## Submission

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Add, Commit and Push the project for #5 to your GitHub repository.

# PE3 – Variables and Expressions

1. In the following code, how would we refer to the name great from code in the namespace fabulous?

namespace fabulous

{

// code in fabulous namespace

}

namespace super

{

namespace smashing

{

// great name defined

}

}

super.smashing.great

1. Which of the following are not legal variable names. Why?

myVariableIsGood

99Flake – invalid; The first character of a variable name must be either a letter, an underscore,or @

\_floor

rit\_tigers

time2GetJiggyWidIt

$bankBalance – Invalid; The first character of a variable name must be either a letter, an underscore,or @

Factorial! – Invalid; Subsequent characters may be letters, underscore characters, or numbers

MAX\_SIZE

black&white – Invalid; Subsequent characters may be letters, underscore characters, or numbers

1. Is the string "supercalifragilisticexpialidocious" too big to fit in a string variable? Why?

There is no upper limit of space to a string, so the string is not too big

1. By considering operator precedence, list the steps involved in the computation of the following expression:

resultVar += var1 \* var2 + var3 % var4 / var5;

1. var1 \* var2
2. var3 % var4
3. (var3 % var4) / var5
4. (var1 \* var2) + ((var3 % var4) / var5)
5. resultVar + ((var1 \* var2) + ((var3 % var4) / var5))
6. Write a console application that obtains four int values from the user and displays the product. Hint: you may recall that the Convert.ToDouble() command was used to covert the input from the console to a double; the equivalent command to convert from a string to an int is Convert.ToInt32().

Enter the URL for your GitHub project here: https://github.com/Sebas11an245/myIGME-201/blob/main/PE3.5/Program.cs

1. *Define the following terms.*

compiler: converts C# code to native code

identifier: displays direction of data flow in UML

primitive data type: predefined

class: holds the code within a namespace

constant: a variable who’s value never changes

parsing: converting a string into a different data type

1. *Evaluate the following expressions using the C# order of precedence.*
2. 19 % 5 Result: 4
3. 13 / 4 Result: 3
4. 100 % 20 – 10 Result: 0
5. 5 + 7 \* 2 – 2 Result: 17
6. (6 / 4.0 + 3.5) / 2 Result: 2.5
7. What are the values for num1, num2, and num3 after the following code is executed? (Hint: Pay attention to data types.)

int num1 = 2;

int num2 = 4;

int num3 = 5;

num1 = num1 \* num3;

num2 = num1 / num2;

num3 = num3 % num2;

The final value of num1 = 10

The final value of num2 = 2

The final value of num3 = 1

1. The following line of code doesn’t compile:

int amountOfMoney = "3.50";

a. What is wrong with the code?

It is trying to implicity convert a string of a double into an int.

b. What is one way you could fix it, and why would you fix it that way?

To fix it, you can remove the quotations marks and change the number to an integer so that it is the correct type.

1. Which of the following are *not* *smartly* *named* C# variable identifiers? Why?
2. qb
   1. you can’t tell what the variable represents without context

b. totalValue

c. theNextValueInTheList

d. player1Score

1. Categorize each of the following errors as either: compile-time error, run-time error, or logical error.
2. Multiplying 2 numbers when you meant to add them
   1. Logical
3. Dividing by zero
   1. Run-time
4. Forgetting a semicolon at the end of a programming statement
   1. Compile
5. Spelling a word wrong in the output
   1. Logical
6. Producing inaccurate results
   1. Logical
7. Typing a { when you should have typed (
   1. Compile
8. What is the output produced by the following code statements. Indicate escape sequences (ie. special characters), if there are any.

Console.Write("Hi there");

Console.Write("David");

Hi thereDavid

1. What is the output produced by the following code statement? Indicate escape sequences (ie. special characters), if there are any.

Console.Out.WriteLine("50 plus 25 is " + 50 + 25);

50 plus 25 is 5025

1. Write the 3 lines of code needed to produce the following output in a console window. (Hint: The underline on the second line is a blinking cursor waiting for your input.)

Please type your name below.

**\_**

Your name is !

Press any key to continue . . .

Please type your name below.

Cookie

Your name is Cookie!

Press any key to continue . . .

Console.WriteLine(“Please type your name below”);

name = Console.ReadLine();

Console.WriteLine(“Your name is ” + name + “!”);

1. Write the C# line of code that creates a string with the identifier *myName* that holds your first name.

string myName = “Sebastian”;

1. Now, add your last name to the string using string concatenation.

myName += “ Arroyo”;

1. Consider these strings:

string englishNo = "No";

string spanishNo = "no";

Does C# find the strings englishNo and spanishNo to be equivalent? If not, why?

They are not equivalent because C# is case-sensative.

1. My program asks the user for input by using Console.ReadLine(). Complete the lines of code to parse the input to a double, then add 55.0 to the number and print the result to the console.

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

string input = Console.ReadLine();

1. A program reads input from a user into a string *userInput*. Which of the following lines of code properly parses *userInput* into an integer *userNumber*?

string userInput = Console.ReadLine();

a. int userNumber = int.ParseInt(userInput);

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

\* B is correct

c. int userInput = Parse(userNumber);

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

1. *True or false?*

**T F** Comments negatively affect a program’s processing and compilation and facilitate human comprehension.

False

**T F** Appropriate white space makes a program harder to read.

False

**T F** A class is a blueprint of an object. Multiple objects can be created from one class definition.

True

**T F** C# is also known as Db.

True