# PE-8 – More About Variables

**Due Wednesday 14-Sep-2022 by 11:59pm**

1. Which of the following conversions can't be performed implicitly:
2. int to short
3. short to int
4. bool to string
5. byte to float
6. Give the code for a color enumeration based on the short type containing the colors of the rainbow plus black and white. Can this enumeration be based on the byte type?

enum color : short

{

red = 1;

orange = 2;

yellow = 3;

green = 4;

blue = 5;

purple = 6;

black = 7;

white = 8;

}

Yes, this enumeration can be based on the byte type.

1. Write the C# code that creates an array of doubles with a size of 4 and assigns values to the array. The identifier should be *precipitation* and the values are 0.45, 2.78, 0.04 and 1.22.

double[] precipitation = new double[4] {0.45, 2.78, 0.04, 1.22};

1. Complete the *for* loop to assign values into the array. When the loop is finished running, the array should hold the values 1, 2, 3, 4, 5.

int[] ascendingNumbers = new int[5];

for( int i = 0; i < ascendingNumbers.Length; i++ )

{

ascendingNumbers[i] = i + 1;

}

1. Given the formula z = 3y2 + 2x - 1 write a console application to calculate z for the following ranges of x and y:
   * -1 <= x <= 1 in 0.1 increments
   * 1 <= y <= 4 in 0.1 increments

Use a 3-dimensional array double[,,] to store the values of x, y and z for each computation.

GitHub project URL: <https://github.com/ndw1117/myIGME-201/tree/main/Will_PE8_5>

1. Will the following code compile? If not, why not? Hint: there are 3 errors.

string[] blab = new string[5];

string[5] = 5th string;

No, the code will not compile.

* Cannot set position 5 of array size 5. Indexes are 0-4.
* Should be blab[4], not string[5]. Must use identifier name.
* Cannot say 5th string. Needs to be a string literal or a variable

1. Write a console application that accepts a string from the user and outputs a string with the characters in reverse order.

GitHub Project URL: <https://github.com/ndw1117/myIGME-201/tree/main/Will_PE8_7>

1. Write a console application that accepts a string and does a case-insensitive replacement of all occurrences of the **word** "no" with "yes".

For example, the string:

She said, "No, I have nothing in my purse!"

Should be converted to:

She said, "Yes, I have nothing in my purse!"

GitHub Project URL: <https://github.com/ndw1117/myIGME-201/tree/main/Will_PE8_8>

1. Write a console application that places double quotes around each word in a string.

GitHub Project URL: <https://github.com/ndw1117/myIGME-201/tree/main/Will_PE8_9>

## Submission

Upload this completed document to the corresponding MyCourses dropbox.

Add, Commit and Push the 4 projects for #5, 7, 8, and 9