

1-LINKED LIST BEGINNING(2-227)

```
prime number(l.list):2,00
prime number(l.list):3,00
prime number(l.list):5,00
prime number(l.list):7,00
prime number(l.list):11,00
prime number(l.list):13,00
prime number(l.list):17,00
prime number(l.list):19,00
prime number(l.list):23,00
prime number(l.list):29,00
prime number(l.list):31,00
prime number(l.list):37,00
prime number(l.list):41,00
prime number(l.list):43,00
prime number(l.list):47,00
prime number(l.list):53,00
prime number(l.list):59,00
prime number(l.list):61,00
prime number(l.list):67,00
prime number(l.list):71,00
prime number(l.list):73,00
prime number(l.list):79,00
prime number(l.list):83,00
prime number(l.list):89,00
prime number(l.list):97,00
prime number(l.list):101,00
prime number(l.list):103,00
prime number(l.list):107,00
prime number(l.list):109,00
prime number(l.list):113,00
prime number(l.list):127,00
prime number(l.list):131,00
prime number(l.list):137,00
prime number(l.list):139,00
prime number(l.list):149,00
prime number(l.list):151,00
prime number(l.list):157,00
prime number(l.list):163,00
prime number(l.list):167,00
prime number(l.list):173,00
prime number(l.list):179,00
prime number(l.list):181,00
prime number(l.list):191,00
prime number(l.list):193,00
prime number(l.list):197,00
prime number(l.list):199,00
prime number(l.list):211,00
prime number(l.list):223,00
prime number(l.list):227,00
```

2-LINKED LIST(END OF THE 500K)

```
prime number(l.list):499397,00
prime number(l.list):499403,00
prime number(l.list):499423,00
prime number(l.list):499439,00
prime number(l.list):499459,00
prime number(l.list):499481,00
prime number(l.list):499483,00
prime number(l.list):499493,00
prime number(l.list):499507,00
prime number(l.list):499519,00
prime number(l.list):499523,00
prime number(l.list):499549,00
prime number(l.list):499559,00
prime number(l.list):499571,00
prime number(l.list):499591,00
prime number(l.list):499601,00
prime number(l.list):499607,00
prime number(l.list):499621,00
prime number(l.list):499633,00
prime number(l.list):499637,00
prime number(l.list):499649,00
prime number(l.list):499661,00
prime number(l.list):499663,00
prime number(l.list):499669,00
prime number(l.list):499673,00
prime number(l.list):499679,00
prime number(l.list):499687,00
prime number(l.list):499691,00
prime number(l.list):499693,00
prime number(l.list):499711,00
prime number(l.list):499717,00
prime number(l.list):499729,00
prime number(l.list):499739,00
prime number(l.list):499747,00
prime number(l.list):499781,00
prime number(l.list):499787,00
prime number(l.list):499801,00
prime number(l.list):499819,00
prime number(l.list):499853,00
prime number(l.list):499879,00
prime number(l.list):499883,00
prime number(l.list):499897,00
prime number(l.list):499903,00
prime number(l.list):499927,00
prime number(l.list):499943,00
prime number(l.list):499957,00
prime number(l.list):499969,00
prime number(l.list):499973,00
prime number(l.list):499979,00
```

3-LINKED LIST(END OF THE 750K)

```
prime number(l.list):749297,00
prime number(l.list):749299,00
prime number(l.list):749323,00
prime number(l.list):749339,00
prime number(l.list):749347,00
prime number(l.list):749351,00
prime number(l.list):749383,00
prime number(l.list):749393,00
prime number(l.list):749401,00
prime number(l.list):749423,00
prime number(l.list):749429,00
prime number(l.list):749431,00
prime number(l.list):749443,00
prime number(l.list):749449,00
prime number(l.list):749453,00
prime number(l.list):749461,00
prime number(l.list):749467,00
prime number(l.list):749471,00
prime number(l.list):749543,00
prime number(l.list):749557,00
prime number(l.list):749587,00
prime number(l.list):749641,00
prime number(l.list):749653,00
prime number(l.list):749659,00
prime number(l.list):749677,00
prime number(l.list):749701,00
prime number(l.list):749711,00
prime number(l.list):749729,00
prime number(l.list):749741,00
prime number(l.list):749747,00
prime number(l.list):749761,00
prime number(l.list):749773,00
prime number(l.list):749779,00
prime number(l.list):749803,00
prime number(l.list):749807,00
prime number(l.list):749809,00
prime number(l.list):749843,00
prime number(l.list):749851,00
prime number(l.list):749863,00
prime number(l.list):749891,00
prime number(l.list):749893,00
prime number(l.list):749899,00
prime number(l.list):749909,00
prime number(l.list):749923,00
prime number(l.list):749927,00
prime number(l.list):749939,00
prime number(l.list):749941,00
prime number(l.list):749971,00
prime number(l.list):749993,00
```

