Codes Assignment 1

Course

// Course.h

```
#pragma once
class Course
{
private:
	int courseID;
	char courseName[20];
	int creaditPoints;

public:
	void setCourseDetails(int cID,const char cName[]);
	void displayCourseDetails();
	void setCreaditPoints( int cPoints);
};
```

//Course.cpp

```
#include "Course.h"
#include <iostream>
#include <cstring>

using namespace std;

void Course::setCourseDetails(int cID, const char cName[]) {
	courseID = cID;
	strcpy_s(courseName, cName);

};
void Course::displayCourseDetails() {
	cout << "\nCourseID = " << courseID << endl;
	cout << "CourseName = " << courseName << endl;
	cout << "CreditPoints = " << creaditPoints << "\n" << endl;

};
void Course::setCreaditPoints(int cPoints) {
	creaditPoints = cPoints;
};
```

Codes Assignment 1

```
// Course Question

#include <iostream>
#include "Course.h"

using namespace std;

int main()
{
    Course c1, c2, c3, c4;

    int p1, p2, p3, p4;

    c1.setCourseDetails(1050, "OOC");
    c1.setCreaditPoints(2);

    c2.setCourseDetails(1060, "SPM");
    c2.setCreaditPoints(3);

    c3.setCourseDetails(1100, "IWT");
    c3.setCreaditPoints(4);

    c4.setCourseDetails(1090, "ISDM");
    c4.setCreaditPoints(4);

    cout << "Input new OOC credit point : ";
    cin >> p1;

    cout << "Input new SPM credit point : ";
    cin >> p2;

    cout << "Input new IWT credit point : ";
    cin >> p3;

    cout << "Input new ISDM credit point : ";
    cin >> p4;

    c1.setCreaditPoints(p1);
    c2.setCreaditPoints(p2);
    c3.setCreaditPoints(p3);
    c4.setCreaditPoints(p4);

    c1.displayCourseDetails();
    c2.displayCourseDetails();
    c3.displayCourseDetails();
    c4.displayCourseDetails();


    return 0;
}
```

Codes Assignment 1

Doctor

//Doctor.h

```
#pragma once

class Doctor
{
private:
	int doctorID;
	char doctorName[50];
	char specialization[50];
	char hospital[50];
public:
	void setDoctorDetails(int dID, const char dName[], const char spec[], const
char h[]);
	void displayDoctorDetails();
	char* getSpecialization();
};
```

//Doctor.cpp

```
#include "Doctor.h"
#include <iostream>
#include <cstring>

using namespace std;

void Doctor::setDoctorDetails(int dID, const char dName[], const char spec[], const
char h[]) {
	doctorID = dID;
	strcpy_s(doctorName, dName);
	strcpy_s(specialization, spec);
	strcpy_s(hospital, h);
};
void Doctor::displayDoctorDetails() {
	cout << "\nDoctorID = " << doctorID << endl;
	cout << "Doctore Name = " << doctorName << endl;
	cout << "Specialization = " << getSpecialization() << endl;
	cout << "Hospital = " << hospital << endl;

};
char* Doctor::getSpecialization() {
	return specialization;
};
```

Codes Assignment 1

// Doctor Question.cpp

```cpp
#include <iostream>
#include "Doctor.h"

using namespace std;

int main()
{
    Doctor d1, d2, d3;

    char h1[20], h2[20], h3[20];

    d1.setDoctorDetails(1, "Dr. Sunil", "Neurologist", "no");
    d2.setDoctorDetails(2, "Dr. Yasantha", "Oncologist", "no");
    d3.setDoctorDetails(3, "Dr. Godvin", "Cardiologist", "no");


    cout << "Input new hospital 1 : ";
    cin >> h1;

    cout << "Input new hospital 2 : ";
    cin >> h2;

    cout << "Input new hospital 3 : ";
    cin >> h3;

    d1.setDoctorDetails(1, "Dr. Sunil", "Neurologist", h1);
    d2.setDoctorDetails(2, "Dr. Yasantha", "Oncologist", h2);
    d3.setDoctorDetails(3, "Dr. Godvin", "Cardiologist", h3);

    d1.displayDoctorDetails();
    d2.displayDoctorDetails();
    d3.displayDoctorDetails();


    return 0;
}
```

