

Answer on Question# 54613, Programming / C++

Exams.cpp) Suppose a teacher weights the four exams he gives 10%, 25%, 30%, and 35%. Write a program that reads ten sets of four grades, prints the weighted average of each set, and prints the unweighted average of each test. The number of students should be in a global constant

Solve

```
#include <iostream>
#include <string>
#define NUM_STUD 2
#define NUM_EXAM 4

using namespace std;

int main()
{
    float weight[NUM_EXAM]={0.1,0.25,0.3,0.35};
    string students[NUM_STUD];
    int grades[NUM_STUD][NUM_EXAM];
    float avg[NUM_STUD]={0},avg_weight[NUM_STUD]={0};

    int i,j;
    //input
    for(i=0;i<NUM_STUD;i++)
    {
        cout<<"Input student #"<<i+1<<" name: ";
        cin>>students[i];
        for(j=0;j<NUM_EXAM;j++)
        {
            cout<<"Input grades #"<<j+1<<" for student # "<<i+1<<": ";
            cin>>grades[i][j];
        }
    }
    //calculate
    for(i=0;i<NUM_STUD;i++)
    {
        for(j=0;j<NUM_EXAM;j++)
        {
            avg[i]+=grades[i][j];
            avg_weight[i]+=weight[j]*grades[i][j];
        }
        avg[i]/=NUM_EXAM;
    }

    //output:
    cout<<"name\tavg\tweight avg\n";
    for(i=0;i<NUM_STUD;i++)
        cout<<students[i]<<"\t"<<avg[i]<<"\t"<<avg_weight[i]<<endl;

    return 0;
}
```