HW10

SCREENSHOTS OF RUNNİNG PROGRAM ABOUT LİNKED LİST

Output of terminal to prime numbers from 1 to 1.000.000 in linked list and time calculations:

```
nevra-VirtualBox: ~/Masaüstü
78442.Prime number in linked list= 999101,00
78443.Prime number in linked list= 999133,00
78444.Prime number in linked list= 999149,00
78445.Prime number in linked list= 999169,00
78446.Prime number in linked list= 999181,00
78447.Prime number in linked list= 999199,00
78448.Prime number in linked list= 999217,00
78449.Prime number in linked list= 999221,00
78450.Prime number in linked list= 999233,00
78451.Prime number in linked list= 999239,00
78452.Prime number in linked list= 999269,00
78453.Prime number in linked list= 999287,00
78454.Prime number in linked list= 999307,00
78455.Prime number in linked list= 999329,00
78456.Prime number in linked list= 999331,00
78457.Prime number in linked list= 999359,00
78458.Prime number in linked list= 999371,00
78459.Prime number in linked list= 999377,00
78460.Prime number in linked list= 999389,00
78461.Prime number in linked list= 999431,00
78462.Prime number in linked list= 999433,00
78463.Prime number in linked list= 999437,00
78464.Prime number in linked list= 999451,00
78465.Prime number in linked list= 999491,00
78466.Prime number in linked list= 999499,00
78467.Prime number in linked list= 999521,00
78468.Prime number in linked list= 999529,00
78469.Prime number in linked list= 999541,00
78470.Prime number in linked list= 999553,00
78471.Prime number in linked list= 999563,00
78472.Prime number in linked list= 999599,00
78473.Prime number in linked list= 999611,00
78474.Prime number in linked list= 999613,00
78475.Prime number in linked list= 999623,00
78476.Prime number in linked list= 999631,00
78477.Prime number in linked list= 999653,00
78478.Prime number in linked list= 999667,00
78479.Prime number in linked list= 999671,00
78480.Prime number in linked list= 999683,00
78481.Prime number in linked list= 999721,00
78482.Prime number in linked list= 999727,00
78483.Prime number in linked list= 999749,00
78484.Prime number in linked list= 999763,00
78485.Prime number in linked list= 999769,00
78486.Prime number in linked list= 999773,00
78487.Prime number in linked list= 999809,00
78488.Prime number in linked list= 999853,00
78489.Prime number in linked list= 999863,00
78490.Prime number in linked list= 999883,00
78491.Prime number in linked list= 999907,00
78492.Prime number in linked list= 999917,00
78493.Prime number in linked list= 999931,00
78494.Prime number in linked list= 999953,00
78495.Prime number in linked list= 999959,00
78496.Prime number in linked list= 999961,00
78497.Prime number in linked list= 999979,00
78498.Prime number in linked list= 999983,00
Time that is between 1 and 500.000 in linked list=367873 (ms)
Time that is between 1 and 750.000 in linked list=824726 (ms)
Time that is between 1 and 1.000.000 in linked list=1454557 (ms)
Time that is running time of record_linked_list function=1454557 (ms)
```

Prime numbers and time calculations results in output_prime_LiknedList.txt file:
There are 78498 prime numbers.

