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Reg# BSE203003

Subject: OOP LAB

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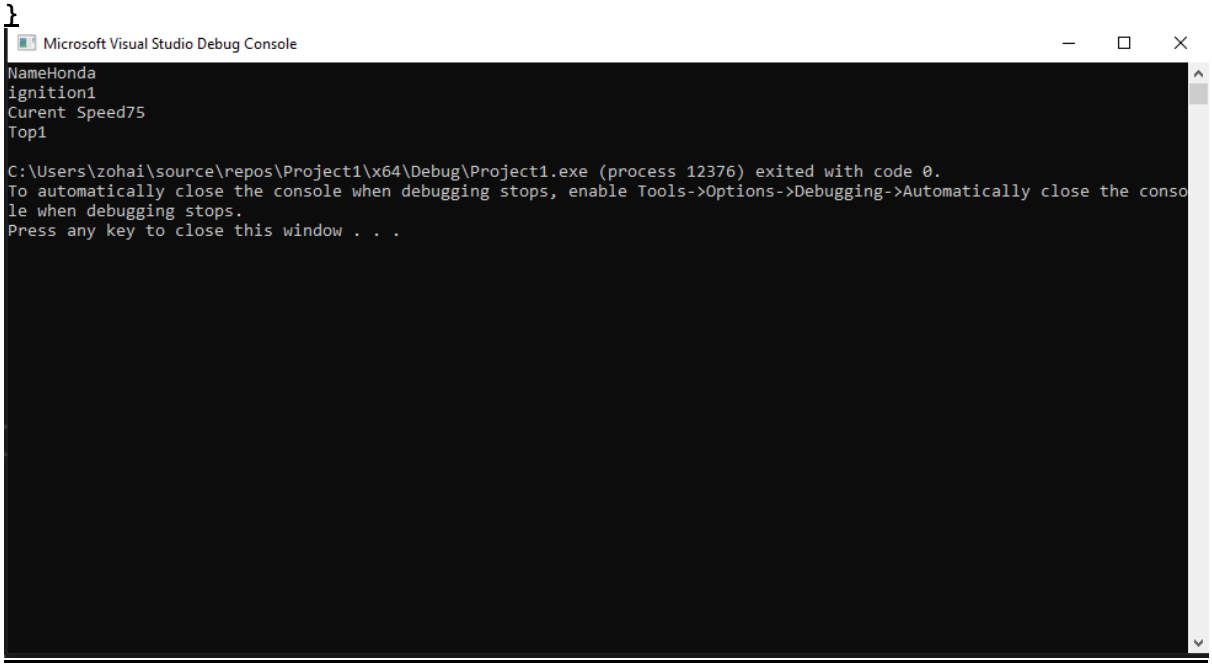
Practice Task:1

```
#include<iostream>
#include<string>
using namespace std;
class Car {
protected:
	string car_name;
	bool ignition;
	int current_speed;
public:
	void set_name()
	{
		cin >> car_name;
	}
	string get_name()
	{
		return car_name;
	}
	void set_ignition()
	{
		cin >> ignition;
	}
	bool get_ignition()
	{
		return ignition;
	}
	void set_speed()
	{
		cin >> current_speed;
	}
	int get_speed()
	{
		return current_speed;
	}
	Car(){
		set_name();
		set_ignition();
		set_speed();
}
	Car(string name, bool ign, int speed)
	{
		car_name = name;
		ignition = ign;
		current_speed = speed;
	}

};
class Convertible :public Car {
protected:
	bool Top;
public:
	void set_top()
	{
		cin >> Top;
	}
	bool get_top()
	{
		return Top;
	}
	Convertible()
	{
```

```
		Top = false;
	}
	Convertible(string name, bool ign, int speed,bool top) :Car(name, ign, speed)
	{
		Top = top;
	}
	void show()
	{
		cout << "Name" << get_name()<<endl;
		cout << "ignition" << get_ignition() << endl;
		cout << "Curent Speed" <<get_speed()  << endl;
		cout << "Top" << get_top() << endl;
	}

};
int main()
{
	Convertible obj("Honda", true, 75, true);
	obj.show();
}
```

