**Lab Report**

**Course Tittle:** Object Oriented Programming Lab

**Course Code:** CSE 215

**Experiment No:** 06

**Experiment Name:** Implementation of Encapsulation

**Submitted To:**

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**Submission Date:** 14-11-2023

**Problem: 01**

Achieving encapsulation (Accessing private variables of an encapsulated class from external package)

package a;  
public class class\_1 {

private String name; *// declear private variable* private int age;  
 private String address;  
 private double ph\_num;  
  
 public class\_1() {

}  
  
 public void setName(String name){

this.name=name; *//access this private variable* }  
 public void setAge(int age){

this.age=age; *//access this private variable* }  
 public void setAddress(String address){

this.address=address; *//access this private variable* }  
  
 public String getName(){

return name; *//return value* }  
 public int getAge(){

return age; *//return value* }  
 public String getAddress(){

return address; *//return value* }  
}

package b;  
import a.class\_1; *//import package*public class class\_2 {

public static void main(String[] args) {

class\_1 c = new class\_1(); *//object creation*

c.setName("Raduan"); *//set value* c.setAge(21);  
 c.setAddress("Rajuk Uttara");

*//getvalue*  
 System.*out*.println("Name of this person : "+c.getName());System.*out*.println("Age of this person : "+c.getAge());  
 System.*out*.println("Address of this person : "+c.getAddress());  
  
 }  
}

**Output:**

Name of this person : Raduan

Age of this person : 21

Address of this person : Rajuk Uttara

**Problem: 02**

Example 3, example 4 from slide.

Example 3:

class student{

private String name;  
 private int Id;  
 private double cgpa;  
 public void setName(String name){

*//use setter* this.name=name; *//override* }  
 public void setId(int Id){ *//use setter* this.Id =Id;  
 }  
 public void setCgpa(double cgpa){ *//use setter* this.cgpa=cgpa; *//override* }  
 public String getName(){ *//use getter* return name;  
 }  
 public int getId(){  
 return Id;  
 }  
 public double getCgpa(){  
 return cgpa;  
 }  
}

public class myclass {

public static void main(String[] args) {

student s = new student(); *//object creation* s.setName("Raduan"); *//set value* s.setId(1839);  
 s.setCgpa(3.59);

*//call getter method*

System.*out*.println("Name of student : " + s.getName());  
 System.*out*.println("Student's Id : " + s.getId());  
 System.*out*.println("Result : " + s.getCgpa());  
 }  
}

**Output:**

Name of student : Raduan

Student's Id : 1839

Result : 3.59

Example 4:

package b;  
class employee{

private String name;  
private int Id;  
private double salary;  
public void setName(String name){

*//use setter*this.name=name; *//override* }  
public void setId(int Id){ *//use setter*this.Id =Id;  
 }  
public void setSalary(double salary){ *//use setter*this.salary=salary; *//override* }  
public String getName(){ *//use getter*return name;  
 }  
public int getId(){  
return Id;  
 }  
public double getSalary(){  
return salary;  
 }  
}

public class my\_class {  
  
public static void main(String[] args) {

employee e = new employee(); *//object creation*e.setName("Raduan"); *//set value*e.setId(1839);  
e.setSalary(50000);

*//call getter method*  
System.*out*.println("Name of student : "+e.getName());System.*out*.println("Student's Id : "+e.getId());  
System.*out*.println("Result : "+e.getSalary());  
 }  
}

**Output:**

Name of employee : Raduan

Employee's Id : 1839

Salary : 50000