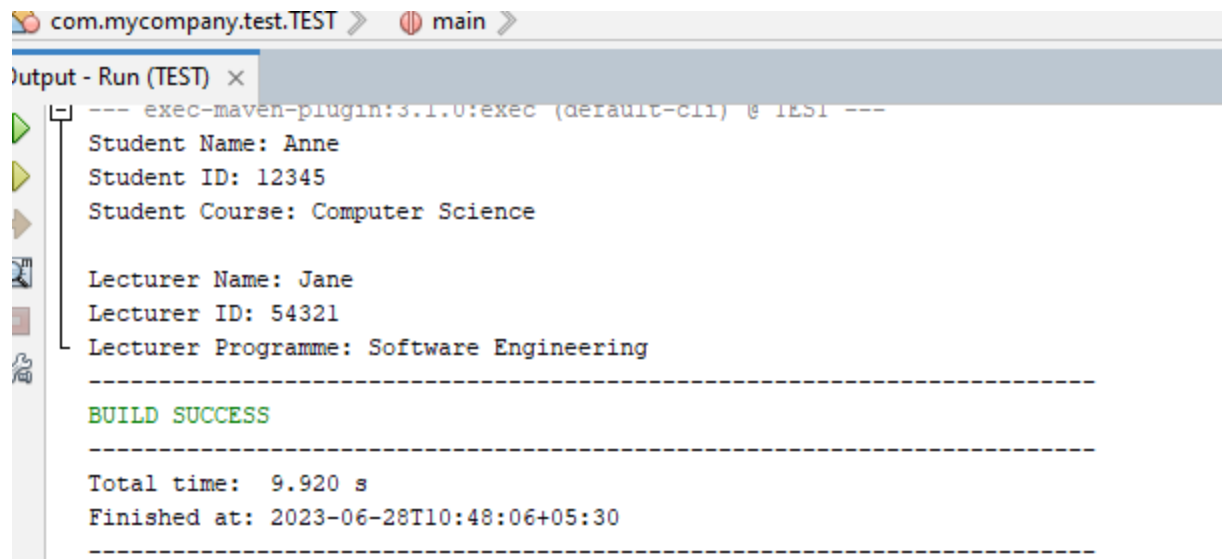


```
public void setCourse(String course) {  
    this.course = course;  
}
```

```
public String getCourse() {  
    return course;  
}  
}
```

Lecturer class-

```
package com.mycompany.test;  
  
public class Lecturer extends Person  
{  
    private String programme;  
  
    public void setProgramme(String programme) {  
        this.programme = programme;  
    }  
  
    public String getProgramme() {  
        return programme;  
    }  
}
```



```
com.mycompany.test.TEST > main >
Output - Run (TEST) x
--- exec-maven-plugin:3.1.0:exec (default-cli) @ TEST ---
Student Name: Anne
Student ID: 12345
Student Course: Computer Science

Lecturer Name: Jane
Lecturer ID: 54321
Lecturer Programme: Software Engineering

-----
BUILD SUCCESS
-----

Total time: 9.920 s
Finished at: 2023-06-28T10:48:06+05:30
-----
```

Exercise-04

Main class-

```
package com.mycompany.test2;

public class Test2 {

    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);  
    }  
}
```

```
//Animal class  
package com.mycompany.test2;  
public class Animal{}  
  
//Mammal class  
package com.mycompany.test2;  
public class Mammal extends Animal{}  
  
//Reptile class  
package com.mycompany.test2;  
public class Reptile extends Animal {}  
  
//Dog class  
package com.mycompany.test2;  
public class Dog extends Mammal{}
```

com.mycompany.test2.Dog >

Output - Run (Test2) x

--- exec-maven-plugin:3.1.0:exec (default-cli) @ Test2 ---

true

true

true

BUILD SUCCESS

Total time: 20.300 s

Finished at: 2023-06-29T08:57:52+05:30