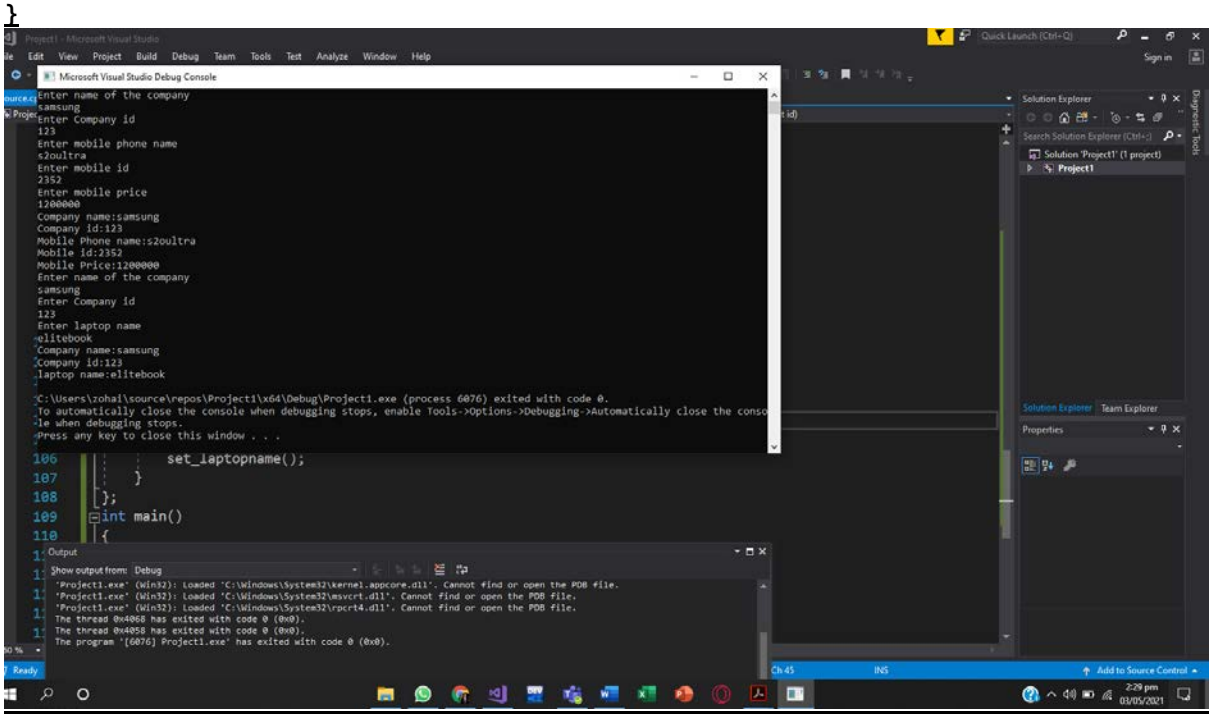


Practice Task 2:

```
#include<iostream>
#include<string>
using namespace std;
class Company {
protected:
	string company_name;
	int company_id;
public:
	void set_name()
	{
		cin >> company_name;

	}
	string get_name()
	{
		return company_name;
	}
	void set_id()
	{
```

```
                cin >> company_id;

        }
        int get_id()
        {
                return company_id;
        }
        Company(string name, int id)
        {
                cout << "Enter name of the company" << endl;
                set_name();
                company_name = name;
                cout << "Enter Company id" << endl;
                set_id();
                company_id = id;
        }
};
class MobilePhone:public Company {
protected:
        string mobilephonename;
        int mobileid;
        int mobileprice;
public:
        void set_mobilename()
        {
                cout << "Enter mobile phone name" << endl;
                cin >> mobilephonename;
        }
        string get_mobilename()
        {
                return mobilephonename;
        }
        void set_mobileid()
        {
                cout << "Enter mobile id" << endl;
                cin >> mobileid;

        }
        int get_mobileid()
        {
                return mobileid;
        }
        void set_mobileprice()
        {
                cout << "Enter mobile price" << endl;
                cin >> mobileprice;
        }
        int get_mprice()
        {
                return mobileprice;
        }
        void show()
        {
                cout << "Company name:" << get_name() << endl;
                cout << "Company id:" << get_id() << endl;
                cout << "Mobile Phone name:" << get_mobilename() << endl;
                cout << "Mobile id:" << get_mobileid() << endl;
                cout << "Mobile Price:" << get_mprice() << endl;

        }
        MobilePhone(string name,int id) :Company(name, id)
        {
```

