

```
// Car.cs
```

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace CustomCarBuilt
{
    abstract class Car
    {
        public int cost = 0;
        public string model;
        public string error = "";
        public abstract void price();
    }
}
```

```
// Car_C.cs
```

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace CustomCarBuilt
{
    class Car_C : Car
    {
        public override void price()
        {
            cost = 28000;
        }
    }
}
```

```
// Car_CS.cs
```

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace CustomCarBuilt
{
    class Car_CS : Car
    {
        public override void price()
    }
}
```

```
        {  
            cost = 54000;  
        }  
    }  
}
```

// Car_E.cs

```
using System;  
using System.Collections.Generic;  
using System.Linq;  
using System.Text;  
using System.Threading.Tasks;
```

```
namespace CustomCarBuilt  
{  
    class CarE : Car  
    {  
        public override void price()  
        {  
            cost = 41000;  
        }  
    }  
}
```

// CarDecorator.cs

```
using System;  
using System.Collections.Generic;  
using System.Linq;  
using System.Text;  
using System.Threading.Tasks;  
  
namespace CustomCarBuilt  
{  
    abstract class CarDecorator : Car  
    {  
        protected Car decoratorcar;  
  
        public CarDecorator(Car decoratorcar)  
        {  
            this.decoratorcar = decoratorcar;  
        }  
  
        public override void price()  
        {  
            decoratorcar.price();  
        }  
    }  
}
```

```
//      V8engine.cs
```

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace CustomCarBuilt
{
    class V8engine : CarDecorator
    {
        public V8engine(Car decoratorcar) : base(decoratorcar)
        {
            decoratorcar.error = "";
        }

        public override void price()
        {
            setEnginePrice(decoratorcar);
        }

        public void setEnginePrice(Car decoratorcar)
        {
            if (decoratorcar.model == "C")
            {
                decoratorcar.cost = decoratorcar.cost + 4000;
            }
            else
            {
                decoratorcar.error = "V-8 not available for the model";
            }
        }
    }
}
```

```
//      V12engine.cs
```

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace CustomCarBuilt
{
    class V12engine : CarDecorator
    {

```

```
public V12engine(Car decoratorcar) : base(decoratorcar)
{
    decoratorcar.error = "";
}

public override void price()
{
    setV12enginePrice(decoratorcar);
}

public void setV12enginePrice(Car decoratorcar)
{
    if (decoratorcar.model == "E")
    {
        decoratorcar.cost = decoratorcar.cost + 6000;
    }
    else
    {
        if (decoratorcar.model == "CS")
        {
            decoratorcar.cost = decoratorcar.cost + 6000;
        }
        else
        {
            decoratorcar.error = "V-12 engine not available for the model";
        }
    }
}
}
```

// Sunroof.cs

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace CustomCarBuilt
{
    class Sunroof : CarDecorator
    {
        public Sunroof(Car decoratorcar) : base(decoratorcar)
        {
            decoratorcar.error = "";
        }

        public override void price()
        {

```

```
        setsunroofPrice(decoratorcar);
    }

    public void setsunroofPrice(Car decoratorcar)
    {
        if (decoratorcar.model == "C")
        {
            decoratorcar.cost = decoratorcar.cost + 1900;
        }

        else if (decoratorcar.model == "E")
        {
            decoratorcar.cost = decoratorcar.cost + 2200;
        }
        else
        {
            if (decoratorcar.model == "CS")
            {
                decoratorcar.cost = decoratorcar.cost + 3000;
            }
        }
    }
}
}
```

```
                                //    TowingPackage.cs
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace CustomCarBuilt
{
    class TowingPackage : CarDecorator
    {
        public TowingPackage(Car decoratorcar) : base(decoratorcar)
        {
            decoratorcar.error = "";
        }

        public override void price()
        {
            setTowingPrice(decoratorcar);
        }

        public void setTowingPrice(Car decoratorcar)
        {
            if (decoratorcar.model == "C")
```

```
        {
            decoratorcar.cost = decoratorcar.cost + 3000 ;
        }

        else if (decoratorcar.model == "E")
        {
            decoratorcar.cost = decoratorcar.cost + 3000;
        }
        else
        {
            if (decoratorcar.model == "CS")
            {
                decoratorcar.cost = decoratorcar.cost + 3000;
            }
        }
    }
}
```

