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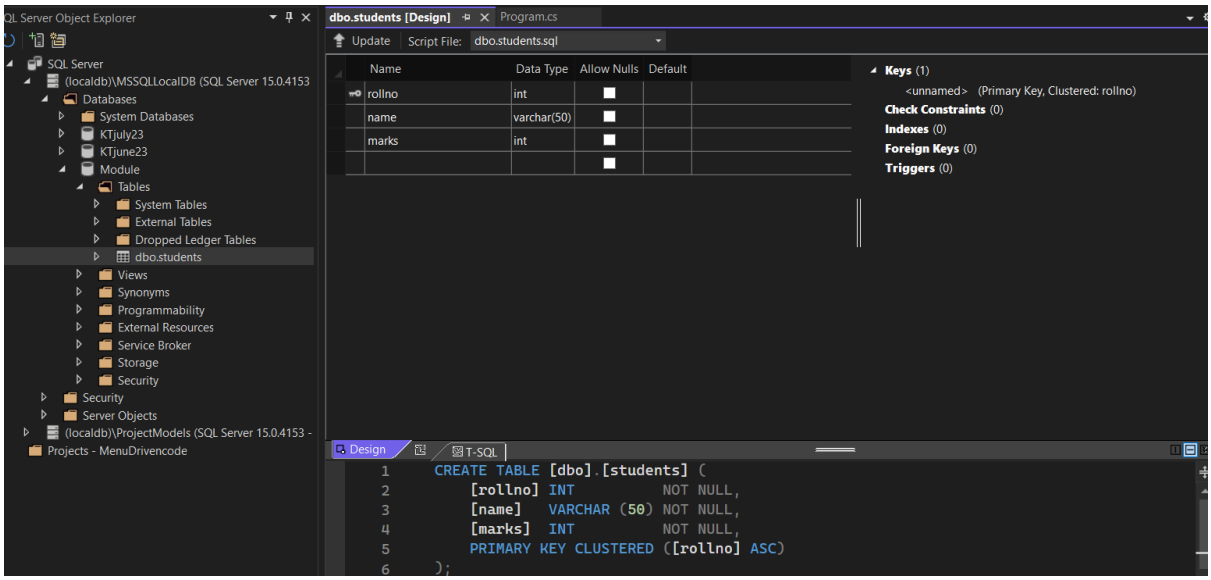
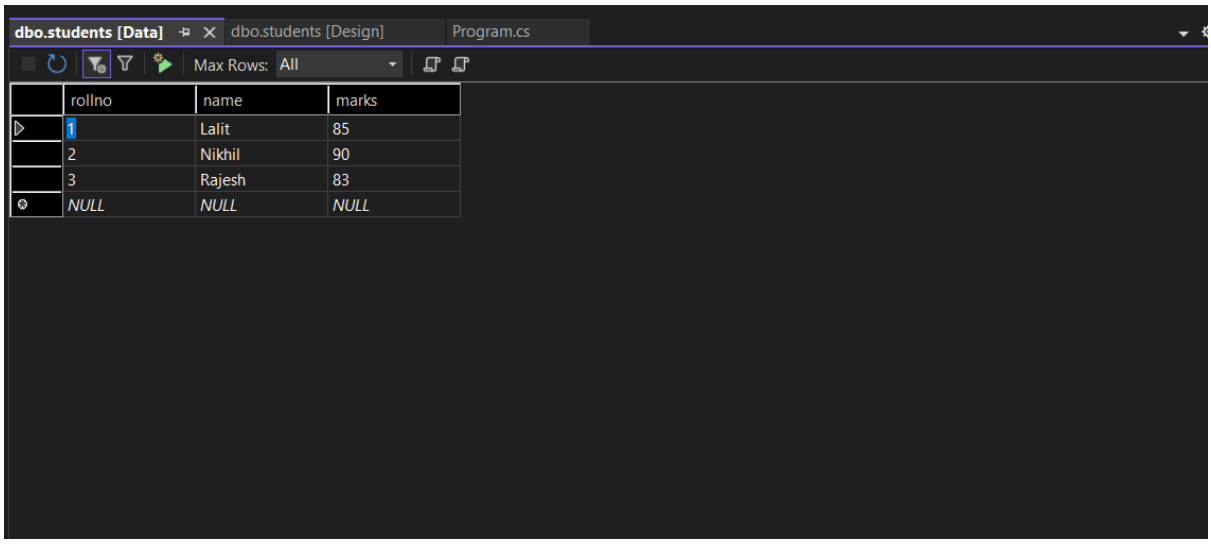
LAB EXAM

MS.Net Technologies

1. **Create a menu driven C# application to interact with the database. You have to insert data into "Students" table and retrieve a list of all the students from the Students table and display their names, roll numbers, and their marks. In the above question, perform update and delete operations as well.**





