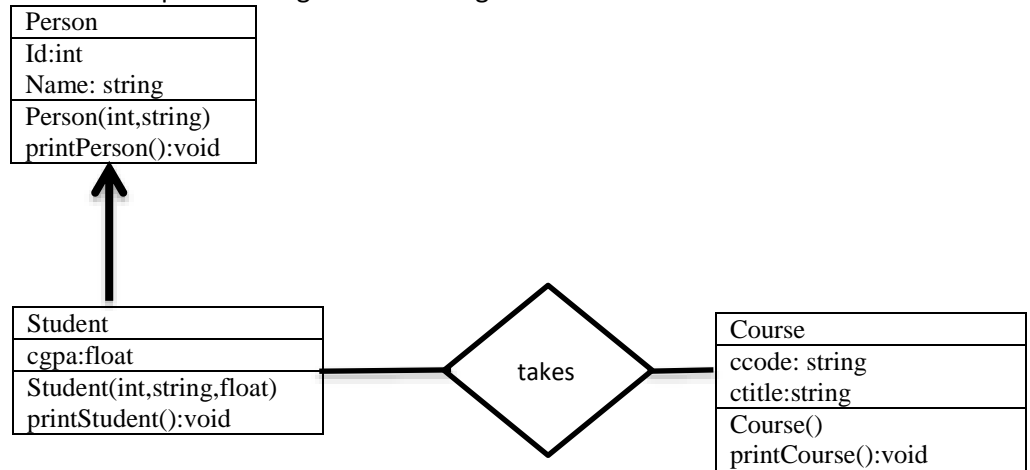


Use Inheritance and composition techniques to design the following classes.



Important Notes:

- Person class is base class for Student class.
- For each student accept id, name and cgpa as parameters.
- For each course ask user to enter ccode and ctile from keyboard.
- Each student takes 5 courses.
- Each class must have an appropriate print method that shows details of each class.

SOLUTION

```

//person.h
class person{
protected:
    int id;
    string name;
public:
    person(int id, string name)
    {
        this->id = id;
        this->name = name;
    }
    void printPerson()
    {
        cout << "Id and Name:" << endl;
        cout << this->id << " " << this->name;
    }
};

//course.h
class course{
private:
    string ccode, title;
public:
    course()
    {
        cout << "Enter ccode and title:";
        getline(cin, this->ccode);
        getline(cin, this->title);
    }
    void printCourse()
    {
        cout << this->ccode << " " << this->title << endl;
    }
};
  
```

```

};

//student.h
class student :public person
{
private:
    float cgpa;
    course takes[5];
public:
    student(int id, string name, float cgpa) :person(id, name)
    {
        this->cgpa = cgpa;
    }
    void printStudent()
    {
        printPerson();
        cout << " CGPA:" << this->cgpa << endl;
        cout << "LIST OF COURSES THAT STUDENT TAKES\n";
        cout << "CCODE and TITLE\n";
        for (int i = 0; i < 5; i++)
            takes[i].printCourse();
    }
};

//stdcrs.cpp
#include<iostream>
#include<string>
using namespace std;
#include"person.h"
#include"course.h"
#include"student.h"
void main()
{
    student std1(101, "Mustafa", 3.30);
    std1.printStudent();
    system("pause");
}

```