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import java.util.Scanner;
import java.util.ArrayList;
public class formatOutput
{
    public static void main(String[] args)
    {
        Scanner s = new Scanner(System.in);
        double totalCredit = 0;
        double totalGpa = 0;
        double credit;
        System.out.println("Enter your class name.");
        String classname = s.nextLine();
        ArrayList<Type_Class> what = new ArrayList<Type_Class>();
        int i = 0;

        while (!classname.equals("done"))
        {
            System.out.printf("What is the credit of %s?\n",classname);
            credit = s.nextDouble();
            totalCredit = totalCredit + credit;
            what.add(new Type_Class(classname, credit));
            what.get(i).assign(s);
            what.get(i).gradeAssigner();
            i++;
            s = new Scanner(System.in);
            System.out.println("Enter your class name. Otherwise, enter 'done'");
            classname = s.nextLine();
        }

        for (int j = 0; j<what.size(); j++)
        {
            System.out.println(what.get(j));
            totalGpa = totalGpa + what.get(j).getWeightedgpa();
        }
        System.out.printf("Your total GPA is : %.2f",totalGpa/totalCredit);
    }
}

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import java.util.Scanner;

public class Type_Class
{
    // instance variables - replace the example below with your own
    private String classname;
    private double grade;
    private String letterGrade;
    private double classGpa;
    private double credit;

    public Type_Class(String classname, double credit)
    {
        this.classname=classname;
        this.credit=credit;
    }

    public String toString()
    {
        double val = grade*100;
        val = (double)((int) val);
        val = val /100;
        return classname + ": " + letterGrade + " " + val + "\n";
    }

    public double getWeightedgpa()
    {
        return credit*classGpa;
    }

    public void assign(Scanner s)
    {
        String[] types = {"homeworks", "quizzes", "tests", "essays", "participation", "projects", "final
exam"};
        double[] weight = new double[7];
        double totalweight = 0;
        int j =0;
        while (totalweight<100)
        {
            System.out.printf("What is the weight of %s? \n",types[j]);
            weight[j] = s.nextDouble();
            totalweight = totalweight + weight[j];
            j++;
        }
        double total = 0;
        if (totalweight >100)
        {
            System.out.println("Please rerun program (total weight is over 100%)");
            System.exit(0);
        }
        String[] questions = {"How many homework grades do you have?", "How many quizzes
have you taken?",

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"How many tests have you taken?", "How many essay grades do you have?", "How many participation grades do you have?",

"How many project grades do you have?";

for (int i = 0; i<6; i++)

{

if (weight[i]!=0)

{

System.out.printf("%s\n",questions[i]);

double index = s.nextDouble();

System.out.printf("Enter your %s grade(s).\n",types[i]);

double tgrade = 0;

for (int k = 0; k<index; k++)

{

double gr = s.nextDouble();

tgrade=tgrade+gr*weight[i];

}

tgrade = tgrade/index;

total = total + tgrade;

}

}

if (weight[6]!=0)

{

double index =1.0;

System.out.println("Enter your exam grade.");

double gr = s.nextDouble();

double Exam=gr*weight[6];

total = total + Exam;

}

grade = total/totalweight;

s.close();

}

public void gradeAssigner()

{

if (grade >= 90.0)

{

letterGrade = "A";

classGpa = 4.00;

}

else if(grade >= 80.0)

{

letterGrade = "B";

classGpa = 3.00;

}

else if(grade >= 70.0)

{

letterGrade = "C";

classGpa = 2.00;

}

else if(grade >= 60.0)

{

letterGrade = "D";

classGpa = 1.00;

}

else

```
{
    letterGrade = "F";
    classGpa = 0.00;
}

double remainder = grade%10.0;
if (!letterGrade.equals("F"))
{
    if (remainder>=6.5&&remainder<10||grade==100.0)
    {
        letterGrade = letterGrade + "+";
        classGpa = classGpa + 0.3333333;
    }
    else if(remainder<2.5&&remainder>=0)
    {
        letterGrade = letterGrade + "-";
        classGpa = classGpa - 0.3333333;
    }
}
}
```