Homework #2

The objective of this exercise is to display prime numbers less than a value N using the Eratoshenes method by following the following

steps:

1- Fill an array T with N integers such that each element is equal to the value of its Index.

2- For each non-zero element of T having an index i>1, find the multiples of this value and replace them with zero value (0).

3- Delete all values lower than 2 from table T.

Example : for N=20

Step 1:

T	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

Step2

T	1	2	3	0	5	0	7	0	9	0	11	0	13	0	15	0	17	0	19	0

T	1	2	3	0	5	0	7	0	0	0	11	0	13	0	0	0	17	0	19	0

....

Step3

T	1	2	3	5	7	11	13	17	19

Work to do :

Part1: Write a program that performs the previous tasks using a **single dynamic array** of size N.

Part2: rewrite the program using a **linked list**

Part3 : **compare** the two solutions proposed in terms of data structures used

The work shall be submitted before the date: April 25, 2024