Quiz #5, on Thursday, November 29, will consist of questions taken or inspired from Part I of this homework and from the lab.

Part I — Questions

1. Can the body of a pretest loop be executed 0 times?

2. What do we name a variable that is incremented at every iteration of a loop, i.e., that keeps the running total?

3. What is a sentinel value?

4. Convert the following `while` loop into a `for` loop.

```
int k = 0;
while(k < 10)
{
        Console.WriteLine(k);
        k++;
}
```

5. What will be displayed at the screen by the following program?

```
for (int num = 3 ; num <= 5 ; num++)
        Console.Write(num + " ");
```

6. Write a `for` loop that display at the screen the sequence "1, 2, 3, 4, 5, 6, 7, 8, 9, 10, ".

7. Adapt the code from Exercise 6 so that the same sequence will be displayed at the screen, but *without the last comma.*

8. Write a for loop that display at the screen the sequence "1 3 5 7 9 ".

9. Consider the following code:

```
for (int y = 1; y <= 3; y++)
{
        for (int z = 1; z < 5; z++)
                Console.Write("Scene " + y + ", take " + z + ". " );
        Console.WriteLine();
}
```

How many times does the outer loop iterates (i.e., how many scenes are shot)? How many times does the inner loop iterates (i.e., how many takes for each scene)? Finally, what is the total number of iteration of the nested loops (i.e., how many takes are made, total)?

10. Circle the pretest loops:

```
do while      switch      while      for      if-else-if
```

11. How many times would "Hi!" be printed?

```
bool flag = false;
do
{
        Console.WriteLine("Hi!");
} while (flag);
```

12. Write a statement that creates a 10-elements `int` array named `numbers`.

13. In the following, what is the value of the size declarator? What is the value of the index?

```
int[] numbers;
numbers = new int[8];
numbers[4] = 9;
```

14. What is wrong with the following array declaration?

```
int[] books = new int[-1];
```

15. Draw the content of the `scores` array once those statements have been executed.

```
int[] scores = new int[3];
scores[0] = 13;
scores[2] = 25;
```

16. Suppose we are given an `int` array `dailyPushUp` with 7 elements. Write a piece of code that display the value of the elements stored in the array `dailyPushUp`.

17. What is "array bounds checking"? When does it happen?

18. Is there an error with the following code? If you think there is one, explain it, otherwise draw the content of the `myIncomes` array once those statements have been executed.

```
double[] myIncomes = new double[5];
myIncomes[1] = 3.5;
// No income on day two.
myIncomes[3] = 5.8;
myIncomes[4] = 0.5;
myIncomes[5] = 1.5;
```

19. What would be the size of the `test` array after the following statement has been executed?

```
int[] test = {3, 5, 7, 0, 9};
```

20. Write a statement that creates and initializes a `double` array with the values 12.5, 89.0 and 3.24.

21. What is the value of `count` and the content of `number` once the following has been executed?

```
int count=2;
int[] number={3, 5, 7};
number[count--] = 8;
number[count]--;
```

22. Suppose we have an array named `temp` that has been declared and initialized. How can we know the number of elements in this array?

23. Describe what the following code would do.

```
int[] record = { 3, 8, 11 };
int accumulator = 0;
foreach (int i in record)
        accumulator += i;
```

24. Assuming we have two `int` arrays of the same size, `firstA` and `secondA`, write a statement that copy the content of `firstA` into `secondA`.

25. Write a method (header included) that takes as argument an `int` array, and display at the screen the value of each element of that array.

26. Write a method (header included) that takes as argument an `int` array, and stores the value 10 in each element of that array.

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