Task 3

Code

Class.h

```
#pragma once
#include <string>

class Person
{
public:
	void SetName(std::string);
	std::string GetName();
private:
	std::string name;
};

void Person::SetName(std::string n)
{
	this->name = n;
}

std::string Person::GetName()
{
	return this->name;
}

class Student:public Person
{
public:
	void SetStudent(std::string, int);
	int GetMarks();
private:
	int marks;
};

void Student::SetStudent(std::string n, int m)
{
	this->marks = m;
	SetName(n);
}
```

```
int Student::GetMarks()
{
	return this->marks;
}
```

Main.cpp

```
#include "Class.h"
#include <iostream>
#include <vector>

int main()
{
    std::vector<Student> students;
    int numberOfStudents;

    std::cout << "Enter the number of students: ";
    std::cin >> numberOfStudents;

    for (int i = 0; i < numberOfStudents; i++)
    {
        Student student;
        int marks;
        std::string name;

        std::cout << "Enter the name of the student: ";
        std::cin >> name;

        std::cout << "Enter the marks of the student: ";
        std::cin >> marks;

        student.SetStudent(name, marks);

        students.push_back(student);
    }

    int sum = 0;

    for (int i = 0; i < numberOfStudents; i++)
    {
        std::cout << "Name: " << students[i].GetName() << std::endl;
        std::cout << "Marks: " << students[i].GetMarks() << std::endl << std::endl;

        sum += students[i].GetMarks();
```

```
    }

    std::cout << "The sum is " << sum << " and the average marks are " << sum /
numberOfStudents << "." << std::endl;
}
```

Solution