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Program.cs

MenuDrivencode | MenuDrivenDatabaseProgram.Program | Update()

```
using Microsoft.Data.SqlClient;
using System.Data;

namespace MenuDrivenDatabaseProgram
{
    0 references
    internal class Program
    {
        0 references
        static void Main()
        {
            while (true)
            {
                Console.WriteLine("Menu:");
                Console.WriteLine("1. Update");
                Console.WriteLine("2. Delete");
                Console.WriteLine("3. View Data");
                Console.WriteLine("5. Exit");
                Console.Write("Enter your choice: ");

                string choice = Console.ReadLine();

                switch (choice)
                {
                    case "1":
                        Update();
                        break;
                    case "2":
                        Delete();
                        break;
                    case "4":
                        Console.WriteLine("Exiting...");
                        return;
                    default:
                        Console.WriteLine("Invalid choice. Please try again.");
                        break;
                }

                Console.WriteLine();
            }
        }
    }
```

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```
static void Update()
{
    SqlConnection cn = new SqlConnection();
    cn.ConnectionString = @"Data Source=(localdb)\MSSQLLocalDB;Initial Catalog=Module;
    Integrated Security=True";
    cn.Open();

    try
    {
        Console.Write("Enter the Student rollno ID to update: ");
        int Rollno = int.Parse(Console.ReadLine());

        Console.Write("Enter the new Name: ");
        string newName = Console.ReadLine();

        SqlCommand cmd = new SqlCommand();
        cmd.Connection = cn;
        cmd.CommandType = CommandType.Text;
        cmd.CommandText = "UPDATE students SET name = @NewName WHERE rollno = @Rollno";
        cmd.Parameters.AddWithValue("@NewName", newName);
        cmd.Parameters.AddWithValue("@Rollno", Rollno);


        Console.WriteLine(cmd.ExecuteNonQuery());


    }
```

```
    }
    catch (Exception ex)
    {
        Console.WriteLine(ex.Message);
    }
    finally
    {
        cn.Close();
    }
}
```

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```
static void Delete()
{
    SqlConnection cn = new SqlConnection();
    cn.ConnectionString = @"Data Source=(localdb)\MSSQLLocalDB;Initial Catalog=Module;
     Integrated Security=True";
    cn.Open();

    try
    {
        Console.Write("Enter the student rollno to delete: ");
        int Rollno = int.Parse(Console.ReadLine());

        SqlCommand cmd = new SqlCommand();
        cmd.Connection = cn;
        cmd.CommandType = CommandType.Text;
        cmd.CommandText = "DELETE FROM students WHERE rollno = @Rollno";
        cmd.Parameters.AddWithValue("@Rollno", Rollno);


        Console.WriteLine(cmd.ExecuteNonQuery());

    }
    catch (Exception ex)
    {
        Console.WriteLine(ex.Message);
    }
    finally
    {
        cn.Close();
    }
```

```
11      static void DataReader()
12      {
13          SqlConnection cn = new SqlConnection();
14          cn.ConnectionString = @"Data Source=(localdb)\MSSQLLocalDB;Initial Catalog=Module;
15          Integrated Security=True";
16          cn.Open();
17          try
18          {
19
20              SqlCommand cmd = new SqlCommand();
21              cmd.Connection = cn;
22              cmd.CommandType = CommandType.Text;
23              cmd.CommandText = "select * from students";
24
25              SqlDataReader dr = cmd.ExecuteReader();
26
27              while (dr.Read())
28              {
29
30                  Console.Write(dr["rollno"] + " ");
31                  Console.Write(dr["name"] + " ");
32                  Console.Write(dr["marks"] + " ");
33
34                  Console.WriteLine();
35              }
36              dr.Close();
37
38          }
39          catch (Exception ex)
40          {
```

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```
138                 }
139                 catch (Exception ex)
140                 {
141
142                     Console.WriteLine(ex.Message);
143                 }
144                 finally
145                 {
146                     cn.Close();
147                 }
148             }
149         }
150
                0 references
151         class Students
152         {
                0 references
153             public string name { get; set; }
                0 references
154             public int rollno { get; set; }
                0 references
155             public int marks { get; set; }
156         }
157     }
```

Update and read

```
Menu:
1. Update
2. Delete
3. View Data
5. Exit
Enter your choice: 1
Enter the Student rollno ID to update: 3
Enter the new Name: Rajesh
1

Menu:
1. Update
2. Delete
3. View Data
5. Exit
Enter your choice: 3
1 Lalit 85
2 Nikhil 90
3 Rajesh 83

Menu:
1. Update
2. Delete
3. View Data
5. Exit
Enter your choice:
E:\CDACTVM\.NET\Lab\Moduleend\Moduleend\MenuDrivencode\bin\Debug\net7.0\MenuDrivencode.exe (process 21364) exited with c
ode -1.
```

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Delete and read

```
Menu:
1. Update
2. Delete
3. View Data
5. Exit
Enter your choice: 2
Enter the student rollno to delete: 3
1

Menu:
1. Update
2. Delete
3. View Data
5. Exit
Enter your choice: 3
1 Lalit 85
2 Nikhil 90

