Main Function

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


namespace InterfaceExample20dec
{
class Program
{
static void Main(string[] args)
{
int i = 1,opt;
while (i != 0)
{
Console.WriteLine("Choose One Option:\n 1.Start car testing.\n 2.Exit");
opt = Convert.ToInt32(Console.ReadLine());
if (opt == 1)
{
TestTrack.Race(new ProductionRemoteControlCar());
TestTrack.Race(new ExperimentalRemoteControlCar());

var prod = new ProductionRemoteControlCar();
TestTrack.Race(prod);
var exp = new ExperimentalRemoteControlCar();
TestTrack.Race(exp);

Console.WriteLine("Distance travelled by production car :{0}", prod.DistanceTravelled);
Console.WriteLine("Distance travelled by experimental car :{0}", exp.DistanceTravelled);


var prc1 = new ProductionRemoteControlCar();
var prc2 = new ProductionRemoteControlCar();

Random r1 = new Random();
int num1 = r1.Next(10);
int num2 = r1.Next(10);


prc1.NumberOfVictories = num1;
prc2.NumberOfVictories = num2;

var rankings = TestTrack.GetRankedCars(prc1, prc2);

Console.WriteLine("Number Of Victories: " + rankings);
}
else if (opt == 2)
{
Console.WriteLine("Press any key to exit.");
break;
}
else
```

```
Console.WriteLine("Wrong Choice!");
Console.WriteLine("_____");
i++;
}
Console.ReadKey();
}
}
}
```

IRemoteControlCar Interface

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

namespace InterfaceExample20dec
{
   public interface IRemoteControlCar
   {
      int DistanceTravelled { get; }
      void Drive();
   }
}
```

ProductionRemoteControl Class

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

namespace InterfaceExample20dec
{
   public class ProductionRemoteControlCar : IRemoteControlCar
,IComparable<ProductionRemoteControlCar>
   {
      public int DistanceTravelled { get; set; }
      public int NumberOfVictories { get; set; }

      public int CompareTo(ProductionRemoteControlCar other)
      {
         return this.NumberOfVictories.CompareTo(other.NumberOfVictories);
         throw new ArgumentException("Object is not a Production Car");
      }

      public void Drive()
      {
         Random r = new Random();
         int num = r.Next(10);
```

```
            DistanceTravelled = num;
        }


    }
}
```

ExperientalRemoteControlClass

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

namespace InterfaceExample20dec
{
    class ExperimentalRemoteControlCar: IRemoteControlCar
    {
        public int DistanceTravelled { get; set; }
        public int NumberOfVictories { get; set; }
        public void Drive()
        {
            Random r = new Random();
            int num = r.Next(10);
            DistanceTravelled = num;
        }
    }
}
```

TestTrack Class

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

namespace InterfaceExample20dec
{
    static class TestTrack
    {
        public static void Race(IRemoteControlCar carRace)
        {
            carRace.Drive();
        }
        public static int GetRankedCars(ProductionRemoteControlCar
p1,ProductionRemoteControlCar p2)
        {
```

```
        int v=0;
        if(p1.CompareTo(p2)> 0)
        {
           v = p1.NumberOfVictories;
           Console.WriteLine("Rank 1 - pcr1");
           return v;
        }
        else if (p1.CompareTo(p2) < 0)
        {
           v = p2.NumberOfVictories;
           Console.WriteLine("Rank 1 - pcr2");
           return v;
        }
        else
        {
           Console.WriteLine("Same Rank");
           return v;
        }

     }
  }
}
```

Output

```
Choose One Option:
 1.Start car testing.
 2.Exit
1
Distance travelled by production car :5
Distance travelled by experimental car :5
Same Rank
Number Of Victories: 0
_____________________________________________________
Choose One Option:
 1.Start car testing.
 2.Exit
1
Distance travelled by production car :9
Distance travelled by experimental car :9
Rank 1 - pcr1
Number Of Victories: 9
_____________________________________________________
Choose One Option:
 1.Start car testing.
 2.Exit
1
Distance travelled by production car :3
Distance travelled by experimental car :3
Rank 1 - pcr2
Number Of Victories: 7
_____________________________________________________
Choose One Option:
 1.Start car testing.
 2.Exit
```