

ANKARA UNIVERSITY
COMPUTER ENGINEERING DEPARTMENT

COM1002-COMPUTER PROGRAMMING 2

Spring 2020-21 Term

LAB5 Quiz

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Date: 09/04/2021

Duration: 90 minutes

Write a C program which reads a set of numbers, until the EOF, from standard input (stdin) and prints the number of items read from the stdin and the sum of the digits of the prime numbers in the given set, in the given order. If there is no prime number in this set, you should print **0**.

Constraints:

This week, you will be assessed on functions; so you must write two functions for this assignment:

- (1) You must write a function that determines if a given number is prime or not.
- (2) Also you must write another function that returns the sum of the digits of a given number.

I/O format:

input: <set of integers>

output: <sum of the digits of the prime numbers><SPACE><# of items read>

Example:

Sample Input: 2 4 3 10 8 11 9 13 19

the set of prime numbers, in the given order: {2, 3, 11, 13, 19}

Sum of the digits of the given primes: {2, 3, 2, 4, 10}

of integers read: 9

Output: 2 3 2 4 10 9

Hint: Remember that **EOF** is a predefined macro which stands for End Of File. You can capture EOF using scanf function as follows:

```
int x;
```

```
while(scanf("%d",&x) != EOF)
```

```
{      <do something>      }
```

Suggestion:

Prepare sample input files, i.e. **input.txt**, to test your program. Assume that your executable is **lab5**.

Test your programs like this:

```
>./lab5<input.txt
```

Submission: Your source code will be named using your student ID: <student-id>.c

Ex: if your id is 1123456 than you should name your source code like this: 1123456.c

Please test your program thoroughly before submission.

Good luck ☺