prime_LiknedList.txt (~/Masaüstü) - gedit

Aç ▾ ⊞

```
1.Prime number =2,00
2.Prime number =3,00
3.Prime number =5,00
4.Prime number =7,00
5.Prime number =11,00
6.Prime number =13,00
7.Prime number =17,00
8.Prime number =19,00
9.Prime number =23,00
10.Prime number =29,00
11.Prime number =31,00
12.Prime number =37,00
13.Prime number =41,00
14.Prime number =43,00
15.Prime number =47,00
16.Prime number =53,00
17.Prime number =59,00
18.Prime number =61,00
19.Prime number =67,00
20.Prime number =71,00
21.Prime number =73,00
22.Prime number =79,00
23.Prime number =83,00
24.Prime number =89,00
25.Prime number =97,00
26.Prime number =101,00
27.Prime number =103,00
28.Prime number =107,00
29.Prime number =109,00
30.Prime number =113,00
31.Prime number =127,00
32.Prime number =131,00
33.Prime number =137,00
34.Prime number =139,00
35.Prime number =149,00
36.Prime number =151,00
37.Prime number =157,00
38.Prime number =163,00
39.Prime number =167,00
40.Prime number =173,00
41.Prime number =179,00
42.Prime number =181,00
43.Prime number =191,00
44.Prime number =193,00
45.Prime number =197,00
46.Prime number =199,00
47.Prime number =211,00
48.Prime number =223,00
49.Prime number =227,00
50.Prime number =229,00
51.Prime number =233,00
52.Prime number =239,00
53.Prime number =241,00
54.Prime number =251,00
55.Prime number =257,00
56.Prime number =263,00
57.Prime number =269,00
58.Prime number =271,00
```

prime_LiknedList.txt (~/Masaüstü) - gedit

Aç ▾ ⊞

```
78445.Prime number =999169,00
78446.Prime number =999181,00
78447.Prime number =999199,00
78448.Prime number =999217,00
78449.Prime number =999221,00
78450.Prime number =999233,00
78451.Prime number =999239,00
78452.Prime number =999269,00
78453.Prime number =999287,00
78454.Prime number =999307,00
78455.Prime number =999329,00
78456.Prime number =999331,00
78457.Prime number =999359,00
78458.Prime number =999371,00
78459.Prime number =999377,00
78460.Prime number =999389,00
78461.Prime number =999431,00
78462.Prime number =999433,00
78463.Prime number =999437,00
78464.Prime number =999451,00
78465.Prime number =999491,00
78466.Prime number =999499,00
78467.Prime number =999521,00
78468.Prime number =999529,00
78469.Prime number =999541,00
78470.Prime number =999553,00
78471.Prime number =999563,00
78472.Prime number =999599,00
78473.Prime number =999611,00
78474.Prime number =999613,00
78475.Prime number =999623,00
78476.Prime number =999631,00
78477.Prime number =999653,00
78478.Prime number =999667,00
78479.Prime number =999671,00
78480.Prime number =999683,00
78481.Prime number =999721,00
78482.Prime number =999727,00
78483.Prime number =999749,00
78484.Prime number =999763,00
78485.Prime number =999769,00
78486.Prime number =999773,00
78487.Prime number =999809,00
78488.Prime number =999853,00
78489.Prime number =999863,00
78490.Prime number =999883,00
78491.Prime number =999907,00
78492.Prime number =999917,00
78493.Prime number =999931,00
78494.Prime number =999953,00
78495.Prime number =999959,00
78496.Prime number =999961,00
78497.Prime number =999979,00
78498.Prime number =999983,00
Time that is between 1 and 500.000 in linked list= 367873 milliseconds(ms)
Time that is between 1 and 750.000 in linked list= 824726 milliseconds(ms)
Time that is between 1 and 1.000.000 in linked list=1454557 milliseconds(ms)
Time that is running time of record_linked_list function=1454557 milliseconds(ms)
```

Time that is between 1 and 500.000 in linked list =367873 ms
Time that is between 1 and 7500.000 in linked list =824726 ms
Time that is between 1 and 1.000.000 in linked list =1454557ms
Time that is running time of linked list function =1454557ms

EXPLANATİON

Record_linked_list function reads data.txt file line by line by usinG read_data function.It uses loop to find prime numbers.When node of linked list reaching numbers in pdf (500.000,750.000,1.000.000 and end of function)time calculations are made seperately.After that results is writed output_prime_LiknedList.txt file and terminal.

