|  |
| --- |
| using System; |
|  | using System.Collections; |
|  |  |
|  | namespace Exercises |
|  | { |
|  | class Program |
|  | { |
|  | static void Main(string[] args) |
|  | { |
|  | switch (GetInput("Do you want to run Exercise 1, 2, or 3? ")) |
|  | { |
|  | case 1: |
|  | Exercise1(); |
|  | break; |
|  | case 2: |
|  | Exercise2(); |
|  | break; |
|  | case 3: |
|  | Exercise3(); |
|  | break; |
|  | default: |
|  | Console.WriteLine("That wasn't 1, 2, or 3. Maybe next time."); |
|  | break; |
|  | } |
|  | } |
|  | private static int GetInput(string s) |
|  | { |
|  | do |
|  | { |
|  | try |
|  | { |
|  | Console.Write(s); |
|  | int value = int.Parse(Console.ReadLine()); |
|  | if (value >= 0 && value <= 100) |
|  | { |
|  | return value; |
|  | } |
|  | else Console.WriteLine("Enter a value between 0 and 100."); |
|  | } |
|  | catch (Exception) |
|  | { |
|  | Console.WriteLine("The value you entered was not an integer."); |
|  | } |
|  | } while (true); |
|  | } |
|  | private static void Exercise1() |
|  | { |
|  | Console.WriteLine("This Exercise accepts 10 test scores between 0-100 and returns the average score and corresponding letter grade."); |
|  | ArrayList testScores = new ArrayList(); |
|  | int testNums = 10; |
|  | for (int i = 0; i < testNums; i++) |
|  | { |
|  | testScores.Add(GetInput("Enter a test score: ")); |
|  | } |
|  | Results(testScores); |
|  | } |
|  | private static void Exercise2() |
|  | { |
|  | Console.WriteLine("This Exercise accepts test scores between 0 - 100 and returns the average score and corresponding letter grade."); |
|  | ArrayList testScores = new ArrayList(); |
|  | int testNums = GetInput("How many test scores do you want to enter?: "); |
|  | for (int i = 0; i < testNums; i++) |
|  | { |
|  | testScores.Add(GetInput("Enter a test score: ")); |
|  | } |
|  | Results(testScores); |
|  | } |
|  | private static void Exercise3() |
|  | { |
|  | Console.WriteLine("This Exercise accepts test scores between 0-100 and returns the average score and corresponding letter grade."); |
|  | ArrayList testScores = new ArrayList(); |
|  | while (true) |
|  | { |
|  | try |
|  | { |
|  | Console.Write("Enter a score or N to stop: "); |
|  | string more = Console.ReadLine(); |
|  | if (more.ToLower() == "n") |
|  | break; |
|  | else |
|  | { |
|  | int value = int.Parse(more); |
|  | if (value >= 0 && value <= 100) |
|  | { |
|  | testScores.Add(value); |
|  | } |
|  | else Console.WriteLine("Enter a value between 0 and 100."); |
|  | } |
|  | } |
|  | catch (Exception) |
|  | { |
|  | Console.WriteLine("The value you entered was invalid."); |
|  | } |
|  |  |
|  | } |
|  | Results(testScores); |
|  | } |
|  | private static void Results(ArrayList a) |
|  | { |
|  | int total = 0; |
|  | int num = 0; |
|  | foreach (int score in a) |
|  | { |
|  | total += score; |
|  | ++num; |
|  | } |
|  | int average = total / num; |
|  | string grade; |
|  | if (average >= 90) |
|  | grade = "A"; |
|  | else if (average >= 80) |
|  | grade = "B"; |
|  | else if (average >= 70) |
|  | grade = "C"; |
|  | else if (average >= 60) |
|  | grade = "D"; |
|  | else |
|  | grade = "F"; |
|  | Console.WriteLine($"The average test score is {average}, the grade is {grade}"); |
|  | } |
|  | } |
|  | } |