**Program:**

#include<iostream>

#include<string>

#include<vector>

using namespace std;

class Student {

    int age;

    string name;

    int m1,m2,m3;

    float per;

    public:

    int rollno;

    Student();

    void input();

    inline void display(const vector<Student>& s,int rollno);

    friend void marks(vector<Student>& s,int rollno);

};

Student::Student(){

    rollno=0;

    age=0;

    per=0.0;

    name="Untitled";

}

void Student::input(){

    cin.ignore();

    cout<<"Enter Name Of Student:-";

    getline(cin,name);

    cout<<"Enter Rollno:-";

    cin>>rollno;

    cout<<"Enter Age OF Student:-";

    cin>>age;

}

void marks(vector<Student>& s,int rollno){

    bool flag=false;

    for (int i=0;i<s.size();i++){

        if(s[i].rollno==rollno){

            flag=true;

            cout<<"Marks Entering For Student:-"<<s[i].name<<endl;

            cout<<"Rollno:-"<<s[i].rollno<<endl;

            cout<<"\*\*Marks OF Three Subject of Student(50 Outoff)\*\*"<<endl;

            cout<<"Enter OOP Marks:-";

            cin>>s[i].m1;

            cout<<"Enter DM Marks:-";

            cin>>s[i].m2;

            cout<<"Enter DSA Marks:-";

            cin>>s[i].m3;

    //Percentage calculate

            s[i].per=float((s[i].m1+s[i].m2+s[i].m3)/150.0\*100);

            break;

        }

        cout<<"\n\n";

    }

    if(!flag){

            cout<<"Student Not Found"<<endl;

            cin.ignore();

            cin.get();

        }

}

void Student::display(const vector<Student>& s, int rollno) {

    bool flag = false;

    for (size\_t i = 0; i < s.size(); i++) {

        if (s[i].rollno == rollno) {

            flag = true;

            cout << "\*\*Student Details\*\*" << endl;

            cout << "Name:-" << s[i].name << endl;

            cout << "Rollno:-" << s[i].rollno << endl;

            cout << "Age:-" << s[i].age << endl;

            cout << "Percentage of Student:-" << s[i].per << "%" << endl;

            break;

        }

    }

    if (!flag) {

        cout << "Student Not Found" << endl;

    }

    cin.ignore();

    cin.get();

}

int main(){

    int choice,roll;

    vector<Student> s;

    cout<<"\*\*Student Management System\*\*"<<endl;

    cout<<"1.Add Student"<<endl;

    cout<<"2.Add Marks For specific Student"<<endl;

    cout<<"3.Display Student"<<endl;

    cout<<"4.Delete Student"<<endl;

    cout<<"5.Exit"<<endl;

    cout<<"\n";

    while(true){

    cout<<"Enter Your Choice:-";

    cin>>choice;

    switch(choice){

        case 1: {

            Student temp;

            temp.input();

            s.push\_back(temp);

            break;

        }

        case 2: {

            cout<<"Enter Rollno of Student:-";

            cin>> roll;

            marks(s, roll);

            break;

        }

        case 3: {

            cout<<"Enter Rollno of Student:-";

            cin>> roll;

            if(!s.empty())

                s.back().display(s,roll);

            break;

        }

        case 4: {

            cout<<"Enter Rollno of Student to delete:-";

            cin>>roll;

            bool found=false;

            for (int i=0;i<s.size();i++){

                if(s[i].rollno==roll){

                    s.erase(s.begin()+i);

                    cout<<"Student Deleted Successfully"<<endl;

                    found=true;

                    break;

                }

            }

            if(!found){

                cout<<"Student Not Found"<<endl;

            }

            break;

        }

        case 5: {

            exit(0);

        }

        default: {

            cout<<"Enter Valid Choice"<<endl;

        }

    }

    }

}

**OUTPUT:**

PS C:\Users\btm9d\Desktop\College\CPP> g++ Ass-4.cpp

PS C:\Users\btm9d\Desktop\College\CPP> ./a.exe

\*\*Student Management System\*\*

1.Add Student

2.Add Marks For specific Student

3.Display Student

4.Delete Student

5.Exit

Enter Your Choice:-1

Enter Name Of Student:-Vinay Gole

Enter Rollno:-35

Enter Age OF Student:-19

Enter Your Choice:-1

Enter Name Of Student:-Pranav Doshi

Enter Rollno:-30

Enter Age OF Student:-19

Enter Your Choice:-2

Enter Rollno of Student:-35

Marks Entering For Student:-Vinay Gole

Rollno:-35

\*\*Marks OF Three Subject of Student(50 Outoff)\*\*

Enter OOP Marks:-48

Enter DM Marks:-45

Enter DSA Marks:-47

Enter Your Choice:-3

Enter Rollno of Student:-35

\*\*Student Details\*\*

Name:-Vinay Gole

Rollno:-35

Age:-19

Percentage of Student:-93.3333%

Enter Your Choice:-4

Enter Rollno of Student to delete:-30

Student Deleted Successfully

Enter Your Choice:-3

Enter Rollno of Student:-30

Student Not Found

Press Enter

Enter Your Choice:-5

PS C:\Users\btm9d\Desktop\College\CPP>