Name: Ashraf Abdulkhaliq Bassuoni

Q1: Write a class named car that have two public data field type and color , create two car and ask user to enter their values.

// Main

#include <iostream>

#include "car.h"

using namespace std;

int main() {

car c1, c2;

c1.type = "BMW";

c1.color = "Black";

c2.type = "KIA";

c2.color = "White";

return 0;

}

// Class

#include <iostream>

using namespace std;

class car

{

public:

string type, color;

};

Q2: Write a class named STUDENT that have 2 private data field name and GPA and one public data field phone , make an accessor and mutators for each data field , make an non-static function to print the phone number and one static function to return the suitable grade for this GPA ( gpa from 85 to 100 = A , from 70 to 85 =B , from 60 to 70 =c , from 45 to 60 is d ) , make three student and ask user to enter their values and calculate gpa to each STUDENT ).

// Main

#include <iostream>

#include "student.h"

using namespace std;

int main() {

student s1, s2, s3;

string n;

int g;

// Student Number 1

cout << "Enter Student Name: ";

cin >> n;

cout << "Enter Student GPA: ";

cin >> g;

cout << "Enter Student PhoneNumber: ";

cin >> s1.phone;

s1.set\_name(n);

s1.set\_GPA(g);

// Student Number 2

cout << "Enter Student Name: ";

cin >> n;

cout << "Enter Student GPA: ";

cin >> g;

cout << "Enter Student PhoneNumber: ";

cin >> s2.phone;

s2.set\_name(n);

s2.set\_GPA(g);

// Student Number 3

cout << "Enter Student Name: ";

cin >> n;

cout << "Enter Student GPA: ";

cin >> g;

cout << "Enter Student PhoneNumber: ";

cin >> s3.phone;

s3.set\_name(n);

s3.set\_GPA(g);

string s1\_name = s1.get\_name();

string s2\_name = s2.get\_name();

string s3\_name = s3.get\_name();

string s1\_GPA = s1.get\_GPA();

string s2\_GPA = s2.get\_GPA();

string s3\_GPA = s3.get\_GPA();

cout << "Student Name: " << s1\_name << " | " << "GPA: " << s1\_GPA << endl;

cout << "Student Name: " << s2\_name << " | " << "GPA: " << s2\_GPA << endl;

cout << "Student Name: " << s3\_name << " | " << "GPA: " << s3\_GPA;

return 0;

}

#include <iostream>

using namespace std;

class student{

string name;

int GPA;

static string calc\_GPA(int gpa) {

if (GPA <= 100 && GPA > 85) {

return "A";

}

else if (GPA <= 85 && GPA > 70) {

return "B";

}

else if (GPA <= 70 && GPA > 60) {

return "C";

}

else if (GPA <= 60 && GPA > 45) {

return "D";

}

}

public:

int phone;

void set\_name(string n) {

name = n;

}

void set\_GPA(int g) {

GPA = g;

}

string get\_name() {

return name;

}

string get\_GPA() {

if (GPA <= 100 && GPA > 85) {

return "A";

}

else if (GPA <= 85 && GPA > 70) {

return "B";

}

else if (GPA <= 70 && GPA > 60) {

return "C";

}

else if (GPA <= 60 && GPA > 45) {

return "D";

}

}

void get\_phone() {

cout << phone;

}

};