COMP1202/CRN:48954/OsilamaKadiri

1. namespace labtest1
2. {
3. class question 1
4. {
5. static void Main(argv[], args){
6. /\* Write an application that computes the area of a circle and rectangle. Dis-
7. play a menu showing the tow options. Allow users to input which figure they want to see
8. calculated. Based on the value inputted, prompt for appropriate dimensions. (4 points)
9. Perform the calculations using the following formulas:
10. Area of a circle = pi ∗ radius2
11. Area of a rectangle = length ∗ width
12. \*/

15. Console.WriteLine("Choose an option:");
16. Console.WriteLine("1. Calculate the area of a circle");
17. Console.WriteLine("2. Calculate the area of a rectangle");
18. Console.WriteLine("3. Exit");
19. Console.Write("Enter your choice: ");
20. int choice;
21. if (!int.TryParse(Console.ReadLine(), out choice))
22. {
23. Console.WriteLine("Invalid input. Please enter a number.");
24. continue;
25. }
26. switch(choice){
28. case 1:
29. CalculateCircleArea();
30. break;
31. case 2:
32. CalculateRectangleArea();
33. break;
34. case 3:
35. Console.WriteLine(“Exit”);
36. break;
37. default:
38. Console.WriteLine("Invalid choice. Please enter a valid option.");
39. break;
40. }
41. }
42. static void CalculateCircleArea()
43. {
44. Console.Write("Enter the radius of the circle: ");
45. double radius;
46. if (!double.TryParse(Console.ReadLine(), out radius) || radius <= 0)
47. {
48. Console.WriteLine("Invalid input. Please enter a valid radius.");
49. return;
50. }
51. double area = Math.PI \* radius \* radius;
52. Console.WriteLine($"The area of the circle with radius {radius} is: {area}");
53. }
54. static void CalculateRectangleArea()
55. {
56. Console.Write("Enter the length of the rectangle: ");
57. double length;
58. if (!double.TryParse(Console.ReadLine(), out length) || length <= 0)
59. {
60. Console.WriteLine("Invalid input. Please enter a valid length.");
61. return;
62. }
63. Console.Write("Enter the width of the rectangle: ");
64. double width;
65. if (!double.TryParse(Console.ReadLine(), out width) || width <= 0)
66. {
67. Console.WriteLine("Invalid input. Please enter a valid width.");
68. return;
69. }
70. double area = length \* width;
71. Console.WriteLine($"The area of the rectangle with length {length} and width {width} is: {area}");
72. }
73. }
74. }
75. }

2. namespace labtest1

{

    class Question 2

{

    static void Main(argv[], args()){

        int randNum = new Random(1).Next(0,1000);

        // Initialize variables

        int minValue = int.MaxValue;

        // Generate 100 random numbers and find the smallest value

        for (int i = 0; i < 100; i++)

        {

              randNum = new Random(1).Next(0,1000);// Generates a random number between 0 and 1000

            // Check if the current random number is smaller than the smallest value found so far

            if (randNum < minValue)

            {

                minValue = randNum; // Update the smallest value

            }

        }

        // Display the smallest value

        Console.WriteLine($"The smallest value among 100 random numbers is: {minValue}");

    }

}

}

3.

Namespace Labtest1 {

internal class question3

{

    static void Main(string[] args)

    {

        Console.WriteLine("Enter scores to be averaged. Enter a negative number to terminate input.");

        double sum = 0;

        int count = 0;

        while (true)

        {

            Console.WriteLine("Enter a score: ");

            double score;

            if (!double.TryParse(Console.ReadLine(), out score))

            {

                Console.WriteLine("Invalid input. Please enter a valid score.");

                continue;

            }

            if (score < 0)

            {

                if (count == 0)

                {

                    Console.WriteLine("At least one score must be entered to calculate the average.");

                }

                else

                {

                    break;

                }

            }

            else

            {

                sum += score;

                count++;

            }

        }

        if (count > 0)

        {

            double average = sum / count;

            Console.WriteLine($"The average of the {count} scores entered is: {average}");

        }

    }

}

}