// GasTank.cs

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace CustomCarBuilt
{
    class GasTank : CarDecorator
    {
        public GasTank(Car decoratorcar) : base(decoratorcar)
        {
            decoratorcar.error = "";
        }

        public override void price()
        {
            setGasTankPrice(decoratorcar);
        }

        public void setGasTankPrice(Car decoratorcar)
        {
            if (decoratorcar.model == "C")
            {
                decoratorcar.cost = decoratorcar.cost + 900;
            }

            else if (decoratorcar.model == "E")
            {

```

```
        decoratorcar.cost = decoratorcar.cost + 900;
    }
    else
    {
        if (decoratorcar.model == "CS")
        {
            decoratorcar.cost = decoratorcar.cost + 900;
        }
    }
}
}
```

// PumaSkin.cs

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace CustomCarBuilt
{
    class PumaSkin : CarDecorator
    {
        public PumaSkin(Car decoratorcar) : base(decoratorcar)
        {
            decoratorcar.error = "";
        }

        public override void price()
        {
            setPumaSkinPrice(decoratorcar);
        }

        public void setPumaSkinPrice(Car decoratorcar)
        {
            if (decoratorcar.model=="E")
            {
                decoratorcar.cost = decoratorcar.cost + 700;
            }
            else
            {
                decoratorcar.error = "PUMA skin Seats not available for the model";
            }
        }
    }
}
```

```
// SealSkinSeats.cs
```

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace CustomCarBuilt
{
    class SealSkinSeats : CarDecorator
    {
        public SealSkinSeats(Car decoratorcar) : base(decoratorcar)
        {
            decoratorcar.error = "";
        }

        public override void price()
        {
            setSealSkinPrice(decoratorcar);
        }

        public void setSealSkinPrice(Car decoratorcar)
        {
            if (decoratorcar.model == "C")
            {
                decoratorcar.cost = decoratorcar.cost + 5600;
            }
            else
            {
                decoratorcar.error = "Seal skin Seats not available for the model";
            }
        }
    }
}
```

```
// DragonSeats.cs
```

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace CustomCarBuilt
{
    class DragonSeats : CarDecorator
    {

```



```
public DragonSeats(Car decoratorcar) : base(decoratorcar)
{
    decoratorcar.error = "";
}

public override void price()
{
    setDragonSeatsPrice(decoratorcar);
}

public void setDragonSeatsPrice(Car decoratorcar)
{
    if (decoratorcar.model == "CS")
    {
        decoratorcar.cost = decoratorcar.cost + 12000;
    }
    else
    {
        decoratorcar.error = "Komodo Dragon Seats not available for the
model";
    }
}
}
```

```
// CupHolder.cs
```

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace CustomCarBuilt
{
    class CupHolder : CarDecorator
    {
        public CupHolder(Car decoratorcar) : base(decoratorcar)
        {
            decoratorcar.error = "";
        }

        public override void price()
        {
            setCupHolderPrice(decoratorcar);
        }

        public void setCupHolderPrice(Car decoratorcar)
        {

```

```
        if (decoratorcar.model == "C")
        {
            decoratorcar.cost = decoratorcar.cost + 1;
        }

        else if (decoratorcar.model == "E")
        {
            decoratorcar.cost = decoratorcar.cost + 1;
        }
        else
        {
            if (decoratorcar.model == "CS")
            {
                decoratorcar.cost = decoratorcar.cost + 1;
            }
        }
    }
}
```

// NYRadio.cs

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace CustomCarBuilt
{
    class NYRadio : CarDecorator
    {
        public NYRadio(Car decoratorcar) : base(decoratorcar)
        {
            decoratorcar.error = "";
        }

        public override void price()
        {
            setNYRadioPrice(decoratorcar);
        }

        public void setNYRadioPrice(Car decoratorcar)
        {
            if (decoratorcar.model == "C ")
            {
                decoratorcar.cost = decoratorcar.cost + 900;
            }

            else if (decoratorcar.model == "E ")
            {
                decoratorcar.cost = decoratorcar.cost + 900;
            }
        }
    }
}
```

```
        {
            decoratorcar.cost = decoratorcar.cost + 900;
        }
        else
        {
            if (decoratorcar.model == "CS")
            {
                decoratorcar.cost = decoratorcar.cost + 900;
            }
        }
    }
}
```

// SpareTire.cs

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace CustomCarBuilt
{
    class SpareTire : CarDecorator
    {
        public SpareTire(Car decoratorcar) : base(decoratorcar)
        {
            decoratorcar.error = "";
        }

        public override void price()
        {
            setSpareTirePrice(decoratorcar);
        }

        public void setSpareTirePrice(Car decoratorcar)
        {
            if (decoratorcar.model == "C")
            {
                decoratorcar.cost = decoratorcar.cost + 400;
            }

            else if (decoratorcar.model == "E")
            {
                decoratorcar.cost = decoratorcar.cost + 400;
            }
            else
            {
                if (decoratorcar.model == "CS")
```