Codes Assignment 1

Guest

// Guest.h

```
#pragma once
class Guest
{
private:
	int guestID;
	char guestName[20];
	float ratePerDay;
	int numberOfDays;

public:
	void setGuestDetails(int gID, const char gName[], float rPerDay, int
nOfdays);
	void displayGuestDetails();
	float calculateGuestBill();
};
```

// Guest.cpp

```
#include "Guest.h"
#include <iostream>
#include <cstring>

using namespace std;

void Guest::setGuestDetails(int gID, const char gName[], float rPerDay, int nOfdays)
{
	guestID = gID;
	strcpy_s(guestName, gName);
	ratePerDay = rPerDay;
	numberOfDays = nOfdays;

};
void Guest::displayGuestDetails() {
	cout << "Guest ID = " << guestID << endl;
	cout << "Guest Name = " << guestName << endl;
	cout << "Bill Amount = " << calculateGuestBill() << "\n" << endl;
};
float Guest::calculateGuestBill() {
	return ratePerDay * numberOfDays;
};
```

Codes Assignment 1

//Guest Question.cpp

```cpp
#include <iostream>
#include "Guest.h"

using namespace std;

int main()
{
    Guest g1, g2, g3;

    g1.setGuestDetails(1212, "Jared", 4500, 4);
    g2.setGuestDetails(1122, "Ben", 3000, 3);
    g3.setGuestDetails(1234, "Ruby", 5750, 2);

    g1.calculateGuestBill();
    g2.calculateGuestBill();
    g3.calculateGuestBill();

    g1.displayGuestDetails();
    g2.displayGuestDetails();
    g3.displayGuestDetails();


    return 0;
}
```

Codes Assignment 1

Student

//Student.h

```
#pragma once
class Student
{
private:
	int studentID;
	char studentName[20];
	float marksOOC;
	float marksSPM;
	float marksISDM;

public:
	void setStudentDetails(int sID, const char sName[]);
	void setMarksOOC(float mOOC);
	float getMarksOOC();
	void setMarksSPM(float mSPM);
	float getMarksSPM();
	void setMarksISDM(float mISDM);
	float getMarksISDM();
};
```

//Student.cpp

```
#include "Student.h"
#include <iostream>
#include <cstring>

void Student::setStudentDetails(int sID,const char sName[]) {
	strcpy_s(studentName, sName);
	studentID = sID;

};
void Student::setMarksOOC(float mOOC) {
	marksOOC = mOOC;
};
float Student::getMarksOOC() {
	return marksOOC;
};
void Student::setMarksSPM(float mSPM) {
	marksSPM = mSPM;
};
float Student::getMarksSPM() {
	return marksSPM;
};
void Student::setMarksISDM(float mISDM) {
	marksISDM = mISDM;
};
float Student::getMarksISDM() {
	return marksISDM;
};
```

Codes Assignment 1

//Student Question.cpp

```
#include <iostream>
#include "Student.h"

using namespace std;

int main()
{
	Student s1, s2, s3, s4;

	s1.setStudentDetails(1234, "Kamal");
	s1.setMarksOOC(85);
	s1.setMarksSPM(80);
	s1.setMarksISDM(75);

	s2.setStudentDetails(4567, "Samn");
	s2.setMarksOOC(65);
	s2.setMarksSPM(50);
	s2.setMarksISDM(45);

	s3.setStudentDetails(7891, "Nimal");
	s3.setMarksOOC(98);
	s3.setMarksSPM(75);
	s3.setMarksISDM(80);

	s4.setStudentDetails(1212, "Sunil");
	s4.setMarksOOC(35);
	s4.setMarksSPM(60);
	s4.setMarksISDM(40);

	cout << "Average OOC Mark : " << (s1.getMarksOOC() + s2.getMarksOOC() +
s3.getMarksOOC() + s4.getMarksOOC()  )/ 4.0 << endl;
	cout << "Average SPM Mark : " << (s1.getMarksSPM() + s2.getMarksSPM() +
s3.getMarksSPM() + s4.getMarksSPM() )/ 4.0 << endl;
	cout << "Average ISDM Mark : " << (s1.getMarksISDM() + s2.getMarksISDM() +
s3.getMarksISDM() + s4.getMarksISDM() )/ 4.0 << endl;

	return 0;
}
```

