using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

/// <summary>

/// File name: PTangAssignment3/ProjectA/Program.cs

///

/// Purpose: Create a C# console application where a user can convert time between seconds, minutes,

/// hours and days. Different projects will have different stubs and integration testing.

///

/// Specifics: Project A will have stubs for ModifyInputStub() and GetMultiplierStub()

/// Project B will have a stub for GetMultiplerStub()

/// Project C will have no stubs

/// PTangAssignment3 will have the full program

///

/// Created by Patrick Tang

///

/// History:

/// March 22, 2017 - Created and finished

/// March 23, 2017 - Added comments

/// </summary>

namespace ProjectA

{

class Program

{

/// <summary>

/// The UI of the program. It will start by asking the user which option (userSelection) they would like

/// to choose (Option 1 = Convert time and Option 2 = Exiting program). Then it will ask the user

/// what the value (value) they would like to convert from (convertFrom) and convert to (convertTo).

/// After that is done, it will go to TimeConversion.cs to do the calculations and modify the user input

/// (See TimeConversion.cs for more details). This will continue until the user selects Option 2 to exit

/// the program.

/// </summary>

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

public static void Main(string[] args)

{

int userSelection = 0;

double value;

string convertFrom;

string convertTo;

do

{

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

Console.WriteLine("1. Convert time");

Console.WriteLine("2. Exit");

try

{

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

if (userSelection == 1)

{

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

value = ValueInput();

Console.WriteLine("What would you like to convert from? (seconds, minutes, hours, days)");

convertFrom = Console.ReadLine();

Console.WriteLine("What would you like to convert to? (seconds, minutes, hours, days)");

convertTo = Console.ReadLine();

Console.WriteLine("Convert " + convertFrom + " to " + convertTo + ": " +

TimeConversion.Convert(value, convertFrom, convertTo));

}

else if (userSelection == 2)

{

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

}

else

{

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

}

}

catch (FormatException)

{

Console.WriteLine("Invalid input. Please try again.");

}

catch (ArgumentException ex)

{

Console.WriteLine(ex.Message);

}

} while (userSelection != 2);

}

/// <summary>

/// The ValueInput method will parse a positive value that the user inputs, otherwise there will be an error

/// that will show up until it is parsed correctly.

/// </summary>

/// <returns>A positive valueInput</returns>

private static double ValueInput()

{

double valueInput;

while (!double.TryParse(Console.ReadLine(), out valueInput) || valueInput <= 0.0)

{

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

}

return valueInput;

}

}

}