

P.F PROJECT

SOURCE CODE:

GPA CALCULATOR:

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#include <iostream>
#include <conio.h>
#include <string>
using namespace std;

string subj(int);
double credit;
double caltimes = 0;
double totalcal = 0;
double totalcredit = 0;
double finalgpa = 0;
float gpa(int);
string remark(float);
string grade(float);
double final(int);
int main()
{
    string name;

    float roll_no;

    cout
    <<"_____ \n";
```

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    cout << "\\t\\t\\tGPA CALCULATOR\\n";

    cout
<<"_____\\n";

    cout << "ENTER NAME:";

    cin>>name;

    cout << "Enter ROLL NUMBER:";

    cin >> roll_no;

    int b=0,mark[4];

    int marks;

    string sub,grad,remak;

    double finals;

    float Gpa,gp;

    for(int i=0;i<=4;i++)
    {
        b++;
        sub=subj(b);
        cout<<endl;
        cout<<"Enter Your marks of "<<sub<<": ";
        cin>>mark[i];
        cout<<"Enter Credit hours of "<<sub<<": ";
        cin>>credit;

    }

    cout<<"\\n_____
_____\\n";

    cout<<"Sr.\\tCourses\\t\\tObt.Marks\\tPercentage\\tGrade\\tGPA\\tRemark";

    b=0;

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

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{
    b++;
    marks=mark[i];
    sub=subj(b);
    Gpa=gpa(marks);
    grad=grade(Gpa);
    remak=remark(Gpa);

    cout<<endl<<i+1<<"\t"<<sub<<"\t"<<marks<<"\t\t"<<marks<<"%\t\t"<<grad<<
"\t"<<Gpa<<"\t"<<remak;
}

finals=final(marks);
cout<<endl;
cout<<"-----\n";
cout<<"Total GPA is:"<<finals<<endl;
cout<<"-----";

}

string remark(float Gpa)
{
    string rem;
    if(Gpa==4.0)
        rem="Excellent";
    if(Gpa==3.75)
        rem="Very Good";
    if(Gpa==3.50)
        rem="Good";
    if(Gpa==3.0)

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        rem="Satisfactory";
    if(Gpa==2.50)
        rem="Above Average";
    if(Gpa==2.0)
        rem="Average";
    if(Gpa==1.50)
        rem="Pass";
    if(Gpa==1.0)
        rem="Just Pass";
    if(Gpa==0)
        rem="Fail";
    return rem;
}

string grade(float Gpa){
    string gra;
    if(Gpa==4)
        gra="A+";
    if(Gpa==3.75)
        gra="A-";
    if(Gpa==3.50)
        gra="B+";
    if(Gpa==3.0)
        gra="B-";
    if(Gpa==2.50)
        gra="C+";
    if(Gpa==2.0)
        gra="C-";
    if(Gpa==1.50)

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        gra="D+";
    if(Gpa==1.0)
        gra="D-";
    if(Gpa==0)
        gra="F";
    return gra;
}

float gpa(int marks){
    float gp;
    if(marks>=90&&marks<=100){

        gp=4;
        caltimes=4*credit;}
    if(marks>=80&&marks<=89){

        gp=3.75;
        caltimes=credit*3.75;}
    if(marks>=75&&marks<=79){

        gp=3.50;
        caltimes=credit*3.50;}
    if(marks>=70&&marks<=74){

        gp=3.0;
        caltimes=credit*3.0;}
    if(marks>=65&&marks<=69){

        gp=2.50;

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        caltimes=credit*2.50;}
if(marks>=60&&marks<=64){

        gp=2.0;
        caltimes=credit*2.0;}
if(marks>=55&&marks<=59){

        gp=1.50;
        caltimes=credit*1.50;}
if(marks>=50&&marks<=54){

        gp=1.0;
        caltimes=credit*1.0;}
if(marks>=0&&marks<=49){

        gp=0;
        caltimes=credit*0;}

return gp;
}

string subj(int b)
{
    string subject;
    if(b==1)
        subject="CS-126: ICT";
    if(b==2)
        subject="MS-110: Physics";
    if(b==3)

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        subject="MS-108: algebra";
    if(b==4)
        subject="CS-116: P.F";
    if(b==5)
        subject="HS-103: P.S.T";
        return subject;
}
double final(int marks)
{
float gp;
    if(marks>=90&&marks<=100){

        gp=4;
        caltimes=4*credit;}
    if(marks>=80&&marks<=89){

        gp=3.75;
        caltimes=credit*3.75;}
    if(marks>=75&&marks<=79){

        gp=3.50;
        caltimes=credit*3.50;}
    if(marks>=70&&marks<=74){

        gp=3.0;
        caltimes=credit*3.0;}
    if(marks>=65&&marks<=69){

```

```

        gp=2.50;
        caltimes=credit*2.50;}
if(marks>=60&&marks<=64){

        gp=2.0;
        caltimes=credit*2.0;}
if(marks>=55&&marks<=59){

        gp=1.50;
        caltimes=credit*1.50;}
if(marks>=50&&marks<=54){

        gp=1.0;
        caltimes=credit*1.0;}
if(marks>=0&&marks<=49){

        gp=0;
        caltimes=credit*0;}

    totalcredit = totalcredit + credit;
    totalcal = totalcal + caltimes;
    finalgpa = totalcal/totalcredit;

    return finalgpa;

}

```