Menu:
1. Update
2. Delete
3. View Data
5. Exit
Enter your choice:
```

```
using Microsoft.Data.SqlClient;
using System.Data;

namespace MenuDrivenDatabaseProgram
{
    internal class Program
    {
        static void Main()
        {
            while (true)
            {
                Console.WriteLine("Menu:");
                Console.WriteLine("1. Update");
                Console.WriteLine("2. Delete");
                Console.WriteLine("3. View Data");
                Console.WriteLine("5. Exit");
                Console.Write("Enter your choice: ");

                string choice = Console.ReadLine();

                switch (choice)
                {
                    case "1":
                        Update();
                        break;
                    case "2":
                        Delete();
                        break;
                    case "3":
                        DataReader();
                        break;
                    case "4":
                        Console.WriteLine("Exiting...");
                        return;
                    default:
                        Console.WriteLine("Invalid choice. Please try again.");
                        break;
                }

                Console.WriteLine();
            }
        }

        static void Update()
        {
            SqlConnection cn = new SqlConnection();
            cn.ConnectionString = @"Data Source=(localdb)\MSSQLLocalDB;Initial Catalog=Module;
```

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```
        Integrated Security=True";
        cn.Open();

        try
        {
            Console.Write("Enter the Student rollno ID to update: ");
            int Rollno = int.Parse(Console.ReadLine());

            Console.Write("Enter the new Name: ");
            string newName = Console.ReadLine();

            SqlCommand cmd = new SqlCommand();
            cmd.Connection = cn;
            cmd.CommandType = CommandType.Text;
            cmd.CommandText = "UPDATE students SET name = @NewName WHERE rollno = @Rollno";
            cmd.Parameters.AddWithValue("@NewName", newName);
            cmd.Parameters.AddWithValue("@Rollno", Rollno);


            Console.WriteLine(cmd.ExecuteNonQuery());


        }
        catch (Exception ex)
        {
            Console.WriteLine(ex.Message);
        }
        finally
        {
            cn.Close();
        }
    }
    static void Delete()
    {
        SqlConnection cn = new SqlConnection();
        cn.ConnectionString = @"Data Source=(localdb)\MSSQLLocalDB;Initial Catalog=Module;
          Integrated Security=True";
        cn.Open();

        try
        {
            Console.Write("Enter the student rollno to delete: ");
            int Rollno = int.Parse(Console.ReadLine());

            SqlCommand cmd = new SqlCommand();
            cmd.Connection = cn;
            cmd.CommandType = CommandType.Text;
            cmd.CommandText = "DELETE FROM students WHERE rollno = @Rollno";
            cmd.Parameters.AddWithValue("@Rollno", Rollno);


            Console.WriteLine(cmd.ExecuteNonQuery());

        }
        catch (Exception ex)
        {
            Console.WriteLine(ex.Message);
        }
        finally
        {
            cn.Close();
        }
    }
    static void DataReader()
    {
        SqlConnection cn = new SqlConnection();
        cn.ConnectionString = @"Data Source=(localdb)\MSSQLLocalDB;Initial Catalog=Module;
       Integrated Security=True";
        cn.Open();
        try
        {

            SqlCommand cmd = new SqlCommand();
            cmd.Connection = cn;
            cmd.CommandType = CommandType.Text;
```

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```
                cmd.CommandText = "select * from students";

                SqlDataReader dr = cmd.ExecuteReader();

                while (dr.Read())
                {

                    Console.Write(dr["rollno"] + " ");
                    Console.Write(dr["name"] + " ");
                    Console.Write(dr["marks"] + " ");

                    Console.WriteLine();
                }
                dr.Close();

            }
            catch (Exception ex)
            {

                Console.WriteLine(ex.Message);
            }
            finally
            {
                cn.Close();
            }
        }
    }

