using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

/// <summary>

/// File name: PTangAssignment2/Program.cs

///

/// Purpose: Create a C# console application determining the correct type of a triangle, then use Git Bash

/// for version control, NUnit for unit testing, then explain the Control Flow Graph and Cyclomatic

/// Complexity in a word document

///

/// Created by Patrick Tang

///

/// History:

/// February 14, 2017 - Created

/// - Added more code in Program.cs and TriangleSolver.cs

/// February 22, 2017 - Added comments and finished program

/// </summary>

namespace PTangAssignment2

{

class Program

{

/// <summary>

/// Frontend of the console application for TriangleSolver.cs

/// </summary>

/// <param name="args">Console Application</param>

public static void Main(string[] args)

{

//

// userSelection variable is for the menu in if statement, default is 0

//

int userSelection = 0;

//

// do-while loop that will continue until the user inputs 2 to exit program. User may choose

// option 1 or option 2 in the menu displayed. If option 1 is selected, it will analyze the

// three inputs in TriangleSolver.cs and displays if the triangle is "Equilateral", "Isosceles",

// "Scalene" or "not a valid triangle". (See TriangleSolver.cs for more information)

//

do

{

Console.WriteLine("Please make a selection:");

Console.WriteLine("1. Enter triangle dimensions");

Console.WriteLine("2. Exit");

try

{

userSelection = int.Parse(Console.ReadLine());

if (userSelection == 1)

{

//

// Small drawing to determine which side is what.

// NOTE: Not to scale

//

Console.WriteLine();

Console.WriteLine(" \*");

Console.WriteLine(" \*\*");

Console.WriteLine("A \* \* C");

Console.WriteLine(" \* \*");

Console.WriteLine(" \*\*\*\*\*");

Console.WriteLine(" B");

Console.WriteLine("\n\*\*\*Not to scale\*\*\*\n");

Console.WriteLine("Please enter a number for side A, side B, and side C");

int sideAInput = EnterInput();

int sideBInput = EnterInput();

int sideCInput = EnterInput();

Console.WriteLine(TriangleSolver.Analyze(sideAInput, sideBInput, sideCInput));

}

else if (userSelection == 2)

{

Console.WriteLine("Exiting program...");

}

else

{

Console.WriteLine("Please select option 1 or option 2 only.");

}

}

catch (Exception)

{

Console.WriteLine("Invalid input. Please select a valid option.");

}

} while (userSelection != 2);

}

/// <summary>

/// Called when the program starts with option 1

/// </summary>

/// <returns>Users input for length of sides for TriangleSolver.cs</returns>

private static int EnterInput()

{

int enterInput;

while (!int.TryParse(Console.ReadLine(), out enterInput) || enterInput < 1)

{

Console.WriteLine("Please enter a numeric value greater than 0. Try again.");

}

return enterInput;

}

}

}