4-LINKED LIST[END OF FILE(1.000.000)]-TIMES

```
prime number(1.list):999359,00
prime number(1.list):999371,00
prime number(1.list):999377,00
prime number(1.list):999389,00
prime number(1.list):999431,00
prime number(1.list):999433,00
prime number(1.list):999437,00
prime number(1.list):999451,00
prime number(1.list):999491,00
prime number(1.list):999499,00
prime number(1.list):999521,00
prime number(1.list):999529,00
prime number(1.list):999541,00
prime number(1.list):999553,00
prime number(1.list):999563,00
prime number(1.list):999599,00
prime number(1.list):999611,00
prime number(1.list):999613,00
prime number(1.list):999623,00
prime number(1.list):999631,00
prime number(1.list):999653,00
prime number(1.list):999667,00
prime number(1.list):999671,00
prime number(1.list):999683,00
prime number(1.list):999721,00
prime number(1.list):999727,00
prime number(1.list):999749,00
prime number(1.list):999763,00
prime number(1.list):999769,00
prime number(1.list):999773,00
prime number(1.list):999809,00
prime number(1.list):999853,00
prime number(1.list):999863,00
prime number(1.list):999883,00
prime number(1.list):999907,00
prime number(1.list):999917,00
prime number(1.list):999931,00
prime number(1.list):999953,00
prime number(1.list):999959,00
prime number(1.list):999961,00
prime number(1.list):999979,00
prime number(1.list):999983,00
linked list 500.000 Time(ms):38115
```

```
linked list 750.000 Time(ms):82651
```

```
linked list 1.000.000 Time(ms):142914
```

```
linked list read and write all these numbers Time(ms):142767
```

5-WRITE THE FILE THE BEGINNING AND THE ENDING

```
output_prime_LiknedList.txt
prime number(l.list):2,00
prime number(l.list):3,00
prime number(l.list):5,00
prime number(l.list):7,00
prime number(l.list):11,00
prime number(l.list):13,00
prime number(l.list):17,00
prime number(l.list):19,00
prime number(l.list):23,00
prime number(l.list):29,00
prime number(l.list):31,00
prime number(l.list):37,00
prime number(l.list):41,00
prime number(l.list):43,00
prime number(l.list):47,00
prime number(l.list):53,00
prime number(l.list):59,00
prime number(l.list):61,00
prime number(l.list):67,00
prime number(l.list):71,00
prime number(l.list):73,00
prime number(l.list):79,00
prime number(l.list):83,00
prime number(l.list):89,00
prime number(l.list):97,00
prime number(l.list):101,00
prime number(l.list):103,00
prime number(l.list):107,00
prime number(l.list):109,00
prime number(l.list):113,00
prime number(l.list):127,00
prime number(l.list):131,00
prime number(l.list):137,00
prime number(l.list):139,00
prime number(l.list):149,00
prime number(l.list):151,00
prime number(l.list):157,00
prime number(l.list):163,00
prime number(l.list):167,00
prime number(l.list):173,00
prime number(l.list):179,00
prime number(l.list):181,00
prime number(l.list):191,00
prime number(l.list):193,00
prime number(l.list):197,00
prime number(l.list):199,00
```

```

.
.
.
output_prime_LiknedList.txt
prime number(l.list):999359,00
prime number(l.list):999371,00
prime number(l.list):999377,00
prime number(l.list):999389,00
prime number(l.list):999431,00
prime number(l.list):999433,00
prime number(l.list):999437,00
prime number(l.list):999451,00
prime number(l.list):999491,00
prime number(l.list):999499,00
prime number(l.list):999521,00
prime number(l.list):999529,00
prime number(l.list):999541,00
prime number(l.list):999553,00
prime number(l.list):999563,00
prime number(l.list):999599,00
prime number(l.list):999611,00
prime number(l.list):999613,00
prime number(l.list):999623,00
prime number(l.list):999631,00
prime number(l.list):999653,00
prime number(l.list):999667,00
prime number(l.list):999671,00
prime number(l.list):999683,00
prime number(l.list):999721,00
prime number(l.list):999727,00
prime number(l.list):999749,00
prime number(l.list):999763,00
prime number(l.list):999769,00
prime number(l.list):999773,00
prime number(l.list):999809,00
prime number(l.list):999853,00
prime number(l.list):999863,00
prime number(l.list):999883,00
prime number(l.list):999907,00
prime number(l.list):999917,00
prime number(l.list):999931,00
prime number(l.list):999953,00
prime number(l.list):999959,00
prime number(l.list):999961,00
prime number(l.list):999979,00
prime number(l.list):999983,00
linked list 500.000 Time(ms):38115
linked list 750.000 Time(ms):82651
linked list 1.000.000 Time(ms):142914
linked list read and write all these numbers Time(ms):142767
```