    class Students
    {
        public string name { get; set; }
        public int rollno { get; set; }
        public int marks { get; set; }
    }
}
```

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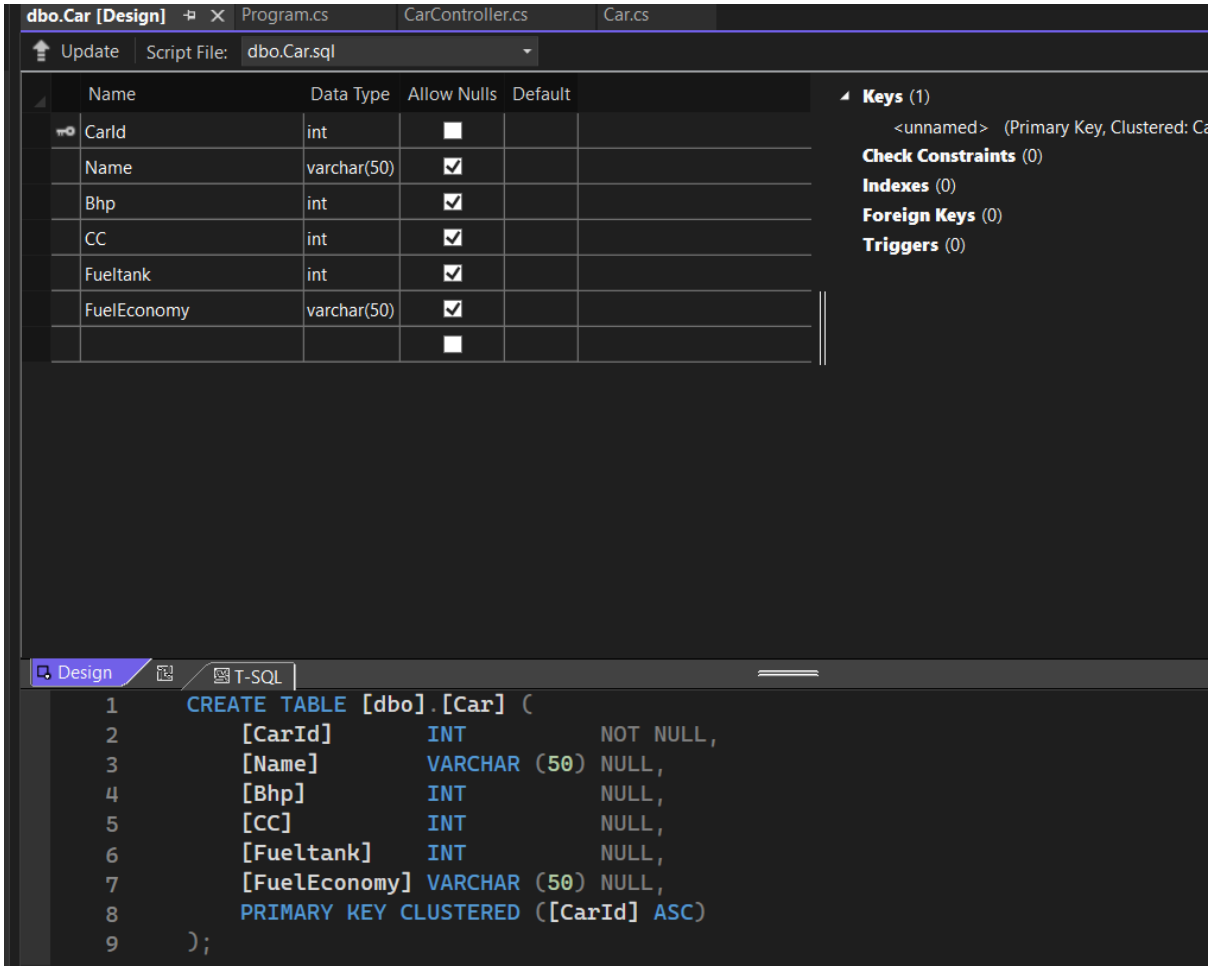
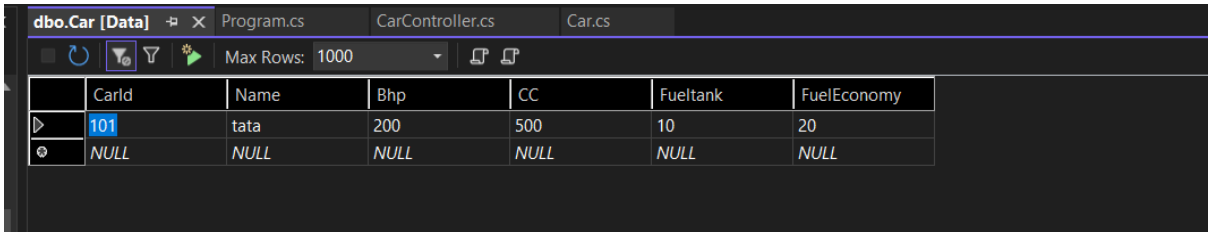
2. **Create a model class named Car. Add an Index by using model binding, perform create, read update and Delete operations for details such as CarId, Name, bhp, cc, fuel tank and fuelEconomy.**





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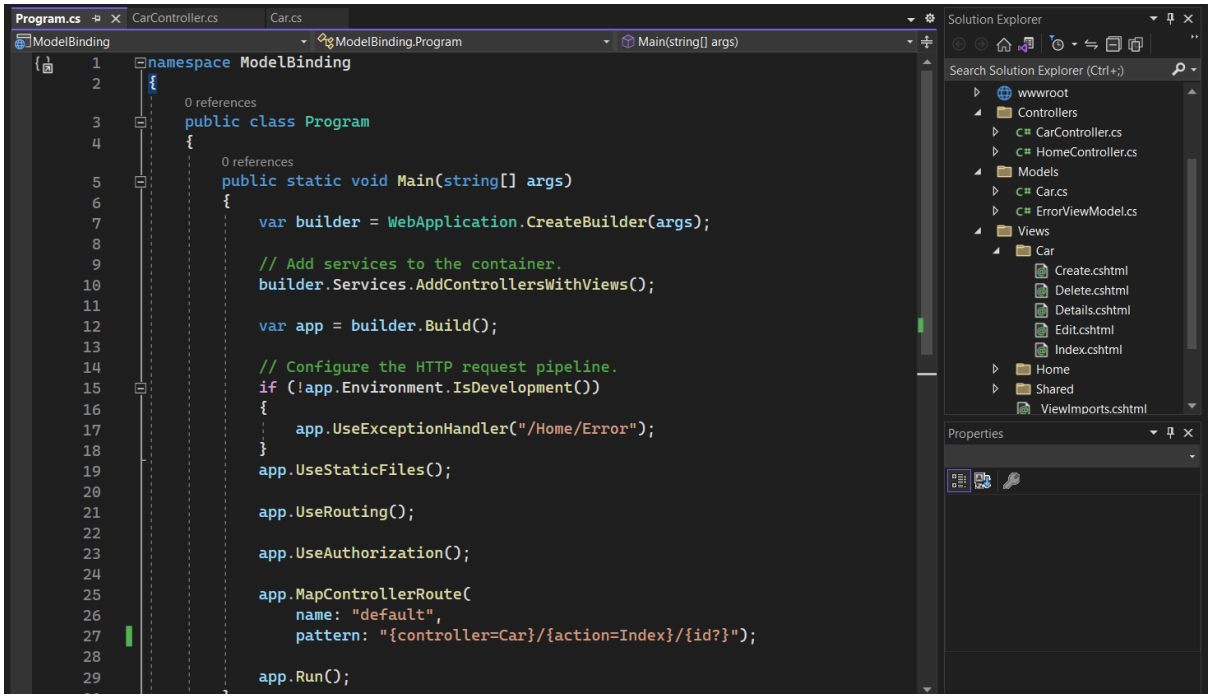

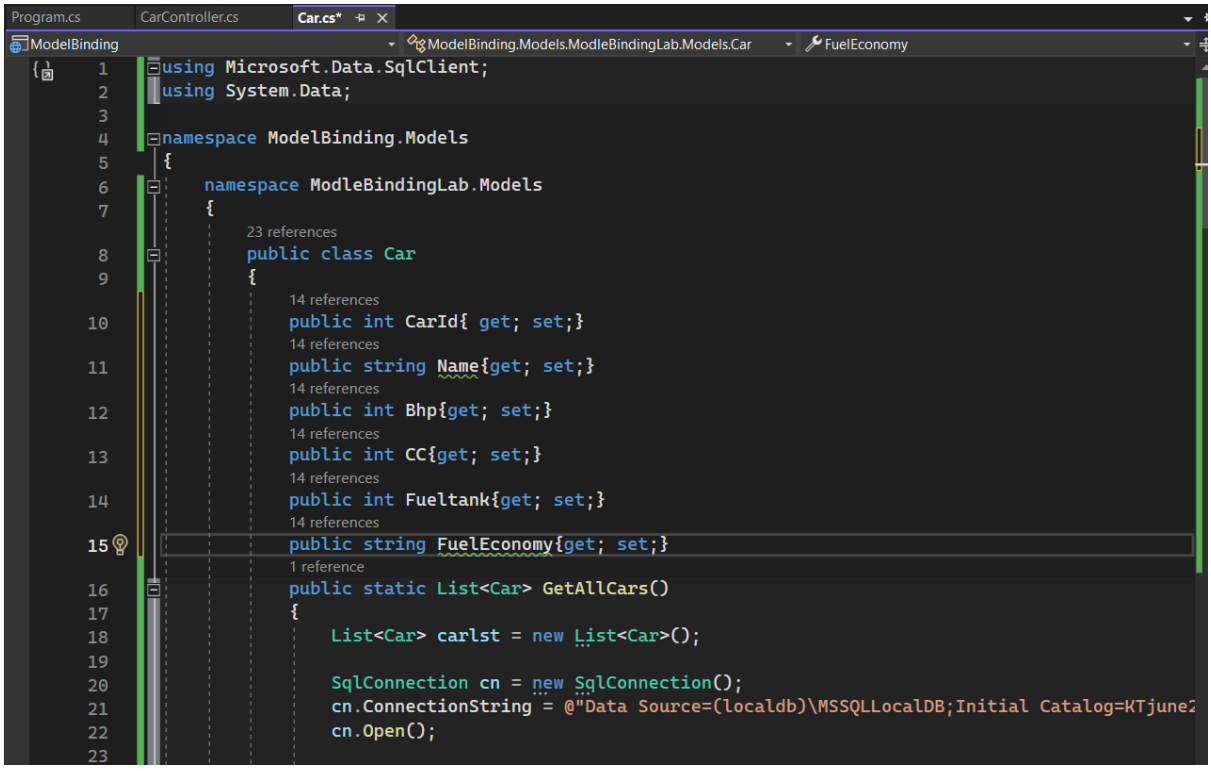

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```
Program.cs  CarController.cs  Car.cs*
ModelBinding  ModelBinding.Models.ModleBindingLab.Models.Car  GetAllCars()
24              try
25              {
26                  SqlCommand cmd = new SqlCommand();
27                  cmd.Connection = cn;
28                  cmd.CommandType = CommandType.Text;
29                  cmd.CommandText = "SELECT * FROM Car";
