**Lab 15 - Write a C++ program to implement multiple and hybrid inheritance**

#include <iostream>

#include <string>

using namespace std;

class Person {

protected:

string name;

int age;

public:

void setPersonDetails(string n, int a) {

name = n;

age = a;

}

void displayPersonDetails() {

cout << "Name: " << name << "\nAge: " << age << endl;

}

};

class AcademicRecord {

protected:

float gpa;

public:

void setAcademicRecord(float g) {

gpa = g;

}

void displayAcademicRecord() {

cout << "GPA: " << gpa << endl;

}

};

class Student : public Person, public AcademicRecord {

protected:

int studentID;

float attendance;

public:

void setStudentDetails(int id, string n, int a, float g, float att) {

studentID = id;

setPersonDetails(n, a);

setAcademicRecord(g);

attendance = att;

}

bool isEligibleForExam() {

return attendance >= 75.0;

}

void displayStudentDetails() {

cout << "Student ID: " << studentID << endl;

displayPersonDetails();

displayAcademicRecord();

cout << "Attendance: " << attendance << "%" << endl;

cout << "Exam Eligibility: " << (isEligibleForExam() ? "Eligible" : "Not Eligible") << endl;

}

};

class ExtraCurricular {

protected:

string activity;

public:

void setActivity(string act) {

activity = act;

}

void displayActivity() {

cout << "Extra-Curricular Activity: " << activity << endl;

}

};

class FullStudentProfile : public Student, public ExtraCurricular {

public:

void setFullProfile(int id, string n, int a, float g, float att, string act) {

setStudentDetails(id, n, a, g, att);

setActivity(act);

}

void displayFullProfile() {

displayStudentDetails();

displayActivity();

}

};

int main() {

FullStudentProfile student;

int id, age;

float gpa, attendance;

string name, activity;

cout << "Enter Student ID: ";

cin >> id;

cout << "Enter Name: ";

cin.ignore();

getline(cin, name);

cout << "Enter Age: ";

cin >> age;

cout << "Enter GPA: ";

cin >> gpa;

cout << "Enter Attendance Percentage: ";

cin >> attendance;

cout << "Enter Extra-Curricular Activity: ";

cin.ignore();

getline(cin, activity);

student.setFullProfile(id, name, age, gpa, attendance, activity);

cout << "\nStudent Full Profile:\n";

student.displayFullProfile();

return 0;

}