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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.Collections.Generic;
6 using System.Linq;
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 partial class _Default : System.Web.UI.Page
12 {
13     protected void Button1_Click(object sender, EventArgs e)
14     {
15         IEnumerable<int> scores = new int[] { 45, 98, 99, 78, 89, 87, 77, 67, 71, 81 }; //array of integers
16         //line 17 below selects all scores 90 or above, and averages them, giving back a double value
17         var goodStudentAverage = (from score in scores where score >= 90 select score).Average();
18         //line 19 below displays the average
19         sampLabel.Text = $"<br>The average for great students is {goodStudentAverage}";
20         //line 21 below selects all students below 70 and 80, and counts them
21         var averageStudentCount = scores.Where(grade => 70 <= grade && grade < 80).Count();
22         //line 23 below displays the student count
23         sampLabel.Text += $"<br>There are {averageStudentCount} average students.";
24         //lines 25 and 26 create two new lists with initializer lists
25         List<int> firstStudent = new List<int> { 90, 89, 92 };
26         List<int> secondStudent = new List<int> { 78, 81, 79 };
27         //line 28 creates a list of lists
28         List<List<int>> classList = new List<List<int>>();
29         classList.Add(firstStudent);
30         classList.Add(secondStudent);
31         //line 32 below find the average for each list, and stores the averages
32         //so avgPerStudent is of type IEnumerable
33         var avgPerStudent = classList.Select(student => student.Average());
34         //lines 35-38 display the averages
35         foreach(var studentAvg in avgPerStudent)
36         {
37             sampLabel.Text += $"<br>Average grade={studentAvg}";
38         }
39     }
40 }
41
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```