30
31                  SqlDataReader dr = cmd.ExecuteReader();
32
33                  while (dr.Read())
34                  {
35                      Car cr = new Car();
36                      {
37                          cr.CarId = Convert.ToInt32(dr["CarId"]);
38                          cr.Name = dr["Name"].ToString();
39                          cr.Bhp = Convert.ToInt32(dr["Bhp"]);
40                          cr.CC = Convert.ToInt32(dr["CC"]);
41                          cr.Fueltank = Convert.ToInt32(dr["Bhp"]);
42                          cr.FuelEconomy = dr["Name"].ToString();
43                      };
44
45                      carlst.Add(cr);
46                  }
47                  foreach (Car c in carlst)
48                  {
49                      Console.WriteLine($"CarId: {c.CarId}");
50                      Console.WriteLine($"Name: {c.Name}");
51                      Console.WriteLine($"Bhp: {c.Bhp}");
52                      Console.WriteLine($"CC: {c.CC}");
53                      Console.WriteLine($"Fueltank: {c.Fueltank}");
54                      Console.WriteLine($"FuelEconomy: {c.FuelEconomy}");
```

```
Program.cs  CarController.cs  Car.cs*
ModelBinding  ModelBinding.Models.ModleBindingLab.Models.Car  GetAllCars()
48                  {
49                      Console.WriteLine($"CarId: {c.CarId}");
50                      Console.WriteLine($"Name: {c.Name}");
51                      Console.WriteLine($"Bhp: {c.Bhp}");
52                      Console.WriteLine($"CC: {c.CC}");
53                      Console.WriteLine($"Fueltank: {c.Fueltank}");
54                      Console.WriteLine($"FuelEconomy: {c.FuelEconomy}");
55
56                      Console.WriteLine();
57                  }
58                  dr.Close();
59              }
60              catch (Exception ex)
61              {
62                  Console.WriteLine(ex.Message);
63              }
64              finally
65              {
66                  cn.Close();
67              }
68
69              return carlst;
70          }
71      }
72  }
73  }
74
```

