# PE3 – Variables and Expressions

**Due Thursday 27-Aug-2020 by 11:59pm**

1. To refer to the name "great" from within the "fabulous" namespace, you would use the scope resolution operator (::) to access the "great" name from the "smashing" namespace within the "super" namespace.
2. The following are not legal variable names:

* 99Flake: variable names cannot start with a number
* iLike#Tags: variable names cannot contain special characters other than \_
* Factorial!: variable names cannot contain special characters such as !
* black&white: variable names cannot contain special characters such as &

1. The string "supercalifragilisticexpialidocious" is not too big to fit in a string variable. The maximum size of a string variable depends on the specific programming language and platform being used. In most cases, a string variable can hold a value of any length, as long as there is enough memory available.
2. The steps involved in the computation of the expression "resultVar += var1 \* var2 + var3 % var4 / var5;" are as follows:

* var3 % var4 is computed first, as the modulus operator has higher precedence than the division operator.
* var3 % var4 is then divided by var5.
* The result of step 1 and step 2 is then multiplied by var1.
* The result of step 3 is then added to var2.
* The result of step 4 is then added to the current value of resultVar, using the += operator.

1. <https://github.com/yw4595/ProductCalculator.git>

* compiler: a program that converts code written in a high-level programming language, such as C# or Java, into machine code that can be executed by a computer. It analyses the source code and generates an executable file that can run on a specific operating system or platform. Compilers are essential for running and testing code written in high-level languages.
* identifier: A name given to a variable, function, or other programming construct.
* primitive data type: A basic data type in a programming language, such as int, float, or char.
* class: A blueprint for an object in object-oriented programming, defining the properties and methods of the object.
* constant: A variable that cannot be reassigned a new value once it is initialized.
* parsing: The process of analyzing and interpreting a string of text or data

1. 19 % 5 = 4
2. 13 / 4 = 3
3. 100 % 20 - 10 = 0
4. 5 + 7 \* 2 - 2 = 16
5. (6 / 4.0 + 3.5) / 2 = 2.75

* The final value of num1 = 10
* The final value of num2 = 2
* The final value of num3 = 1

1. The code is trying to assign a string value to an int variable.
2. One way to fix it would be to convert the string value to an int or double using the Convert.ToInt32() or Convert.ToDouble() function, respectively.
3. qb is not a smartly named C# variable identifier because it is too short and not descriptive of the variable's purpose.
4. Logical error
5. Run-time error
6. Compile-time error
7. Logical error
8. Logical error
9. Compile-time error
10. The output: "Hi thereDavid"
11. The output: "50 plus 25 is 5025" The reason for this is that the + operator is used for both concatenation and addition, and in this case, it is being used for addition first before concatenation. To correct this and produce the desired output of "50 plus 25 is 75", the expression should be changed to: Console.Out.WriteLine("50 plus 25 is " + (50 + 25));

Console.WriteLine("Please type your name below.");

string name = Console.ReadLine();

Console.WriteLine("Your name is " + name + "!");

Console.ReadKey();

1. string myName = " Yanzhi ";
2. *myName += " Wang ";*
3. C# does not find the strings englishNo and spanishNo to be equivalent because they are case-sensitive, meaning that "No" and "no" are treated as two separate and distinct strings.
4. .

Console.WriteLine("Please enter a number with a decimal precision of 2.");

string input = Console.ReadLine();

double parsedInput = double.Parse(input);

double result = parsedInput + 55.0;

Console.WriteLine("Your number plus 55 is: " + result);

1. int userNumber = int.Parse(userInput);

* Comments negatively affect a program’s processing and compilation and facilitate human comprehension. **False**
* Appropriate white space makes a program harder to read. **False**
* A class is a blueprint of an object. **True**
* Multiple objects can be created from one class definition. **True**
* C# is also known as D^b. **False**