```
        {
            decoratorcar.cost = decoratorcar.cost + 400;
        }
    }
}
}
```

// OilChange.cs

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace CustomCarBuilt
{
    class OilChange : CarDecorator
    {
        public OilChange(Car decoratorcar) : base(decoratorcar)
        {
            decoratorcar.error = "";
        }

        public override void price()
        {
            setOilChangePrice(decoratorcar);
        }

        public void setOilChangePrice(Car decoratorcar)
        {
            if (decoratorcar.model == "C")
            {
                decoratorcar.cost = decoratorcar.cost + 75;
            }

            else if (decoratorcar.model == "E")
            {
                decoratorcar.cost = decoratorcar.cost + 75;
            }
            else
            {
                if (decoratorcar.model == "CS")
                {
                    decoratorcar.cost = decoratorcar.cost + 75;
                }
            }
        }
    }
}
```

```
}  
}
```

```
// CustomCarBuilt.cs
```

```
using System;  
using System.Collections.Generic;  
using System.ComponentModel;  
using System.Data;  
using System.Drawing;  
using System.Linq;  
using System.Text;  
using System.Threading.Tasks;  
using System.Windows.Forms;  
  
namespace CustomCarBuilt  
{  
    public partial class CustomCarBuilt : Form  
    {  
        Car objCar;  
        string errorMsg;  
        string selectedoption = "";  
        public CustomCarBuilt()  
        {  
            InitializeComponent();  
        }  
  
        private void comboBox2_SelectedIndexChanged(object sender, EventArgs e)  
        {  
            if (cmbSelectCar.SelectedIndex != 0)  
            {  
                if (cmbSelectCar.SelectedItem.ToString() == "C")  
                    objCar = new Car_C();  
                else if (cmbSelectCar.SelectedItem.ToString() == "E")  
                    objCar = new CarE();  
                else if (cmbSelectCar.SelectedItem.ToString() == "CS")  
                    objCar = new Car_CS();  
            }  
            if (objCar != null)  
            {  
                objCar.model = cmbSelectCar.SelectedItem.ToString();  
                objCar.price();  
            }  
        }  
  
        private void CustomCarBuilt_Load(object sender, EventArgs e)  
        {  
            cmbSelectCar.SelectedIndex = 0;  
        }  
    }  
}
```

```
}

private void Calculate_Click(object sender, EventArgs e)
{
    selectedoption += objCar.model + " With ";
    ErrorMsg += "Enter car model: " + cmbSelectCar.SelectedItem.ToString()
+ "\r\n";
    if (rdv8yes.Checked == true)
    {
        Car objCarDecor = new V8engine(objCar);
        objCarDecor.price();
        ErrorMsg += "\tOption: V - 8\r\n";
        if (objCar.error != "")
            ErrorMsg += "\t\tError: " + objCar.error + "\r\n";
        else
            selectedoption += "V-8 ,";
    }
    if (rdv12yes.Checked == true)
    {
        Car objCarDecor = new V12engine(objCar);
        objCarDecor.price();
        ErrorMsg += "\tOption: V - 12\r\n";
        if (objCar.error != "")
            ErrorMsg += "\t\tError: " + objCar.error + "\r\n";
        else
            selectedoption += "V-12 ,";
    }
    if (rdsryes.Checked == true)
    {
        Car objCarDecor = new Sunroof(objCar);
        objCarDecor.price();
        ErrorMsg += "\tOption: Sunroof\r\n";
        if (objCar.error != "")
