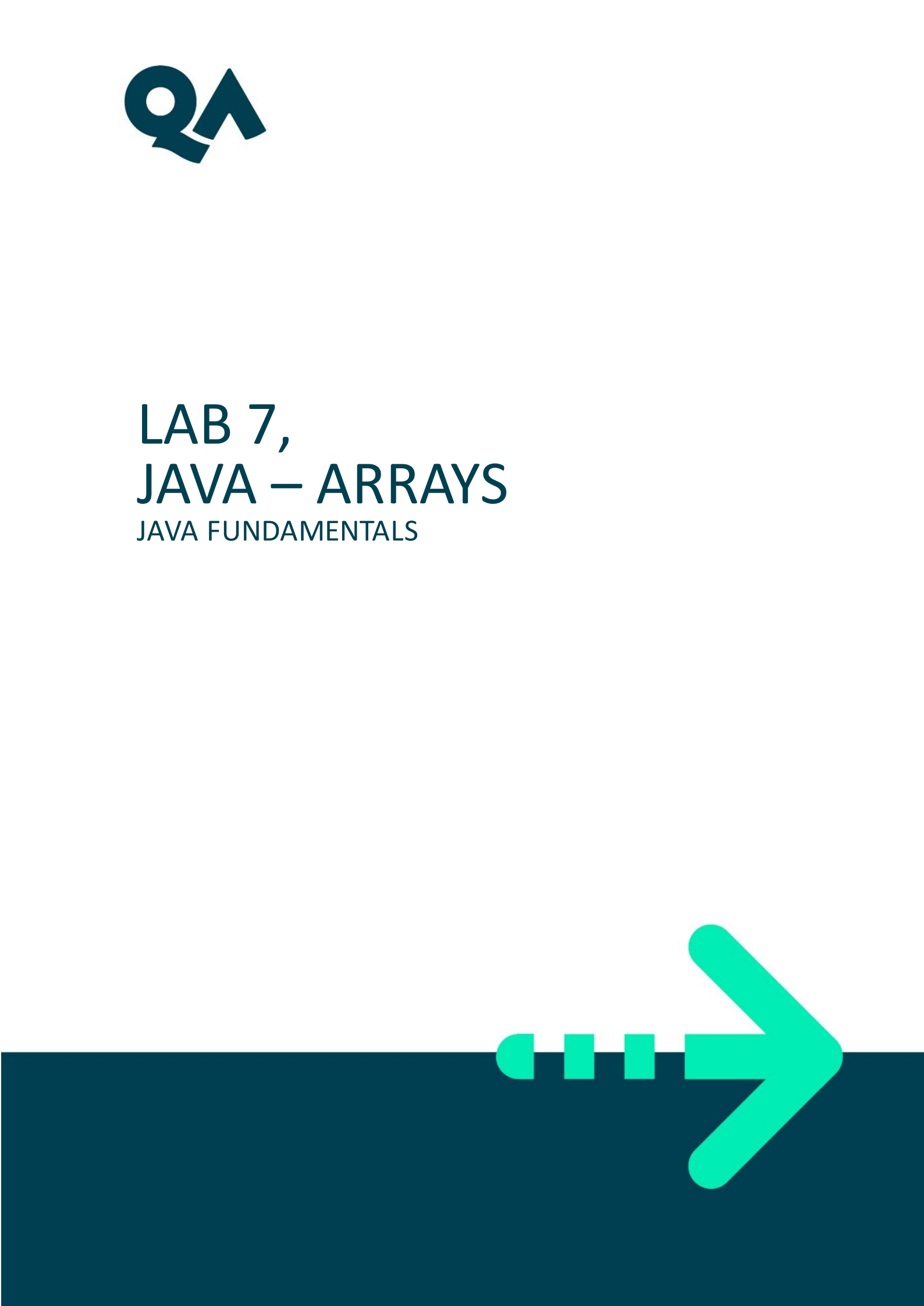

LAB 7, JAVA – ARRAYS

JAVA FUNDAMENTALS

Lab 7, Java - 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. Back in the labs project which you created in Lab1, add a new package called lab07.

   Please refer to lab1's instructions if you need help.

2. Add a class called Program with a main() method to this package.
3. Add a class called Lab7.
4. Add a method called start() to Lab7 class.
5. Call the start() method from main().

   Tip: refer to instructions in previous labs if you're not sure how to do this.

6. Declare an array of integers in the start method as:

   ```
   int[] numbers = { 1, 3, -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.

7. Task 1: write code to find the sum of every number in numbers
8. Task 2: Find the average of these numbers
9. Task 3: Find the minimum number in numbers
10. Task 4: Find the maximum number in numbers
11. Task 5: Find the index of number zero in numbers

Part 2

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

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.

Here is an explanation from Geeksforgeeks.org site. Please do not go to this site because they provide the code!

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.

** End **