SCREENSHOTS OF RUNNİNG PROGRM ABOUT DYNAMİC ARRAY

Output of terminal to prime numbers from 1 to 1.000.000 in dynamic array and time calculations:

Prime numbers and time calculations results in output_prime_dynamic_array.txt:
There are 78498 prime number.

prime_dynamic_array.txt (~/Masaüstü) - gedit

Aç ▾ ⨅

```
1.Prime number=2,00
2.Prime number=3,00
3.Prime number=5,00
4.Prime number=7,00
5.Prime number=11,00
6.Prime number=13,00
7.Prime number=17,00
8.Prime number=19,00
9.Prime number=23,00
10.Prime number=29,00
11.Prime number=31,00
12.Prime number=37,00
13.Prime number=41,00
14.Prime number=43,00
15.Prime number=47,00
16.Prime number=53,00
17.Prime number=59,00
18.Prime number=61,00
19.Prime number=67,00
20.Prime number=71,00
21.Prime number=73,00
22.Prime number=79,00
23.Prime number=83,00
24.Prime number=89,00
25.Prime number=97,00
26.Prime number=101,00
27.Prime number=103,00
28.Prime number=107,00
29.Prime number=109,00
30.Prime number=113,00
31.Prime number=127,00
32.Prime number=131,00
33.Prime number=137,00
34.Prime number=139,00
35.Prime number=149,00
36.Prime number=151,00
37.Prime number=157,00
38.Prime number=163,00
39.Prime number=167,00
40.Prime number=173,00
41.Prime number=179,00
42.Prime number=181,00
43.Prime number=191,00
44.Prime number=193,00
45.Prime number=197,00
46.Prime number=199,00
47.Prime number=211,00
48.Prime number=223,00
49.Prime number=227,00
50.Prime number=229,00
51.Prime number=233,00
52.Prime number=239,00
53.Prime number=241,00
54.Prime number=251,00
55.Prime number=257,00
56.Prime number=263,00
57.Prime number=269,00
```

```
78446.Prime number=999181,00
78447.Prime number=999199,00
78448.Prime number=999217,00
78449.Prime number=999221,00
78450.Prime number=999233,00
78451.Prime number=999239,00
78452.Prime number=999269,00
78453.Prime number=999287,00
78454.Prime number=999307,00
78455.Prime number=999329,00
78456.Prime number=999331,00
78457.Prime number=999359,00
78458.Prime number=999371,00
78459.Prime number=999377,00
78460.Prime number=999389,00
78461.Prime number=999431,00
78462.Prime number=999433,00
78463.Prime number=999437,00
78464.Prime number=999451,00
78465.Prime number=999491,00
78466.Prime number=999499,00
78467.Prime number=999521,00
78468.Prime number=999529,00
78469.Prime number=999541,00
78470.Prime number=999553,00
78471.Prime number=999563,00
78472.Prime number=999599,00
78473.Prime number=999611,00
78474.Prime number=999613,00
78475.Prime number=999623,00
78476.Prime number=999631,00
78477.Prime number=999653,00
78478.Prime number=999667,00
78479.Prime number=999671,00
78480.Prime number=999683,00
78481.Prime number=999721,00
78482.Prime number=999727,00
78483.Prime number=999749,00
78484.Prime number=999763,00
78485.Prime number=999769,00
78486.Prime number=999773,00
78487.Prime number=999809,00
78488.Prime number=999853,00
78489.Prime number=999863,00
78490.Prime number=999883,00
78491.Prime number=999907,00
78492.Prime number=999917,00
78493.Prime number=999931,00
78494.Prime number=999953,00
78495.Prime number=999959,00
78496.Prime number=999961,00
78497.Prime number=999979,00
78498.Prime number=999983,00
Time that is between 1 and 500.000 in dynamic array= 462459 milliseconds(ms)
Time that is between 1 and 750.000 in dynamic array= 983348 milliseconds(ms)
Time that is between 1 and 1.000.000 in dynamic array= 1811344 milliseconds(ms)
Time that is running time of record_array function= 1811344 milliseconds(ms)
```

Time that is between 1 and 500.000 in dynamic array=462459ms
Time that is between 1 and 7500.000 in dyamic array =983348ms
Time that is between 1 and 1.000.000 in dynamic array =1811344ms
Time that is running time of dynamic array=1811344ms

EXPLANATİON

Record_array function reads data.txt file line by line by using read_data function.It creates dynamic array.It uses loop to find prime numbers.When dynamic array element reaching numbers in pdf (500.000,750.000,1.000.000 and end of function)time calculations are made seperately.After that results is writed output_prime_dynamic_array.txt file and terminal.