**Task1**

**package info;**

**public class Personal**

**{**

**public void disp()**

**{**

**System.out.println("Name is Ghulam Mustafa:");**

**}**

**}**

**package info;**

**public class Educational**

**{**

**public void show()**

**{**

**System.out.println("Studying Computer Science:");**

**}**

**}**

**package university;**

**public class Staff**

**{**

**public void disp()**

**{**

**System.out.println("Staff is more educated");**

**}**

**}**

**package university;**

**public class Departments**

**{**

**public void Show()**

**{**

**System.out.println("There are 15 departments in our University:");**

**}**

**}**

**package hotel;**

**public class Rooms**

**{**

**public void disp()**

**{**

**System.out.println("There are 50 rooms in our hotel:");**

**}**

**}**

**package hotel;**

**public class Environment**

**{**

**public void show()**

**{**

**System.out.println("All the rooms in our hotel are air conditioned:");**

**}**

**}**

**import info.Personal;**

**import info.Educational;**

**import university.Departments;**

**import university.Staff;**

**import hotel.Rooms;**

**import hotel.Environment;**

**public class PracticePackage**

**{**

**public static void main(String args[])**

**{**

**Personal p=new Personal();**

**Educational e=new Educational();**

**Departments d=new Departments();**

**Staff s=new Staff();**

**Rooms r=new Rooms();**

**Environment en=new Environment();**

**p.disp();**

**e.show();**

**d.show();**

**s.disp();**

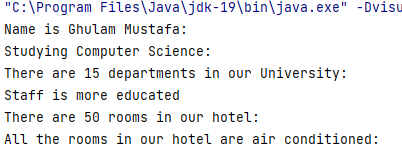
**r.disp();**

**en.show();**

**}**

**}**

**OUTPUT:**

****

**Task2**

**1.**In interface there is body of method‘aMethod’with no any access modifier so by default there is public access modifier then there will be error in program.

**2.public interface SomethingIsWrong {**

**default void aMethod(int aValue){**

**System.out.println("Hi Mom");**

**}**

**}**

**3.** Yes it valid interface.

**Task3**

**interface Animal**

**{**

**void legs();**

**void eat();**

**}**

**class Spider implements Animal**

**{**

**public void legs()**

**{**

**System.out.println("Spider has four legs:");**

**}**

**public void eat()**

**{**

**System .out.println("Spider eats insects:");**

**}**

**}**

**class Caterpiller implements Animal**

**{**

**public void legs()**

**{**

**System.out.println("Caterpiller has six legs:");**

**}**

**public void eat()**

**{**

**System .out.println("Caterpiller eats grass:");**

**}**

**}**

**class Cat implements Animal**

**{**

**public void legs()**

**{**

**System.out.println("Cat has four legs:");**

**}**

**public void eat()**

**{**

**System .out.println("Cat eats meat:");**

**}**

**}**

**class Main**

**{**

**public static void main(String[] args)**

**{**

**Spider s=new Spider();**

**Caterpiller cp=new Caterpiller();**

**Cat c=new Cat();**

**s.legs();**

**s.eat();**

**cp.legs();**

**cp.eat();**

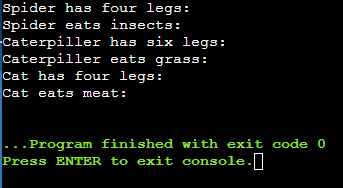
**c.legs();**

**c.eat();**

**}**

**}**

**Output:**

****

**Task4**

**abstract class Marks**

**{**

**abstract double getPercentage();**

**}**

**class A extends Marks**

**{**

**double s1;**

**double s2;**

**double s3;**

**A(double a, double b , double c)**

**{**

**s1=a;**

**s2=b;**

**s3=c;**

**}**

**double getPercentage()**

**{**

**return(((s1+s2+s3)\*100)/300);**

**}**

**}**

**class B extends Marks**

**{**

**double sub1;**

**double sub2;**

**double sub3;**

**double sub4;**

**B(double x, double y , double z, double g)**

**{**

**sub1=x;**

**sub2=y;**

**sub3=z;**

**sub4=g;**

**}**

**double getPercentage()**

**{**

**return(((sub1+sub2+sub3+sub4)\*100)/400);**

**}**

**}**

**class Main**

**{**

**public static void main(String[] args)**

**{**

**A st1=new A(89,91,95);**

**B st2=new B(86,70,80,75);**

**System.out.println("Percentage of Student 1:"+Math.round(st1.getPercentage()\*100.0)/100.0+"%");**

**System.out.println("\nPercentage of Student 2:"+st2.getPercentage()+"%");**

**}**

**}**

**OUTPUT:**

****