1-DYNAMIC ARRAY BEGINNING(2-227)

```
prime number(dynamic arr):2,00
prime number(dynamic arr):3,00
prime number(dynamic arr):5,00
prime number(dynamic arr):7,00
prime number(dynamic arr):11,00
prime number(dynamic arr):13,00
prime number(dynamic arr):17,00
prime number(dynamic arr):19,00
prime number(dynamic arr):23,00
prime number(dynamic arr):29,00
prime number(dynamic arr):31,00
prime number(dynamic arr):37,00
prime number(dynamic arr):41,00
prime number(dynamic arr):43,00
prime number(dynamic arr):47,00
prime number(dynamic arr):53,00
prime number(dynamic arr):59,00
prime number(dynamic arr):61,00
prime number(dynamic arr):67,00
prime number(dynamic arr):71,00
prime number(dynamic arr):73,00
prime number(dynamic arr):79,00
prime number(dynamic arr):83,00
prime number(dynamic arr):89,00
prime number(dynamic arr):97,00
prime number(dynamic arr):101,00
prime number(dynamic arr):103,00
prime number(dynamic arr):107,00
prime number(dynamic arr):109,00
prime number(dynamic arr):113,00
prime number(dynamic arr):127,00
prime number(dynamic arr):131,00
prime number(dynamic arr):137,00
prime number(dynamic arr):139,00
prime number(dynamic arr):149,00
prime number(dynamic arr):151,00
prime number(dynamic arr):157,00
prime number(dynamic arr):163,00
prime number(dynamic arr):167,00
prime number(dynamic arr):173,00
prime number(dynamic arr):179,00
prime number(dynamic arr):181,00
prime number(dynamic arr):191,00
prime number(dynamic arr):193,00
prime number(dynamic arr):197,00
prime number(dynamic arr):199,00
prime number(dynamic arr):211,00
prime number(dynamic arr):223,00
prime number(dynamic arr):227,00
```


2-DYNAMIC ARRAY(END OF 500K)

```
prime number(dynamic arr):499397,00
prime number(dynamic arr):499403,00
prime number(dynamic arr):499423,00
prime number(dynamic arr):499439,00
prime number(dynamic arr):499459,00
prime number(dynamic arr):499481,00
prime number(dynamic arr):499483,00
prime number(dynamic arr):499493,00
prime number(dynamic arr):499507,00
prime number(dynamic arr):499519,00
prime number(dynamic arr):499523,00
prime number(dynamic arr):499549,00
prime number(dynamic arr):499559,00
prime number(dynamic arr):499571,00
prime number(dynamic arr):499591,00
prime number(dynamic arr):499601,00
prime number(dynamic arr):499607,00
prime number(dynamic arr):499621,00
prime number(dynamic arr):499633,00
prime number(dynamic arr):499637,00
prime number(dynamic arr):499649,00
prime number(dynamic arr):499661,00
prime number(dynamic arr):499663,00
prime number(dynamic arr):499669,00
prime number(dynamic arr):499673,00
prime number(dynamic arr):499679,00
prime number(dynamic arr):499687,00
prime number(dynamic arr):499691,00
prime number(dynamic arr):499693,00
prime number(dynamic arr):499711,00
prime number(dynamic arr):499717,00
prime number(dynamic arr):499729,00
prime number(dynamic arr):499739,00
prime number(dynamic arr):499747,00
prime number(dynamic arr):499781,00
prime number(dynamic arr):499787,00
prime number(dynamic arr):499801,00
prime number(dynamic arr):499819,00
prime number(dynamic arr):499853,00
prime number(dynamic arr):499879,00
prime number(dynamic arr):499883,00
prime number(dynamic arr):499897,00
prime number(dynamic arr):499903,00
prime number(dynamic arr):499927,00
prime number(dynamic arr):499943,00
prime number(dynamic arr):499957,00
prime number(dynamic arr):499969,00
prime number(dynamic arr):499973,00
prime number(dynamic arr):499979,00
```

