**Experiment :5**

Student Details using C++

**ALGORITHM**

**STEP 1:** Start the program.

**STEP 2:** Declare the data members.

**STEP 3:** Define the data members outside of the class.

**STEP 4:** Read the student details ie. usn, Name, Mark1, Mark2, Mark3, total, percentage

**STEP 5:** Calculate total and percentage using

Total=m1+m2+m3

Percentage=(total/300)\*100

**STEP 7:** Display the student record.

**STEP 8:** Stop the program.

**CODE:**

#include<iostream>

using namespace std;

int j=0;

class student{ //Creating class to store student details

private : //Private access specifier

char name[30],grade='/0';

int usn;

float m1,m2,m3;

float total,percentage;

public : //Public access specifier

student() //Constructor

{

cout<<"Constructor"<<endl;

name[0]='/0';

usn=0;

grade='\0';

m1=m2=m3=total=percentage=0.0;

}

void getdata() //Function to accept the student details

{

j++;

cout<<"\nEnter the Information of student "<<j<<endl;

cout<<"Enter the student name : ";

cin>>name;

cout<<"\nEnter the usn of the student : ";

cin>>usn;

cout<<"\nEnter the marks of three subjects : ";

cin>>m1>>m2>>m3;

}

void calculate() //Function to calculate total and percentage

{

total=m1+m2+m3;

percentage=(total/300\*100);

}

void showstudent() //Function to display students Details

{

cout<<"-----------STUDENT DETAILS------------\n";

cout<<"\tThe student name is : "<<name<<endl;

cout<<"\tThe student usn is : "<<usn<<endl;

cout<<"\tThe student marks in\n\tm1 : "<<m1<<"\n\tm2 is :"<<m2<<"\n\tm3 is :"<<m3<<endl;

cout<<"\tThe Total is : "<<total<<endl<<"The percentage is :"<<percentage<<"%"<<"\tGrade: "<<grade<<endl;

cout<<"---------------------------------------\n";

}

void findgrade() //Function to assign grade based on percentage

{

if (percentage>=80)

grade='A';

else if(percentage>=70 && percentage<80)

grade='B';

else if (percentage>=60 && percentage<70)

grade='C';

else

grade='F';

}

~student() //Destructor

{

cout<<"\nIn the Student Destructor"<<endl;

cout<<"Year 2019-20"<<endl;

}

};

int main()

{

int i,n;

cout<<"Enter the number of students : ";

cin>>n;

student s[n];

for(i=0;i<n;i++) //loop for given number of students

{

s[i].getdata();

s[i].calculate();

s[i].findgrade();

s[i].showstudent();

}

}

**OUTPUT:**