            ErrorMsg += "\t\tError: " + objCar.error + "\r\n";
        else
            selectedoption += "Sunroof,";
    }
    if (rdtpyes.Checked == true)
    {
        Car objCarDecor = new TowingPackage(objCar);
        objCarDecor.price();
        ErrorMsg += "\tOption: Towing package\r\n";
        if (objCar.error != "")
            ErrorMsg += "\t\tError: " + objCar.error + "\r\n";
        else
            selectedoption += "Towing package,";
    }
    if (rdgtyes.Checked == true)
    {
        Car objCarDecor = new GasTank(objCar);
```

```
        objCarDecor.price();
        ErrorMsg += "\tOption: Oversized Gas Tank\r\n";
        if (objCar.error != "")
            ErrorMsg += "\t\tError: " + objCar.error + "\r\n";
        else
            selectedoption += "Oversized Gas Tank ,";
    }
    if (rdpsyes.Checked == true)
    {
        Car objCarDecor = new PumaSkin(objCar);
        objCarDecor.price();
        ErrorMsg += "\tOption: Puma Skin Seats\r\n";
        if (objCar.error != "")
            ErrorMsg += "\t\tError: " + objCar.error + "\r\n";
        else
            selectedoption += "Puma Skin Seats ,";
    }
    if (rdssyes.Checked == true)
    {
        Car objCarDecor = new SealSkinSeats(objCar);
        objCarDecor.price();
        ErrorMsg += "\tOption: Seal Skin Seats\r\n";
        if (objCar.error != "")
            ErrorMsg += "\t\tError: " + objCar.error + "\r\n";
        else
            selectedoption += "Seal Skin Seats";
    }
    if (rdkdsyes.Checked == true)
    {
        Car objCarDecor = new DragonSeats(objCar);
        objCarDecor.price();
        ErrorMsg += "\tOption: Komodo Dragon Skin Seats\r\n";
        if (objCar.error != "")
            ErrorMsg += "\t\tError: " + objCar.error + "\r\n";
        else
            selectedoption += "Komodo Dragon Skin Seats ,";
    }
    if (rdcupyes.Checked == true)
    {
        Car objCarDecor = new CupHolder(objCar);
        objCarDecor.price();
        ErrorMsg += "\tOption:32oz Cup Holders\r\n";
        if (objCar.error != "")
            ErrorMsg += "\t\tError: " + objCar.error + "\r\n";
        else
            selectedoption += " 32oz cup Holders ,";
    }
    if (rdnyyes.Checked == true)
    {
```

```

        Car objCarDecor = new NYRadio(objCar);
        objCarDecor.price();
        ErrorMsg += "\tOption: Blaupunkt New York 800 Radio\r\n";
        if (objCar.error != "")
            ErrorMsg += "\t\tError: " + objCar.error + "\r\n";
        else
            selectedoption += " Blaupunkt New York 800 Radio ,";
    }
    if (rdstyes.Checked == true)
    {
        Car objCarDecor = new SpareTire(objCar);
        objCarDecor.price();
        ErrorMsg += "\tOption: Spare Tire\r\n";
        if (objCar.error != "")
            ErrorMsg += "\t\tError: " + objCar.error + "\r\n";
        else
            selectedoption += "Spare Tire ,";
    }
    if (rdoilyes.Checked == true)
    {
        Car objCarDecor = new OilChange(objCar);
        objCarDecor.price();
        ErrorMsg += "\tOption: Free First Oil Change\r\n";
        if (objCar.error != "")
            ErrorMsg += "\t\tError: " + objCar.error + "\r\n";
        else
            selectedoption += "Free First Oil Change ,";
    }
}

ErrorMsg += "\tOption: done\r\n";
FinalForm finalForm = new FinalForm();
finalForm.FinalCost = objCar.cost;
finalForm.ErrorMsg = this.ErrorMsg;
finalForm.selectedoption = this.selectedoption;
finalForm.ShowDialog();
}
}

//      FinalForm.cs

