Anchor College offers both graduate and postgraduate programs.

The college stores the names of the students, their test scores and

the final result for each student. Each student has to take 4 tests in

total. You need to create an application for the college by

implementing the classes based on the class diagram and

description given below.

import java.util.Scanner;

import java.util.Arrays;

public class Anchor

{

public static void main(String[] args)

{

Scanner s = new Scanner(System.in);

int choice;

System.out.print("\n1. UnderGraduate Student\n2. GraduateStudent\nEnter your choice: ");

choice = s.nextInt();

switch(choice)

{

case 1:

{

System.out.print("\nEnter the student name: ");

UnderGraduate u = new UnderGraduate(s.next());

System.out.println("Enter the subject number and marks of 4 subjects");

for(int i=0;i<4;i++)

{

u.setTestScore(s.nextInt(),s.nextInt());

}

u.setTestResult();

u.display();

}

break;

case 2:

{

System.out.print("\nEnter the student name: ");

Graduate g = new Graduate(s.next());

System.out.println("Enter the subject number and marks of 4 subjects");

for(int i=0;i<4;i++)

{

g.setTestScore(s.nextInt(),s.nextInt());

}

g.setTestResult();

g.display();

}

break;

default: System.out.println("Invalid Choice!");

}

}

}

interface A

{

public String getName();

public void setTestScore(int no,int marks);

public int[] getTestScore();

public void setTestResult();

public int getTestResult();

public void display();

}

abstract class Student implements A

{

String name;

int[] test = new int[4];

int sum;

abstract public void generateResult();

Student()

{}

Student(String name)

{

this.name = name;

}

public String getName()

{

return this.name;

}

public void setTestScore(int no,int marks)

{

test[no-1] = marks;

}

public int[] getTestScore()

{

return test;

}

public void setTestResult()

{

for(int i=0;i<4;i++)

{

sum=sum+test[i];

}

sum/=4;

}

public int getTestResult()

{

return sum;

}

public void display()

{

System.out.println("\nStudent Name : "+getName());

System.out.println("Student Marks : "+Arrays.toString(getTestScore()));

System.out.print("Result : ");

generateResult();

}

}

class UnderGraduate extends Student

{

UnderGraduate()

{}

UnderGraduate(String name)

{

this.name = name;

}

public void generateResult()

{

if(getTestResult()>=60)

System.out.print("Pass");

else

System.out.print("Fail");

}

}

class Graduate extends Student

{

Graduate()

{}

Graduate(String name)

{

this.name = name;

}

public void generateResult()

{

if(getTestResult()>=70)

System.out.print("Pass");

else

System.out.print("Fail");

}

}

