

HW 10

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1. A) output_prime_LinkedList.txt file was created.
B) Linked lists are creating and values read from file are writing to the parameters.

The number was read from the file and the list was created. The number read from the file was entered into the newly created list. Then the new list is linked to the previous list.

```
-----PROGRAM STARTED-----  
  
=> LINKED LIST <=  
  
output_prime_LinkedList.txt file was created.  
  
Linked lists are creating and values read from file are writing to the parameters.  
    Linked lists were created and the values read from the file were written to the parameters.  
  
The process of finding prime numbers and writing them to the file started.
```

2. A) The process of finding prime numbers in linked list : calculated the times when doing this process. First between 1 and 500.000 , Second between 1 and 750.000 , Third between 1 and 1.000.000.
B) Writing all prime number to the file started.
C) Calculate the time of writting all prime number in file.

```
-----PROGRAM STARTED-----  
  
=> LINKED LIST <=  
  
output_prime_LinkedList.txt file was created.  
  
Linked lists are creating and values read from file are writing to the parameters.  
    Linked lists were created and the values read from the file were written to the parameters.  
  
The process of finding prime numbers and writing them to the file started.  
    The prime numbers were found and written to the file.  
  
Between 1 and 500.000 calculation time = 20481.000 millisecond.  
Between 1 and 750.000 calculation time = 42914.000 millisecond.  
Between 1 and 1.000.000 calculation time = 73733.000 millisecond.  
ALL NUMBER calculation time = 73733.000 millisecond, writting time = 101.000 millisecond.  
  
The process applied for linked lists have been successfully completed.
```

IN FILE FIRST SITUATION:

output_prime_LinkedList.txt - Not Defteri					output_prime_LinkedList.txt - Not Defteri				
Dosya	Düzen	Biçim	Görünüm	Yardım	Dosya	Düzen	Biçim	Görünüm	Yardım
2,00					999623,00				
3,00					999631,00				
5,00					999653,00				
7,00					999667,00				
11,00					999671,00				
13,00					999683,00				
17,00					999721,00				
19,00					999727,00				
23,00					999749,00				
29,00					999763,00				
31,00					999769,00				
37,00					999773,00				
41,00					999809,00				
43,00					999853,00				
47,00					999863,00				
53,00					999883,00				
59,00					999907,00				
61,00					999917,00				
67,00					999931,00				
71,00					999953,00				
73,00					999959,00				
79,00					999961,00				
83,00					999979,00				
89,00					999983,00				

IN FILE SECOND SITUATION:

```
Between 1 and 500.000 calculation time = 20481.000 millisecond.  
Between 1 and 750.000 calculation time = 42914.000 millisecond.  
Between 1 and 1.000.000 calculation time = 73733.000 millisecond.  
ALL NUMBER calculation time = 73733.000 millisecond, writting time = 101.000 millisecond
```

3. A) output_prime_dynamic_array.txt file was created.

B) Dynamic array is creating and values read from file are writing to the array.

As the number is read from the line, the allocated memory for the array will be incremented. Number read from the file was entered into the new memory allocated for array. Then the read next line(number) from file until end of file.

```
=> DYNAMIC ARRAY <=  
  
output_prime_dynamic_array.txt file was created.  
  
Dynamic array is creating and values read from file are writing to the array.  
Dynamic array was created and the values read from the file were written to the array.  
  
The process of finding prime numbers and writing them to the file started.
```

4. A) The process of finding prime numbers in dynamic array : calculated the times when doing this process. First between 1 and 500.000 , Second between 1 and 750.000 , Third between 1 and 1.000.000.
- B) Writing all prime number to the file started.
- C) Calculate the time of writting all prime number in file.

```
=> DYNAMIC ARRAY <=

output_prime_dynamic_array.txt file was created.

Dynamic array is creating and values read from file are writing to the array.
Dynamic array was created and the values read from the file were written to the array.

The process of finding prime numbers and writing them to the file started.
The prime numbers were found and written to the file.

Between 1 and 500.000 calculation time = 18961.000 millisecond.
Between 1 and 750.000 calculation time = 42469.000 millisecond.
Between 1 and 1.000.000 calculation time = 74318.000 millisecond.
ALL NUMBER calculation time = 74318.000 millisecond, writting time = 87.000 millisecond.

The process applied for dynamic array have been successfully completed.

The program has been successfully completed.
```

IN FILE FIRST SITUATION:

output_prime_dynamic_array.txt - Not Defteri						output_prime_dynamic_array.txt - Not Defteri					
Dosya	Düzen	Biçim	Görünüm	Yardım		Dosya	Düzen	Biçim	Görünüm	Yardım	
2,00						999623,00					
3,00						999631,00					
5,00						999653,00					
7,00						999667,00					
11,00						999671,00					
13,00						999683,00					
17,00						999721,00					
19,00						999727,00					
23,00						999749,00					
29,00						999763,00					
31,00						999769,00					
37,00						999773,00					
41,00						999809,00					
43,00						999853,00					
47,00						999863,00					
53,00						999883,00					
59,00						999907,00					
61,00						999917,00					
67,00						999931,00					
71,00						999953,00					
73,00						999959,00					
79,00						999961,00					
83,00						999979,00					
89,00						999983,00					

IN FILE SECOND SITUATION:

Between 1 and 500.000 calculation time = 18961.000 millisecond.
Between 1 and 750.000 calculation time = 42469.000 millisecond.
Between 1 and 1.000.000 calculation time = 74318.000 millisecond.
ALL NUMBER calculation time = 74318.000 millisecond, writting time = 87.000 millisecond.

PROGRAM OUTPUT

```
-----PROGRAM STARTED-----  
  
=> LINKED LIST <=  
  
output_prime_LinkedList.txt file was created.  
  
Linked lists are creating and values read from file are writing to the parameters.  
    Linked lists were created and the values read from the file were written to the parameters.  
  
The process of finding prime numbers and writing them to the file started.  
    The prime numbers were found and written to the file.  
  
Between 1 and 500.000 calculation time = 20481.000 millisecond.  
Between 1 and 750.000 calculation time = 42914.000 millisecond.  
Between 1 and 1.000.000 calculation time = 73733.000 millisecond.  
ALL NUMBER calculation time = 73733.000 millisecond, writting time = 101.000 millisecond.  
  
The process applied for linked lists have been successfully completed.  
  
=> DYNAMIC ARRAY <=  
  
output_prime_dynamic_array.txt file was created.  
  
Dynamic array is creating and values read from file are writing to the array.  
    Dynamic array was created and the values read from the file were written to the array.  
  
The process of finding prime numbers and writing them to the file started.  
    The prime numbers were found and written to the file.  
  
Between 1 and 500.000 calculation time = 18961.000 millisecond.  
Between 1 and 750.000 calculation time = 42469.000 millisecond.  
Between 1 and 1.000.000 calculation time = 74318.000 millisecond.  
ALL NUMBER calculation time = 74318.000 millisecond, writting time = 87.000 millisecond.  
  
The process applied for dynamic array have been successfully completed.  
  
The program has been successfully completed.  
  
-----  
Process exited after 152.3 seconds with return value 0  
Press any key to continue . . .
```