Lab 6

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Student.java package CIE;

public class Student {

protected String name;

protected int[] marks;

public Student(String name)

{

this.name = name;

this.marks = new int[5];

}

public String getName()

{

return name;

}

public void setMarks(int[] marks)

{

this.marks = marks;

}

public int[] getMarks() {

return marks;

}

}

Internal.java package CIE;

public class Internal extends Student

{

private int[] internalMarks;

public Internal(String name, int[] internalMarks)

{

super(name); this.internalMarks = internalMarks;

this.setMarks(internalMarks);

}

public int[] getInternalMarks()

{

return internalMarks;

}

public void setInternalMarks(int[] internalMarks)

{

this.internalMarks = internalMarks; this.setMarks(internalMarks);

}

}

External.java package SEE;

import CIE.Student;

public class External extends Student

{ private int[] externalMarks;

public External(String name, int[] externalMarks)

{

super(name);

this.externalMarks = externalMarks;

this.setMarks(externalMarks);

}

public int[] getExternalMarks()

{

return externalMarks;

}

public void setExternalMarks(int[] externalMarks)

{ this.externalMarks = externalMarks;

this.setMarks(externalMarks); }

}

import CIE.Internal;

import SEE.External;

import java.util.Scanner;

public class Main { public static void main(String[] args) {

 Scanner sc = new Scanner(System.in);

System.out.print("Enter the number of students: ");

 int n = sc.nextInt();

sc.nextLine();

 Internal[] internalStudents = new Internal[n];

External[] externalStudents = new External[n];

 for (int i = 0; i < n; i++)

{

 System.out.print("Enter the name of student " + (i + 1) + ": ");

String name = sc.nextLine();

System.out.println("Enter internal marks (5 courses) for " + name + ": ");

int[] internalMarks = new int[5]; for (int j = 0; j < 5; j++)

{

internalMarks[j] = sc.nextInt();

}

sc.nextLine();

System.out.println("Enter external marks (5 courses) for " + name + ": ");

int[] externalMarks = new int[5];

for (int j = 0; j < 5; j++)

{

externalMarks[j] = sc.nextInt();

}

 sc.nextLine();

 internalStudents[i] = new Internal(name, internalMarks);

 externalStudents[i] = new External(name, externalMarks); }

 System.out.println("\nFinal Marks for all students:");

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

{

int[] internalMarks = internalStudents[i].getMarks();

int[] externalMarks = externalStudents[i].getMarks();

System.out.println("\nStudent: " + internalStudents[i].getName());

System.out.print("Internal Marks: ");

for (int mark : internalMarks)

{

System.out.print(mark + " "); }

System.out.print("\nExternal Marks: ");

for (int mark : externalMarks)

{

System.out.print(mark + " "); }

System.out.print("\nFinal Marks: ");

for (int j = 0; j < 5; j++)

 {

int finalMark = internalMarks[j] + externalMarks[j];

System.out.print(finalMark + " ");

 }

System.out.println();

 }

sc.close();

}

}



