package students;

import java.util.Scanner;

import javax.swing.JFrame;

public class Students {

String name;

int id;

String department;

String coursname;

double totalmark;

String grade;

void recive(){

Scanner s=new Scanner(System.in);

name=s.nextLine();

System.out.println("ENTER ID OF "+name);

id=s.nextInt();

System.out.println("ENTER DEPARTMENT OF "+name);

department=s.next();

System.out.println("ENTER COURSNAME OF "+name+("has taken"));

coursname=s.next();

System.out.println("ENTER TOTALMARK OF "+name+("that scored in"+coursname));

totalmark=s.nextInt();

}

void grade(){

if(totalmark>0&&totalmark<100){

if(totalmark>=85)

grade="A";

else if(totalmark>=80)

grade="A-";

else if(totalmark>=75)

grade="B+";

else if(totalmark>=70)

grade="B";

else if(totalmark>=65)

grade="B-";

else if(totalmark>=60)

grade="C+";

else if(totalmark>=50)

grade="C";

else if(totalmark>=45)

grade="D+";

else if(totalmark>=40)

grade="D";

else if(totalmark>=30)

grade="FX";

else

grade="F";

}

else

System.out.println("invalid mark");

}

void sortshow()

{

System.out.println(name+"\t"+id+

"\t"+department+"\t\t"+coursname+"\t\t"+totalmark+"\t\t"+grade);

}

public static void main(String[] args)throws java.io.IOException {

String c;

char c2;

int n;

String[] temp0=new String[100];//reference variable

int [] temp1=new int [100];

String[] temp2=new String[100];

String[] temp3=new String[100];

double [] temp4=new double [100];

String[] temp5=new String[100];

Students[]a=new Students[10];//objexct REFERENCE variable with array

Scanner S=new Scanner(System.in);

System.out.println("\*\*\*\*\*\* WOLLO UNIVERSITY \*\*\*\*\*\*\*\*\*\*\*\*\*\*|");

System.out.println("\*\*\*\*\*\*KOMBOLCHA INSTITUTE OF TECHNOLOGY \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*|");

System.out.println("\*\*\*\*\*\*\*OOP PROJECT FOR IS SECOND YEAR \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*|");

System.out.println("=======================================================|");

System.out.println("===================GROUP MEMBERS======================|");

System.out.println("\t\t\tNAME\t\t\t"+"ID");

System.out.println("\t\t\tLIDIYA MEKONEN\t\t\t"+"0576/10");

System.out.println("\t\t\tMULUALEM GELAW\t\t\t"+"0594/10");

System.out.println("\t\t\tHIRUT WAGNAW\t\t\t"+"0569/10");

System.out.println("\t\t\tBANCHAYEHU AMARE\t\t\t"+"");

System.out.println("\t\t\tZEBIDER GASHAW\t\t\t"+"1260/09");

System.out.println("\t\t\tBITEW TADEGE\t\t\t"+"1010/10");

System.out.println("\t\t\tYOHANIS \t\t\t"+"");

System.out.println("\t\t\tAZMERA TESFAYE\t\t\t"+"0532/10");

System.out.println("\t\t\tBELAYNEH ASEFA\t\t\t"+"");

do{

Scanner s=new Scanner(System.in);

System.out.println("=========================================================|");

System.out.println("=================PROGRAM MENU============================|");

System.out.println("|Pres'S' or 's' to sort students by their name |");

System.out.println("|Pres'B' or 'b' to cinvert binary numbers int decimal |");

System.out.println("|Pres'C' or 'c' to calculat for simple calculator |");

System.out.println("|=========================================================|");

System.out.println("------Enter Your Choce--------");

c=s.next();

switch(c){

case "s":

case "S":

System.out.println("HOW MANY STUDENTS DO YOU HAVE? ");

n=s.nextInt();

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

a[i]=new Students();//ARRAY OBJECT

}

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

{

System.out.println("ENTER NAME OF STUDENT "+(i+1));

a[i].recive();//RECIEVE VALUES

}

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

{a[i].grade();//COMPUTE GRADE

}

System.out.

println("\n====================================================================");

System.out.println("STUDENT INFORMATION BEFORE SORT.....");

System.out.

println("====================================================================");

System.out.println("name\t id no\t department\t course name\t total mark\t grade");

System.out.println("====\t======\t===========\t============\t===========\t======");

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

{

a[i].sortshow();//DISPLAY INFO

}

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

for(int j=i+1;j<n;j++){

if(a[i].name.compareTo(a[j].name)>0){

temp0[i]=a[i].name;

a[i].name=a[j].name;

a[j].name=temp0[i];

temp1[i]=a[i].id;

a[i].id=a[j].id;

a[j].id=temp1[i];

temp2[i]=a[i].department;

a[i].department=a[j].department;

a[j].department=temp2[i];

temp3[i]= a[i].coursname;

a[i]. coursname=a[j]. coursname;

a[j]. coursname=temp3[i];

temp4[i]=a[i].totalmark;

a[i].totalmark=a[j].totalmark;

a[j].totalmark=temp4[i];

temp5[i]=a[i].grade;

a[i].grade=a[j].grade;

a[j].grade=temp5[i];

}}

}

System.out.println("\n====================================================================");

System.out.println("STUDENT INFORMATION AFTER SORT.....");

System.out.

println("====================================================================");

System.out.println("name\t id no\t department\t course name\t total mark\t grade");

System.out.println("====\t======\t===========\t============\t===========\t======");

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

a[i].sortshow();

break;

case "b":

case "B":

int nn;

int decimal[]= new int [100];

int p []= new int [10];

int x[]=new int [100];

System.out.println(" Enter how many number you want ");

nn=s.nextInt();

for(int i=0;i<nn;i++){

System.out.println(" Enter those binary numbers "+(i+1));

x[i]=s.nextInt();

}

for(int i=0;i<nn;i++){

decimal[i]=0;

p[i]=0;

}

for(int i=0;i<nn;i++){

while(x[i]!=0){

decimal[i]+=((x[i]%10)\*Math.pow(2, p[i]));

x[i]=x[i]/10;

p[i]++;

}

}

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

System.out.println("The binary number, when It changes to decimal is :" +(i+1)+ " "

+decimal[i]);

break;

case "c":

case "C":

Cal cal = new Cal();

cal.setDefaultCloseOperation(JFrame.EXIT\_ON\_CLOSE);

cal.setVisible(true);

break;

// defoult:

//System.out.println("wrong input");

}

System.out.println("Do You Went To Do Again?:y/n");

c2=(char)System.in.read();

} while(c2=='y'||c2=='Y');

System.out.println("Your Chioce Is No ");

System.out.println("Good BY ");

}

}