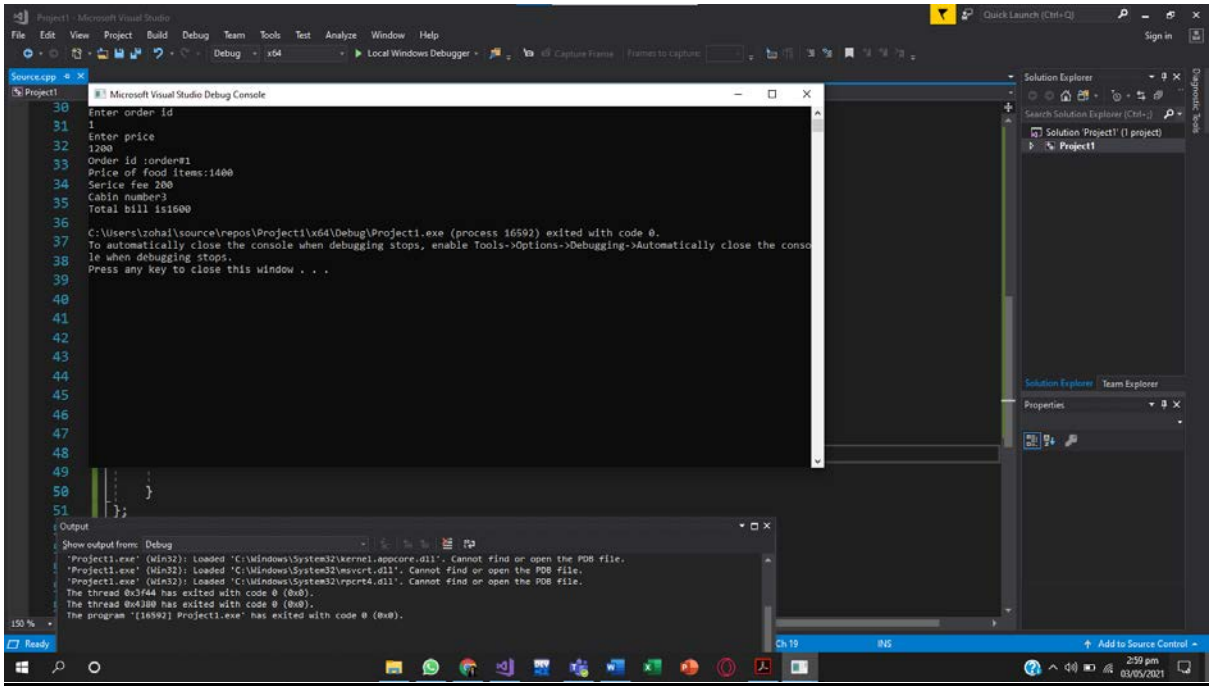
```
                set_mobilename();
                set_mobileid();
                set_mobileprice();
        }
};
class laptop :public Company {
protected:
        string laptop_name;
public:
        void set_laptopname()
        {
                cout << "Enter laptop name" << endl;
                cin >> laptop_name;
        }
        void show()
        {
                cout << "Company name:" << get_name() << endl;
                cout << "Company id:" << get_id() << endl;
                cout << "laptop name:" << laptop_name << endl;

        }
        laptop(string name,int id):Company(name,id)
        {
                set_laptopname();
        }
};
int main()
{
        MobilePhone obj("samsung",123);
        obj.show();
        laptop obj2("samsung", 123);
        obj2.show();
    }
```



Practice Task 3:

```
#include<iostream>
#include<string>
using namespace std;
```

```
class Cafeservice {
protected:
	string order_id;
	int price;
public:
	Cafeservice()
	{
		order_id = "ord#0";
		price = 0;
	}
	Cafeservice(string id, int rates)
	{
		cout << "Enter order id" << endl;
		cin >> order_id;

		order_id = id;
		cout << "Enter price" << endl;
		cin >> price;

		price = rates;

	}
};
class StaffService :public Cafeservice {
protected:
	int service_fee;
	int cabin_number;
public:
	int total;
	void total_charges()
	{
		total = service_fee + price;
		cout << "Total bill is" << total << endl;
	}
	StaffService(string id, int rates, int sfee, int cnumber) :Cafeservice(id,
rates) {
		service_fee = sfee;
		cabin_number = cnumber;
	}
	void show()
	{
		cout << "Order id :" << order_id << endl;
		cout << "Price of food items:" << price << endl;
		cout << "Serice fee " << service_fee << endl;
		cout << "Cabin number" << cabin_number << endl;
		total_charges();

	}
};
int main()
{
	StaffService obj("order#1", 1400, 200, 3);
	obj.show();
}
```


Microsoft Visual Studio Debug Console
Enter order id
1
Enter price
1200
Order id :order#1
Price of food items:1400
Serice fee 200
Cabin number3
Total bill is1600
C:\Users\zohai\source\repos\Project1\x64\Debug\Project1.exe (process 16592) exited with code 0.
To automatically close the console when debugging stops, enable Tools->Options->Debugging->Automatically close the console when debugging stops.
Press any key to close this window . . .
Output
Show output from: Debug
'Project1.exe' (Win32): Loaded 'C:\Windows\System32\kernel.appcore.dll'. Cannot find or open the PDB file.
'Project1.exe' (Win32): Loaded 'C:\Windows\System32\msvcrt.dll'. Cannot find or open the PDB file.
'Project1.exe' (Win32): Loaded 'C:\Windows\System32\rpcrt4.dll'. Cannot find or open the PDB file.
The thread 0x3f44 has exited with code 0 (0x0).
The thread 0x4380 has exited with code 0 (0x0).
The program '[16592] Project1.exe' has exited with code 0 (0x0).