3-DYNAMIC ARRAY(END OF 750K)

```
prime number(dynamic arr):749297,00
prime number(dynamic arr):749299,00
prime number(dynamic arr):749323,00
prime number(dynamic arr):749339,00
prime number(dynamic arr):749347,00
prime number(dynamic arr):749351,00
prime number(dynamic arr):749383,00
prime number(dynamic arr):749393,00
prime number(dynamic arr):749401,00
prime number(dynamic arr):749423,00
prime number(dynamic arr):749429,00
prime number(dynamic arr):749431,00
prime number(dynamic arr):749443,00
prime number(dynamic arr):749449,00
prime number(dynamic arr):749453,00
prime number(dynamic arr):749461,00
prime number(dynamic arr):749467,00
prime number(dynamic arr):749471,00
prime number(dynamic arr):749543,00
prime number(dynamic arr):749557,00
prime number(dynamic arr):749587,00
prime number(dynamic arr):749641,00
prime number(dynamic arr):749653,00
prime number(dynamic arr):749659,00
prime number(dynamic arr):749677,00
prime number(dynamic arr):749701,00
prime number(dynamic arr):749711,00
prime number(dynamic arr):749729,00
prime number(dynamic arr):749741,00
prime number(dynamic arr):749747,00
prime number(dynamic arr):749761,00
prime number(dynamic arr):749773,00
prime number(dynamic arr):749779,00
prime number(dynamic arr):749803,00
prime number(dynamic arr):749807,00
prime number(dynamic arr):749809,00
prime number(dynamic arr):749843,00
prime number(dynamic arr):749851,00
prime number(dynamic arr):749863,00
prime number(dynamic arr):749891,00
prime number(dynamic arr):749893,00
prime number(dynamic arr):749899,00
prime number(dynamic arr):749909,00
prime number(dynamic arr):749923,00
prime number(dynamic arr):749927,00
prime number(dynamic arr):749939,00
prime number(dynamic arr):749941,00
prime number(dynamic arr):749971,00
prime number(dynamic arr):749993,00
```


4-DYNAMIC ARRAY[1.000.000(END OF FILE)]-TIME

```
prime number(dynamic arr):999371,00
prime number(dynamic arr):999377,00
prime number(dynamic arr):999389,00
prime number(dynamic arr):999431,00
prime number(dynamic arr):999433,00
prime number(dynamic arr):999437,00
prime number(dynamic arr):999451,00
prime number(dynamic arr):999491,00
prime number(dynamic arr):999499,00
prime number(dynamic arr):999521,00
prime number(dynamic arr):999529,00
prime number(dynamic arr):999541,00
prime number(dynamic arr):999553,00
prime number(dynamic arr):999563,00
prime number(dynamic arr):999599,00
prime number(dynamic arr):999611,00
prime number(dynamic arr):999613,00
prime number(dynamic arr):999623,00
prime number(dynamic arr):999631,00
prime number(dynamic arr):999653,00
prime number(dynamic arr):999667,00
prime number(dynamic arr):999671,00
prime number(dynamic arr):999683,00
prime number(dynamic arr):999721,00
prime number(dynamic arr):999727,00
prime number(dynamic arr):999749,00
prime number(dynamic arr):999763,00
prime number(dynamic arr):999769,00
prime number(dynamic arr):999773,00
prime number(dynamic arr):999809,00
prime number(dynamic arr):999853,00
prime number(dynamic arr):999863,00
prime number(dynamic arr):999883,00
prime number(dynamic arr):999907,00
prime number(dynamic arr):999917,00
prime number(dynamic arr):999931,00
prime number(dynamic arr):999953,00
prime number(dynamic arr):999959,00
prime number(dynamic arr):999961,00
prime number(dynamic arr):999979,00
prime number(dynamic arr):999983,00
dynamic array 500.000 Time(ms):38315

dynamic array 750.000 Time(ms):82615

dynamic array 1.000.000 Time(ms):143117

dynamic array read and write all these numbers Time(ms):143338
Fatih-MacBook-Pro:CSE102_HW10 fatihselimyakar$
```

