```
1  //using is a directive
2  //System is a name space
3  //name space is a collection of features that our needs to run
4  using System;
5  using System.Linq;
6  using System.Collections.Generic;
7  //public means accessible anywhere
8  //partial means this class is split over multiple files
9  //class is a keyword and think of it as the outermost level of grouping
10 //:System.Web.UI.Page means our page inherits the features of a Page
11 public class Person
12 {
13     public string Name { get; set; } //define Person class
14 }
15 public class Car
16 {
17     public Person Owner { get; set; } //define Car class, using a field of type Person
18     public string Maker { get; set; }
19 }
20 public partial class _Default : System.Web.UI.Page
21 {
22     protected void Button1_Click(object sender, EventArgs e)
23     {
24         Person per1 = new Person() { Name = "Mark Owens" }; //make three new people
25         Person per2 = new Person() { Name = "Jenny Smith" };
26         Person per3 = new Person() { Name = "John Jenkins" };
27
28         Car car1 = new Car() { Owner = per1, Maker = "Honda" };//make four new cars
29         Car car2 = new Car() { Owner = per2, Maker = "Honda" };
30         Car car3 = new Car() { Owner = per1, Maker = "Toyota" };
31         Car car4 = new Car() { Owner = per2, Maker = "Tesla" };
32
33         //make lists of people and cars
34         List<Person> people = new List<Person> { per1, per2, per3 };
35         List<Car> cars = new List<Car> { car1, car2, car3, car4 };
36
37         //use linq to write a query that joins the two lists by car Owner
38         //here, the type of var is an enumerable list of anonymous data types
39         var carsWithOwners = from person in people
40                              join car in cars on person equals car.Owner
41                              select new { OwnerName = person.Name, CarMake = car.Maker };
42
43         //foreach loops iterates over carsWithOwners
44         foreach(var ownedCar in carsWithOwners)
45         {
46             sampLabel.Text += $"<br>Owner={ownedCar.OwnerName}      Car Make=
                 {ownedCar.CarMake}";
47         }
48
49     }
50 }
51
52
```