Codes Assignment 1

Taxi

// Taxi.h

```
#pragma once

class Taxi
{
private:
	int taxiID;
	char driver[30];
	float ratePerKM;
	float distanceTravelled;

public :
	void setTaxiDetails(int tID, const char d[], float rPerKM, float dTravelled);
	void displayTaxiDetails();
	float calculateBill();
};
```

//Taxi.cpp

```
#include "Taxi.h"
#include <iostream>
#include <cstring>
#include <iomanip>

using namespace std;

void Taxi::setTaxiDetails(int tID, const char d[], float rPerKM, float dTravelled) {
	taxiID = tID;
	strcpy_s(driver, d);
	ratePerKM = rPerKM;
	distanceTravelled =dTravelled ;
};
void Taxi::displayTaxiDetails() {
	cout << "Taxi ID = " << taxiID << endl;
	cout << "Driver Name = " << driver << endl;
	cout << "BillAmount = "<< setiosflags(ios::fixed) << setprecision(2) <<
calculateBill() << "\n" << endl;
};
float Taxi::calculateBill() {
	return ratePerKM * distanceTravelled;
};
```

Codes Assignment 1

//taxi question

```
#include <iostream>
#include "Taxi.h"

using namespace std;

int main()
{
    Taxi t1, t2, t3;

    t1.setTaxiDetails(1234, "Ben", 150, 10);
    t2.setTaxiDetails(4321, "Charis", 250, 4);
    t3.setTaxiDetails(3434, "Nick", 175, 2);

    t1.calculateBill();
    t2.calculateBill();
    t3.calculateBill();

    t1.displayTaxiDetails();
    t2.displayTaxiDetails();
    t3.displayTaxiDetails();

    return 0;
}
```

Codes Assignment 1

Vehicle

//Vehicle.h

```
#include <iostream>
#include "Taxi.h"

using namespace std;

int main()
{
    Taxi t1, t2, t3;

    t1.setTaxiDetails(1234, "Ben", 150, 10);
    t2.setTaxiDetails(4321, "Charis", 250, 4);
    t3.setTaxiDetails(3434, "Nick", 175, 2);

    t1.calculateBill();
    t2.calculateBill();
    t3.calculateBill();

    t1.displayTaxiDetails();
    t2.displayTaxiDetails();
    t3.displayTaxiDetails();

    return 0;
}
```

//Vehicle.cpp

```
#include "Vehicle.h"
#include <iostream>
#include <cstring>
#include <iomanip>

using namespace std;

void Vehicle::setVehicleDetails(const char vBrand[], const char vType[]) {
      strcpy_s(vehicleBrand, vBrand);
      strcpy_s(vehicleType, vType);
};
void Vehicle::displayVehicleDetails() {

      cout << "Input new priceof vehicle : " << setiosflags(ios::fixed)<<
setprecision(2) << vehiclePrice << endl;

};
void Vehicle::setVehiclePrice(double vPrice) {

            vehiclePrice = vPrice;

};
```

Codes Assignment 1

//vehicle Question.cpp

```cpp
#include <iostream>
#include "Vehicle.h"

using namespace std;

int main()
{
    Vehicle v1, v2, v3;
    double vp1, vp2, vp3;

    v1.setVehicleDetails("Toyota", "SUV");
    v1.setVehiclePrice(8500000);

    v2.setVehicleDetails("Nissan", "Saloon");
    v2.setVehiclePrice(6000000);

    v3.setVehicleDetails("Honda", "Convertible");
    v3.setVehiclePrice(7200000);

    cout << "Enter v1 price : ";
    cin >> vp1;
    v1.setVehiclePrice(vp1);

    cout << "Enter v2 price : ";
    cin >> vp2;
    v2.setVehiclePrice(vp2);

    cout << "Enter v3 price : ";
    cin >> vp3;
    v3.setVehiclePrice(vp3);


    v1.displayVehicleDetails();
    v2.displayVehicleDetails();
    v3.displayVehicleDetails();




    return 0;
}
```