5-WRITE THE FILE THE BEGINNING AND THE ENDING

```
output_prime_dynamic_array.txt
prime number(dynamic arr):2,00
prime number(dynamic arr):3,00
prime number(dynamic arr):5,00
prime number(dynamic arr):7,00
prime number(dynamic arr):11,00
prime number(dynamic arr):13,00
prime number(dynamic arr):17,00
prime number(dynamic arr):19,00
prime number(dynamic arr):23,00
prime number(dynamic arr):29,00
prime number(dynamic arr):31,00
prime number(dynamic arr):37,00
prime number(dynamic arr):41,00
prime number(dynamic arr):43,00
prime number(dynamic arr):47,00
prime number(dynamic arr):53,00
prime number(dynamic arr):59,00
prime number(dynamic arr):61,00
prime number(dynamic arr):67,00
prime number(dynamic arr):71,00
prime number(dynamic arr):73,00
prime number(dynamic arr):79,00
prime number(dynamic arr):83,00
prime number(dynamic arr):89,00
prime number(dynamic arr):97,00
prime number(dynamic arr):101,00
prime number(dynamic arr):103,00
prime number(dynamic arr):107,00
prime number(dynamic arr):109,00
prime number(dynamic arr):113,00
prime number(dynamic arr):127,00
prime number(dynamic arr):131,00
prime number(dynamic arr):137,00
prime number(dynamic arr):139,00
prime number(dynamic arr):149,00
prime number(dynamic arr):151,00
prime number(dynamic arr):157,00
prime number(dynamic arr):163,00
prime number(dynamic arr):167,00
prime number(dynamic arr):173,00
prime number(dynamic arr):179,00
prime number(dynamic arr):181,00
prime number(dynamic arr):191,00
prime number(dynamic arr):193,00
prime number(dynamic arr):197,00
prime number(dynamic arr):199,00
```

- .
- .
- .

```
output_prime_dynamic_array.txt — Düzenlendi
prime number(dynamic arr):999433,00
prime number(dynamic arr):999437,00
prime number(dynamic arr):999451,00
prime number(dynamic arr):999491,00
prime number(dynamic arr):999499,00
prime number(dynamic arr):999521,00
prime number(dynamic arr):999529,00
prime number(dynamic arr):999541,00
prime number(dynamic arr):999553,00
prime number(dynamic arr):999563,00
prime number(dynamic arr):999599,00
prime number(dynamic arr):999611,00
prime number(dynamic arr):999613,00
prime number(dynamic arr):999623,00
prime number(dynamic arr):999631,00
prime number(dynamic arr):999653,00
prime number(dynamic arr):999667,00
prime number(dynamic arr):999671,00
prime number(dynamic arr):999683,00
prime number(dynamic arr):999721,00
prime number(dynamic arr):999727,00
prime number(dynamic arr):999749,00
prime number(dynamic arr):999763,00
prime number(dynamic arr):999769,00
prime number(dynamic arr):999773,00
prime number(dynamic arr):999809,00
prime number(dynamic arr):999853,00
prime number(dynamic arr):999863,00
prime number(dynamic arr):999883,00
prime number(dynamic arr):999907,00
prime number(dynamic arr):999917,00
prime number(dynamic arr):999931,00
prime number(dynamic arr):999953,00
prime number(dynamic arr):999959,00
prime number(dynamic arr):999961,00
prime number(dynamic arr):999979,00
prime number(dynamic arr):999983,00
dynamic array 500.000 Time(ms):38315
dynamic array 750.000 Time(ms):82615
dynamic array 1.000.000 Time(ms):143117
dynamic array read and write all these numbers Time(ms):143338
```

EXPLANATION

In the source code firstly I declare the struct for the linked list and then I declared the read_line function that is contain a fscanf for the use other parts. The second function is find_prime that is finds the number is prime or not. The third function is fpn_dyn that is read the whole .txt file then saves a dynamic array and print the terminale and write the other file and it returns the calculation time. The forth function is fpn_dyn_between_space, the same function but it provides until the calculation max value but it dont write the folder. The fifth function is fpn_ll that is read the whole .txt file with read_line function and saves the linked list and prints(fprintf and printf) the prime numbers and it returns too the calculation time. The sixth function is fpn_ll_between_space that is the same function but it provides until the calculation max value but it dont write the folder. At the end I use the three times fpn_ll_between_space and fpn_dyn_between_space for the 500.000,750,000 and 1.000.000. Then I use fpn_ll and fpn_dyn for the read write and calculate whole file.

Fatih Selim Yakar
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