Lab for week 2

Create a console program to display sin, cos, or tan for an angle. The angle will be given in degrees.

In Visual Studio, create a new console application. All coding can be done in the Main(…) method, but feel free to refactor your code into additional methods.

The user input will be given in the form:

Trig:␣sin␣30

(Prompt) (user input)

STEPS: (These are hints. You are not required to follow them)

Hint: get each step working before going onto the next step.

1. Display prompt "Trig:" to console. Add a `Console.ReadKey()` near the end of the program to keep the console from disappearing.
2. Get a line of input from user and store into a string variable.
   ex: `string input = Console.ReadLine()`
3. Use the string instance method "Split" to split the string into a string array
   ex: `string[] parts = input.Split(' ');`
4. If the string array does not contain 2 elements, notify the user of bad input and quit.
   ex:
```
if (parts.Length != 2)
{
    Console.WriteLine("bad input");
    return;
}
```
5. Convert the 2nd element in the split string array into a double variable. If this is unsuccessful, display an error message and quit.
   ex:
```
double degree;
if (double.TryParse(parts[1], out degree) == false)
{
    // display error and quit similar to step 4
}
```
6. Convert the degree to radians
   ex: `double radians = degree * ( Math.PI / 180.0 )`
7. Take the first element (the trig operator) in the split string and put it into a string variable (trimmed and lowercase).
   ex: `string trig = parts[0].Trim().ToLower();`
8. Using an if/elseif/else statement or a switch statement, display the final trig value.
   ex:
```
switch (trig)
{
    case "sin": Console.WriteLine/Math.Sin(degree)); break;
    //case for cos
    //case for tan
    default: //display an error message
}
```

When you are done, demo this to me. I will check you off as complete.

**If you are stuck, I can give you a hint to move you forward.