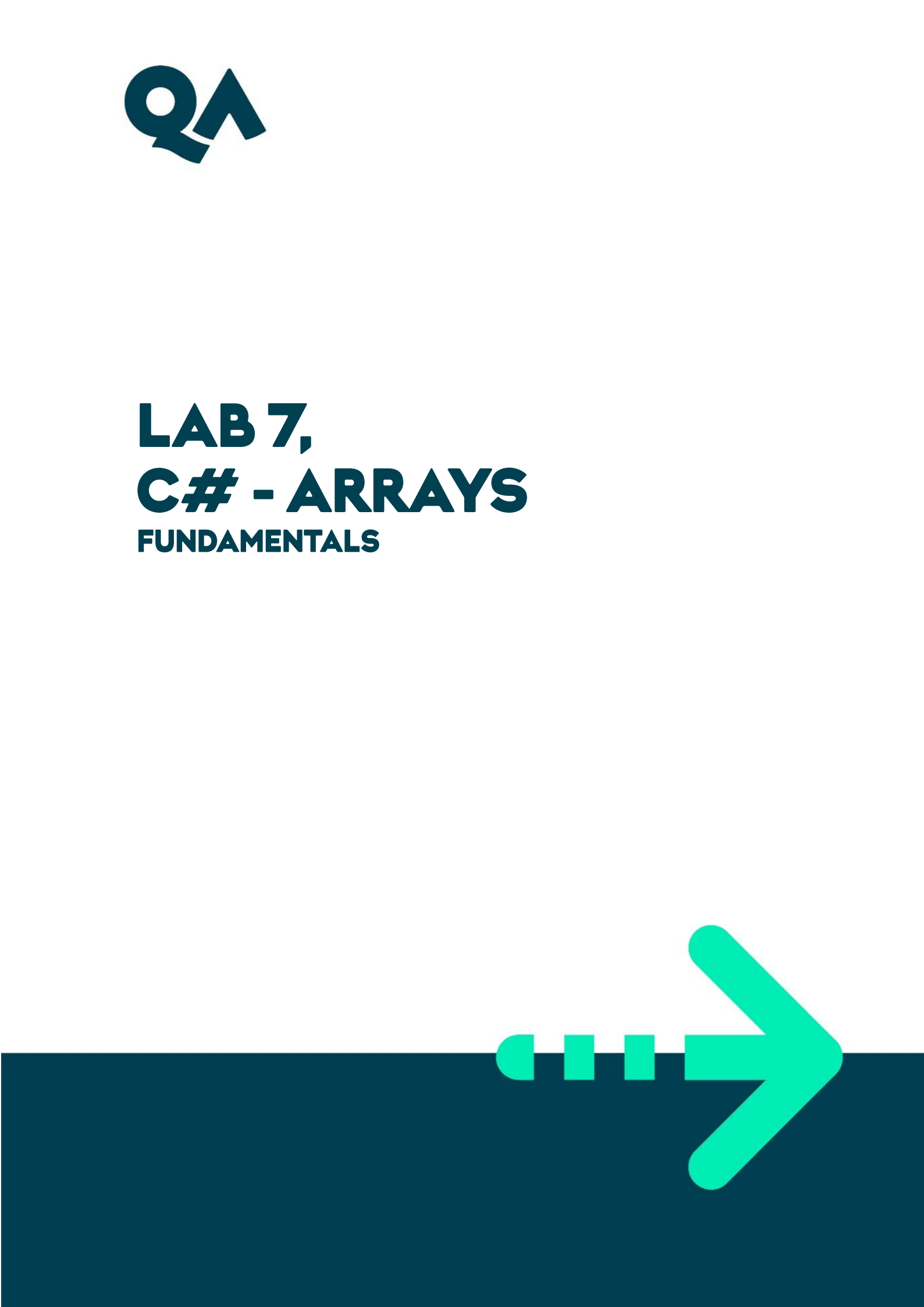

# LAB 7, C# - ARRAYS

## FUNDAMENTALS

# Lab 7, C# - Arrays

## Objective

The objectives of this practical are to get fully up to speed with array definition, creating, filling, and manipulation and to fully understand when is it appropriate to use a 'foreach' loop as opposed to a 'for' loop to process the array.

## Part 1

### Step by step

1. Create a new Console application called Lab07.
   Please refer to Lab01's instructions if you need help.
2. Add a class to your project called Lab7.
3. Add a method called Start() to the Lab7 class.
4. Call the Start() method from Main().

   Tip: refer to instructions in previous labs if you need help.
5. Declare an array of integers in the Start() method as:

   ```
   int[] numbers = { 1, 4, -5, 7, 0, 4, 6, 8 };
   ```

   You can put all your code in the Start() method or
   (even better) create individual methods for each one of the following tasks and then call them from the Start() method.
6. Task 1: write code to find the sum of every number in numbers
7. Task 2: Find the average of these numbers
8. Task 3: Find the minimum number in the numbers array
9. Task 4: Find the maximum number in the numbers array
10. Task 5: Find the index of number zero in numbers

## Part 2

In this part you'll implement the Bubble sort algorithm.

Please have a look at https://en.wikipedia.org/wiki/Bubble_sort
for an explanation of how a Bubble sort works and then write the code.

### Step by step

1. Create a method called Sort() in Lab7 class.
   This method should accept a parameter of type int[ ]
2. Call the Sort() method from the Start() method and pass numbers as parameter.
3. Implement Bubble sort.

There are lots of sites (like Geeksforgeeks.org) which explain the Bubble sort and also provide the code. Please do not go to these sites because you want to practice manipulating arrays not copy and paste code!

** End **