

# Week 08

## 1D Array



Department of Software Engineering-FIT-VNU-HCMUS

# 1

## Content

In this lab, we will study the following topics:

- How to manipulate data in a 1D array.

# 2

## Assignments

**A: YY = 02**

**H: YY = 10**

Write down at least 3 test cases in each problem.

- What is your input?
- What is your expected output?

1 solution

6 projects: a single project for first 5 problems with 3 files: array.h, array.cpp and main.cpp. An 5 separate projects for 5 codeforces problems.

For 5 codeforces problems, you should submit your code to codeforces. Then capture the Accepted screenshots and paste them to your project folders. You don't need to create 3 separated files (.h, .cpp and .cpp) for codeforces problems.

1. P258

Write a program to sort all prime numbers in an integer array in ascending order. All non-prime numbers should keep their original positions.

2. P264

Write a program to merge 2 ascendingly sorted arrays a, b to an ascendingly sorted array c.

3. P269

Write a program to insert x into an ascending sorted array a so that the new array is also sorted in ascending order.

4. P274

Write a program to remove all duplicated numbers out of the array.

Input: 1 3 7 3 9 3

Output: 1 3 7 9

5. P191

Write all program to extract all local maximum elements in an array a to a new array b. A local maximum elements  $a[i]$  should have and be bigger than its 2 neighbors  $a[i-1]$  and  $a[i+1]$

6. <http://codeforces.com/problemset/problem/31/A>
7. <http://codeforces.com/problemset/problem/32/A>
8. <http://codeforces.com/problemset/problem/34/A>
9. <http://codeforces.com/problemset/problem/38/A>
10. <http://codeforces.com/problemset/problem/40/A>