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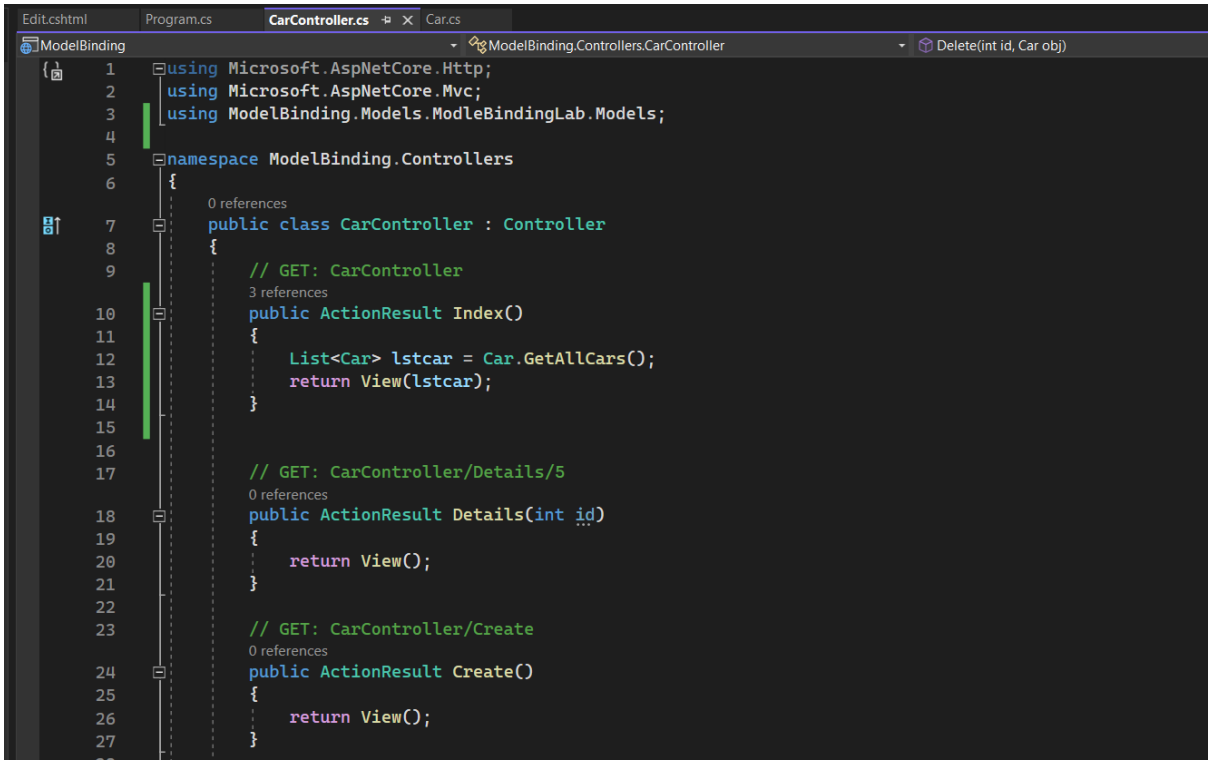
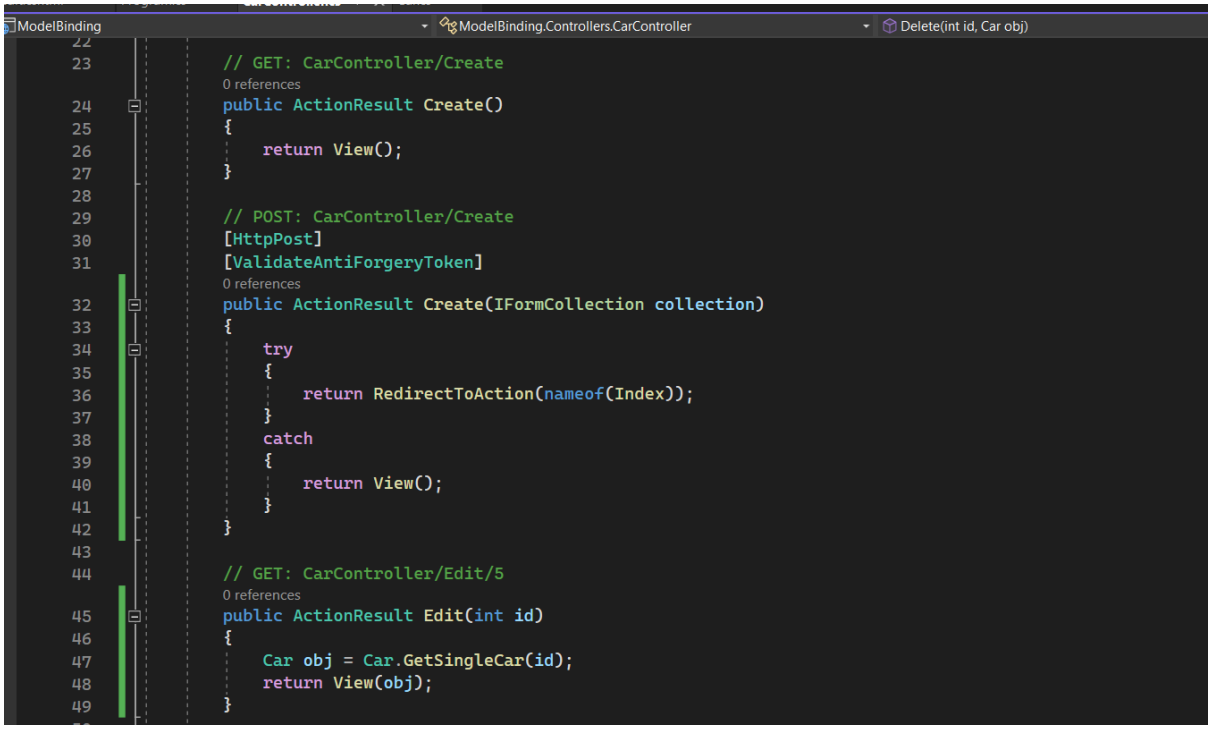



```
using Microsoft.AspNetCore.Http;
using Microsoft.AspNetCore.Mvc;
using ModelBinding.Models.ModleBindingLab.Models;

namespace ModelBinding.Controllers
{
    0 references
    public class CarController : Controller
    {
        // GET: CarController
        3 references
        public ActionResult Index()
        {
            List<Car> lstcar = Car.GetAllCars();
            return View(lstcar);
        }


        // GET: CarController/Details/5
        0 references
        public ActionResult Details(int id)
        {
            return View();
        }

        // GET: CarController/Create
        0 references
        public ActionResult Create()
        {
            return View();
        }
```




```
        // GET: CarController/Create
        0 references
        public ActionResult Create()
        {
            return View();
        }

        // POST: CarController/Create
        [HttpPost]
        [ValidateAntiForgeryToken]
        0 references
        public ActionResult Create(IFormCollection collection)
        {
            try
            {
                return RedirectToAction(nameof(Index));
            }
            catch
            {
                return View();
            }
        }

        // GET: CarController/Edit/5
        0 references
        public ActionResult Edit(int id)
        {
            Car obj = Car.GetSingleCar(id);
            return View(obj);
        }
```

