

ANKARA UNIVERSITY
COMPUTER ENGINEERING DEPARTMENT
SUMMER TERM-COM1002
Lab4– Q3

Name your files as studentNo.c (12345678.c). Do not make any additions or deficiencies in the outputs (outputs produced by the programs) other than those requested from you. Do not make any changes in outputs such as extra spaces, going to the bottom line. Your codes will be passed through the copy program and the legal process will be initiated against the student who have similarity rates higher than the determined rate. For this reason, the assignments you upload should be unique to you.

You can compile your codes as follows:

```
gcc studentNumber.c  
./a.out
```

Make sure your program is running in Ubuntu environment. Do not forget that there may be programs that run on a different operating system but generate errors or warnings in Ubuntu. Objections to the evaluations made due to such errors will not be accepted. Please carefully review the sample input and output files provided for the correct output format.

To check the accuracy of your program, you need to perform the following operations.

1) gcc studentNumber.c ./a.out> myOutput1.txt

This command saves the output of your program to myOutput1.txt file.

2) diff myOutput1.txt output1.txt

Using this command, compare your own output with the required output. If there is no warning on the screen after entering this command, your program is working correctly for these values. If you see a warning in the command system after entering the command, this indicates a problem with your output, you need to correct your code. Test your program for different inputs that you will create yourself. The input files given to you and the input files used during the evaluation will differ.

QUESTION:

You are expected to write the code that takes some integers as input and sort them, then return the maximum difference between the consecutive elements of the sorted version of the array.

For this aim, you are expected to write “return_difference” function. Your function accepts the length of the array and a sequence of integers. The function sort the content of the array and print sorted version. Finally, the function returns the calculated difference.

For example:

If your input as: 11 9 4 26 26 0 0 5 20 6 25 5

It means your array's length is 11, and your array is 9 4 26 26 0 0 5 20 6 25 5

After sorting array will look like: 0 0 4 5 5 6 9 20 25 26 26

So, your function prints the sorted version first.

Then, calculate the largest difference between the consecutive elements:

The largest difference in the array is between the elements 9 and 20. So, the function returns and prints 11.

For input/output format please see provided txt files.

Good luck.