```

```

using System;
using System.Collections.Generic;
using System.ComponentModel;
using System.Data;
using System.Drawing;
using System.Linq;
using System.Text;
using System.Threading.Tasks;
using System.Windows.Forms;

```



```
namespace CustomCarBuilt
{
    public partial class FinalForm : Form
    {
        public FinalForm()
        {
            InitializeComponent();

            public int FinalCost { get; set; }
            public string ErrorMsg { get; set; }
            public string selectedoption { get; set; }

            private void FinalForm_Load(object sender, EventArgs e)
            {
                Displaybox.Text = ErrorMsg;
                Displaybox.Text += "\r\nNew Order:";
                Displaybox.Text += "\r\n\tCar :" + selectedoption;
                Displaybox.Text += "\r\n\tCost: $" + FinalCost.ToString();
                Displaybox.Text += "\r\nEnd Order";
                labelPrice.Text = FinalCost.ToString();
            }

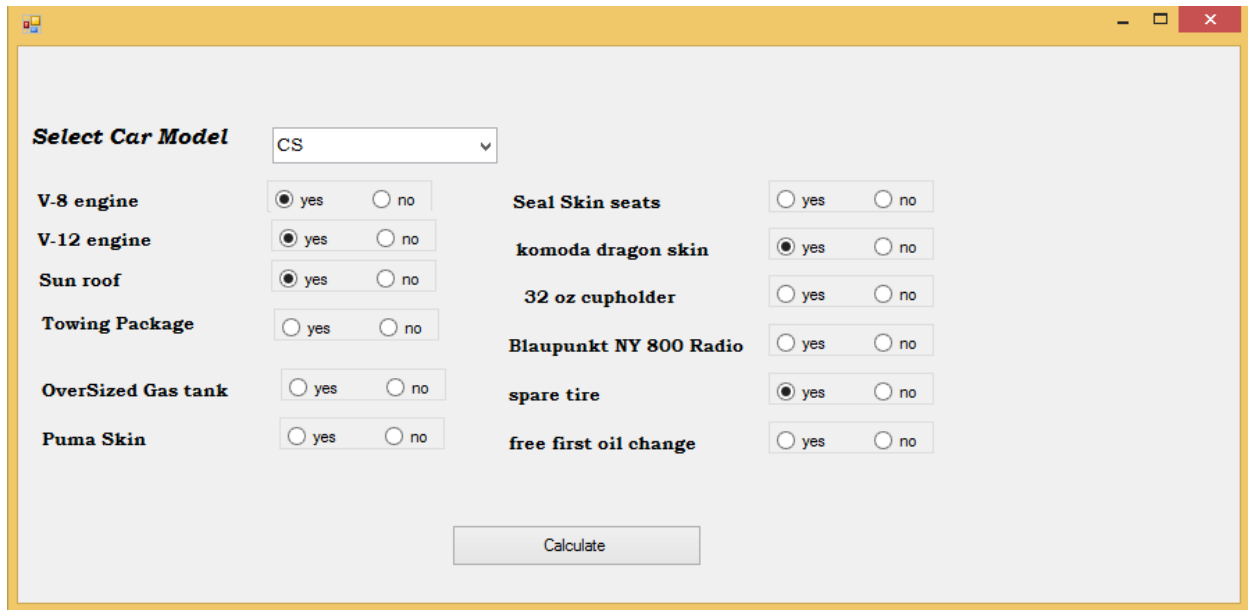
            private void labelTotalCost_Click(object sender, EventArgs e)
            {
            }
        }
    }
}
```

// Output

Select Car Model -- select car --

V-8 engine	<input type="radio"/> yes <input type="radio"/> no	Seal Skin seats	<input type="radio"/> yes <input type="radio"/> no
V-12 engine	<input type="radio"/> yes <input type="radio"/> no	komoda dragon skin	<input type="radio"/> yes <input type="radio"/> no
Sun roof	<input type="radio"/> yes <input type="radio"/> no	32 oz cupholder	<input type="radio"/> yes <input type="radio"/> no
Towing Package	<input type="radio"/> yes <input type="radio"/> no	Blaupunkt NY 800 Radio	<input type="radio"/> yes <input type="radio"/> no
OverSized Gas tank	<input type="radio"/> yes <input type="radio"/> no	spare tire	<input type="radio"/> yes <input type="radio"/> no
Puma Skin	<input type="radio"/> yes <input type="radio"/> no	free first oil change	<input type="radio"/> yes <input type="radio"/> no