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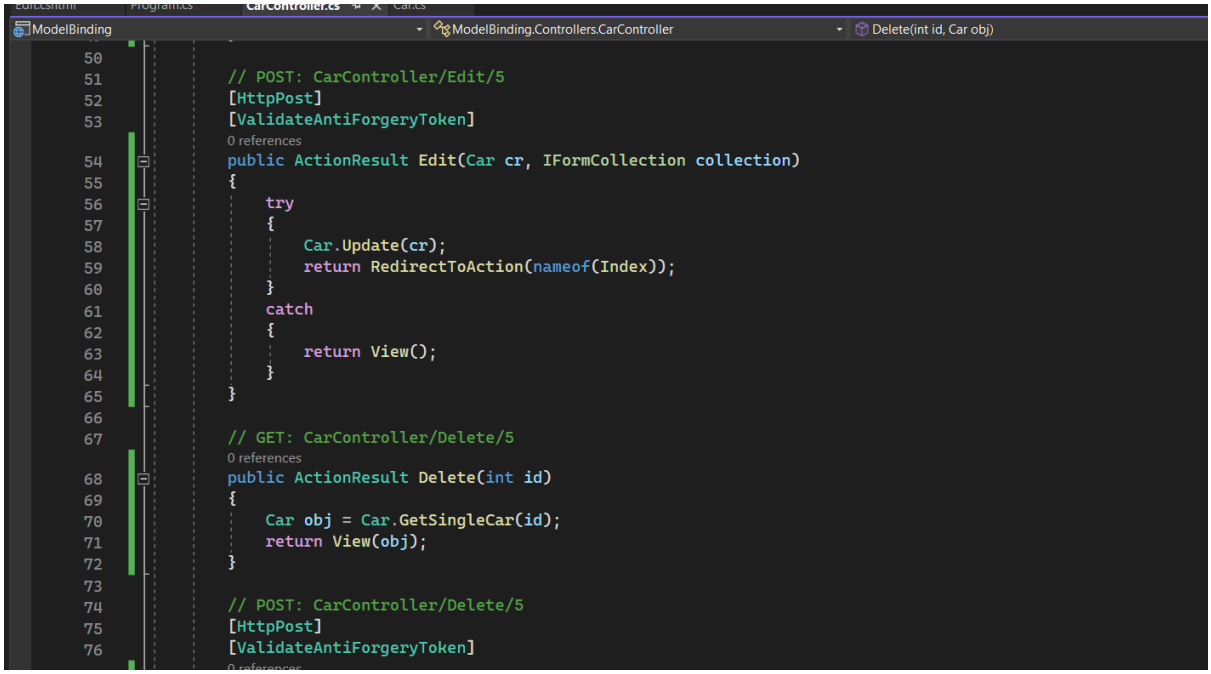
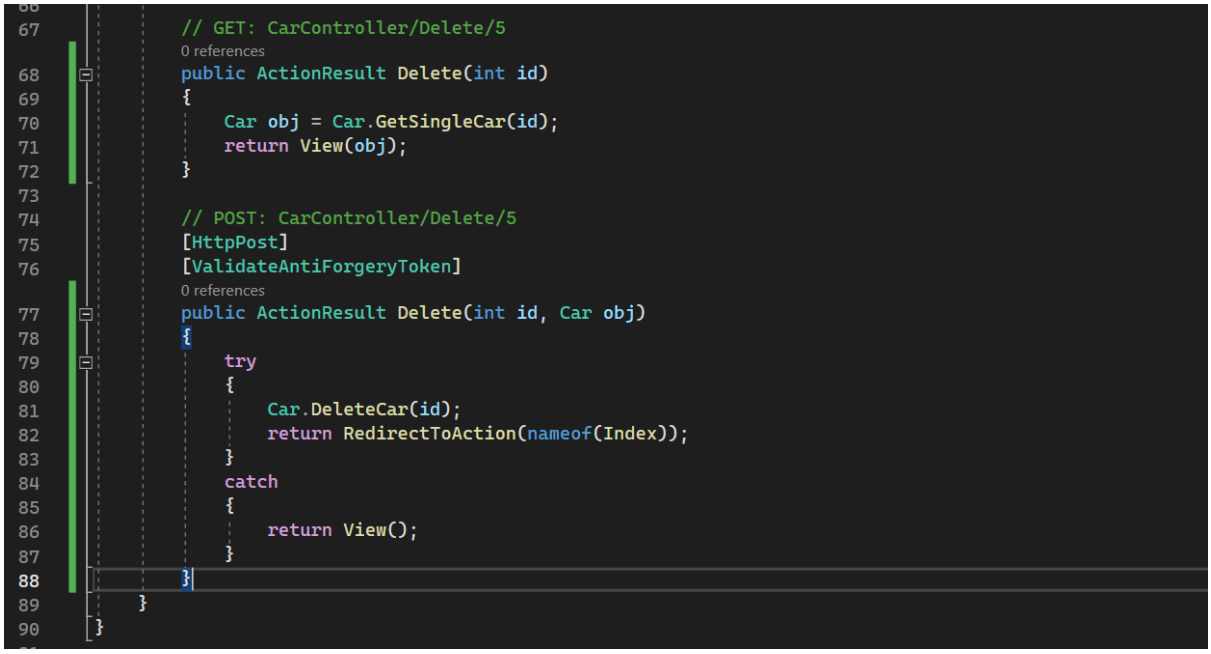



```
50
51          // POST: CarController/Edit/5
52          [HttpPost]
53          [ValidateAntiForgeryToken]
            0 references
54          public ActionResult Edit(Car cr, IFormCollection collection)
55          {
56              try
57              {
58                  Car.Update(cr);
59                  return RedirectToAction(nameof(Index));
60              }
61              catch
62              {
63                  return View();
64              }
65          }
66
67          // GET: CarController/Delete/5
            0 references
68          public ActionResult Delete(int id)
69          {
70              Car obj = Car.GetSingleCar(id);
71              return View(obj);
72          }
73
74          // POST: CarController/Delete/5
75          [HttpPost]
76          [ValidateAntiForgeryToken]
```



```
67          // GET: CarController/Delete/5
            0 references
68          public ActionResult Delete(int id)
69          {
70              Car obj = Car.GetSingleCar(id);
71              return View(obj);
72          }
73
74          // POST: CarController/Delete/5
75          [HttpPost]
76          [ValidateAntiForgeryToken]
            0 references
77          public ActionResult Delete(int id, Car obj)
78          {
79              try
80              {
81                  Car.DeleteCar(id);
82                  return RedirectToAction(nameof(Index));
83              }
84              catch
85              {
86                  return View();
87              }
88          }
89      }
90  }
```

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