WA2

WEEKLY ASSIGNMENT 2
BME 121, FALL 2016

Due Wed Sep 21 at 4:30 pm

ASSIGNMENT

Write a C# program to perform as a simple calculator.

1. Display a title.
2. Prompt the user to enter a number or constant (the constants are e and pi).
3. Prompt the user to enter an operator (from the set + - * / % cos log sqrt).
4. If the operator is not binary (i.e., not one of + - * / %), display the answer.
5. If the operator is binary, prompt the user to enter another number or constant.
6. Display the answer.

A sample of the program in action can be run from the file SampleSolution.zip. Download and unzip the file. Open a command promt in the resulting directory and type "dotnet .\wa2.dll" (Windows) or "dotnet ./wa2.dll" (Linux/Mac).

This program will require selection ("if" statements) and string comparisons ("==" operator).

The expression "myString == yourString" will evaluate to a boolean (true/false) result of "true" if the strings are identical or "false" otherwise. There is an inverse operator "!=" which will result in "true" if the strings are not identical.

The block-structured statement

```
if( myTest )
{
    statementsForTrueTest;
    statementsForTrueTest;
}
else
{
    statementsForFalseTest;
    statementsForFalseTest;
}
```

allows you to check whether some "myTest" expression evaluates to "true" or "false" and then performs only one of the set of statements from the two attached blocks (the "true"/"if" block or the "false"/"else" block). After that, the program continues with the statement after the closing brace.

The operators "||" and "&&" are the logical combiners "or" and "and" respectively so, for example you can write a test such as

```
myOperator == "+" || myOperator == "-"
```

to check whether the string stored in a string variable called "myOperator" is either a plus sign or a minus sign. There's also a logical "not" available using the operator "!" (exclamation mark/bang symbol) applied in front of something in the same way that "-" is used for negative numbers. As always, you can use parentheses to force order of evaluation or just to enhance reading clarity.

C# has about 100 so-called keywords that you can't use as variable names because they are already defined to mean something in the language. Unfortunately for this assignment, one of the keywords is "operator".

SUBMISSION

Name your C# program file as wa2.cs. Use Bme121.Wa2 as your namespace identifier. Include the standard doc-comment block. Submit wa2.cs at the following url.

https://georgefreeman.ca/fileuploader