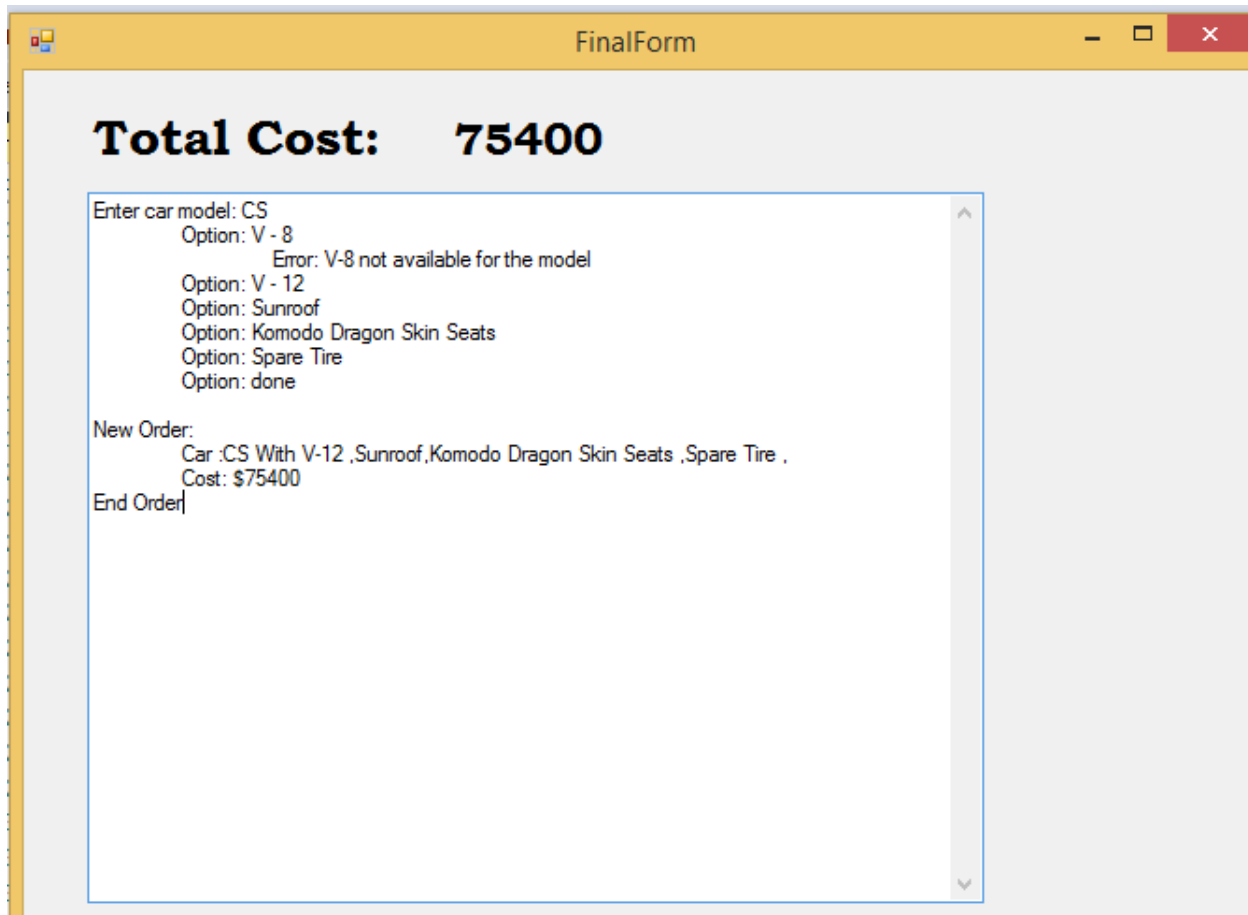
Calculate



Select Car Model CS

V-8 engine	<input checked="" type="radio"/> yes <input type="radio"/> no	Seal Skin seats	<input type="radio"/> yes <input type="radio"/> no
V-12 engine	<input checked="" type="radio"/> yes <input type="radio"/> no	komoda dragon skin	<input checked="" type="radio"/> yes <input type="radio"/> no
Sun roof	<input checked="" type="radio"/> yes <input type="radio"/> no	32 oz cupholder	<input type="radio"/> yes <input type="radio"/> no
Towing Package	<input type="radio"/> yes <input type="radio"/> no	Blaupunkt NY 800 Radio	<input type="radio"/> yes <input type="radio"/> no
OverSized Gas tank	<input type="radio"/> yes <input type="radio"/> no	spare tire	<input checked="" type="radio"/> yes <input type="radio"/> no
Puma Skin	<input type="radio"/> yes <input type="radio"/> no	free first oil change	<input type="radio"/> yes <input type="radio"/> no

Calculate



FinalForm

Total Cost: 75400

Enter car model: CS
Option: V - 8
Error: V-8 not available for the model
Option: V - 12
Option: Sunroof
Option: Komodo Dragon Skin Seats
Option: Spare Tire
Option: done

New Order:
Car :CS With V-12 ,Sunroof,Komodo Dragon Skin Seats ,Spare Tire ,
Cost: \$75400

End Order|

Select Car Model

C

V-8 engine

☒ yes ☐ no

V-12 engine

☒ yes ☐ no

Sun roof

☐ yes ☒ no

Towing Package

☐ yes ☒ no

OverSized Gas tank

☒ yes ☐ no

Puma Skin

☒ yes ☐ no

Seal Skin seats

☐ yes ☒ no

komoda dragon skin

☐ yes ☒ no

32 oz cupholder

☒ yes ☐ no

Blaupunkt NY 800 Radio

☒ yes ☐ no

spare tire

☐ yes ☒ no

free first oil change

☐ yes ☒ no

Calculate

FinalForm

Total Cost: 32901

Enter car model: C

Option: V - 8

Option: V - 12

Error: V-12 engine not available for the model

Option: Oversized Gas Tank

Option: Puma Skin Seats

Error: PUMA skin Seats not available for the model

Option:32oz Cup Holders

Option: Blaupunkt New York 800 Radio

Option: done

New Order:

Car :C With V-8 ,Oversized Gas Tank , 32oz cup Holders , Blaupunkt New York 800 Radio ,

Cost: \$32901

End Order

Select Car Model

E

V-8 engine

☐ yes ☒ no

V-12 engine

☐ yes ☒ no

Sun roof

☒ yes ☐ no

Towing Package

☐ yes ☒ no

OverSized Gas tank

☐ yes ☒ no

Puma Skin

☒ yes ☐ no

Seal Skin seats

☐ yes ☒ no

komoda dragon skin

☐ yes ☒ no

32 oz cupholder

☒ yes ☐ no

Blaupunkt NY 800 Radio

☐ yes ☒ no

spare tire

☐ yes ☒ no

free first oil change

☒ yes ☐ no

Calculate

FinalForm

Total Cost: 43976

Enter car model: E

Option: Sunroof

Option: Puma Skin Seats

Option:32oz Cup Holders

Option: Free First Oil Change

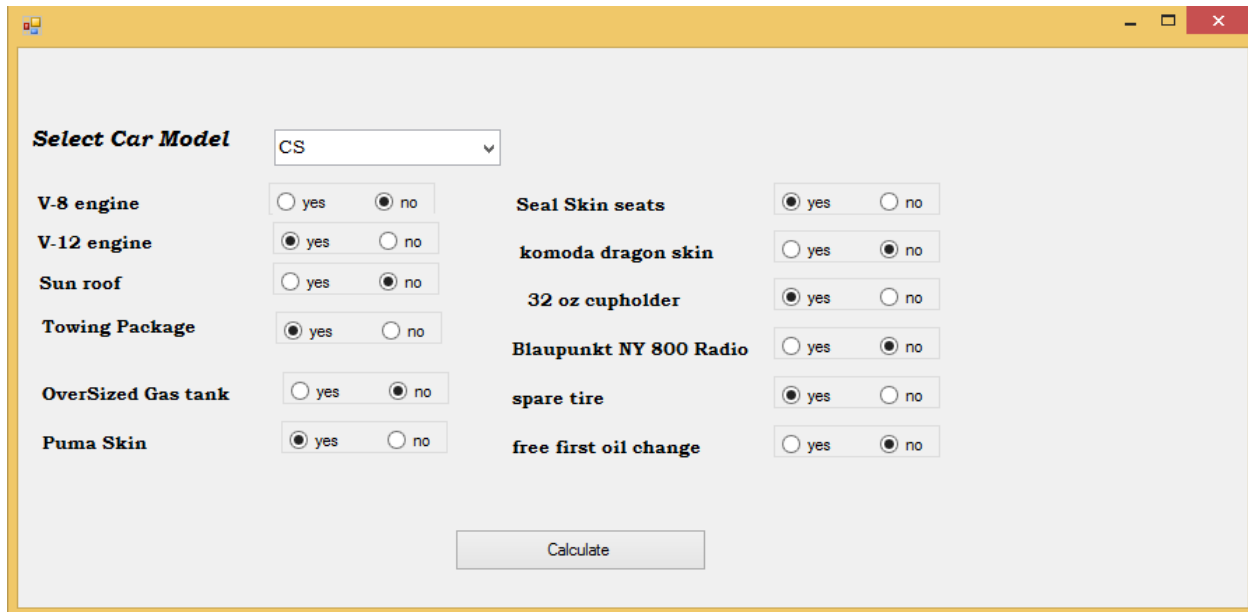
Option: done

New Order:

Car :E With Sunroof,Puma Skin Seats , 32oz cup Holders ,Free First Oil Change ,

Cost: \$43976

End Order

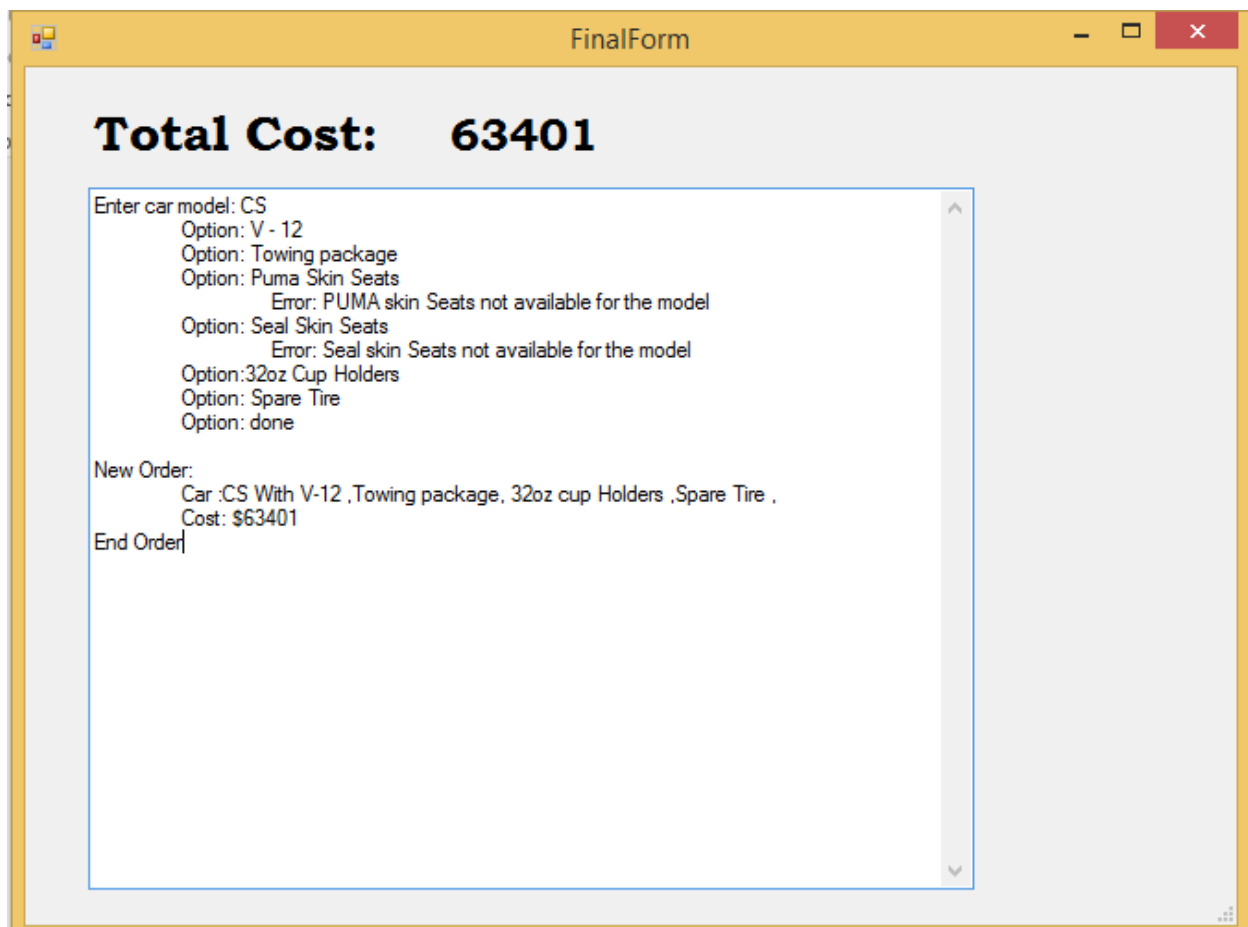


Select Car Model

CS

V-8 engine	<input type="radio"/> yes <input checked="" type="radio"/> no	Seal Skin seats	<input checked="" type="radio"/> yes <input type="radio"/> no
V-12 engine	<input checked="" type="radio"/> yes <input type="radio"/> no	komoda dragon skin	<input type="radio"/> yes <input checked="" type="radio"/> no
Sun roof	<input type="radio"/> yes <input checked="" type="radio"/> no	32 oz cupholder	<input checked="" type="radio"/> yes <input type="radio"/> no
Towing Package	<input checked="" type="radio"/> yes <input type="radio"/> no	Blaupunkt NY 800 Radio	<input type="radio"/> yes <input checked="" type="radio"/> no
OverSized Gas tank	<input type="radio"/> yes <input checked="" type="radio"/> no	spare tire	<input checked="" type="radio"/> yes <input type="radio"/> no
Puma Skin	<input checked="" type="radio"/> yes <input type="radio"/> no	free first oil change	<input type="radio"/> yes <input checked="" type="radio"/> no

Calculate



FinalForm

Total Cost: 63401

Enter car model: CS
Option: V - 12
Option: Towing package
Option: Puma Skin Seats
Error: PUMA skin Seats not available for the model
Option: Seal Skin Seats
Error: Seal skin Seats not available for the model
Option: 32oz Cup Holders
Option: Spare Tire
Option: done

New Order:
Car :CS With V-12 ,Towing package, 32oz cup Holders ,Spare Tire ,
Cost: \$63401

End Order|