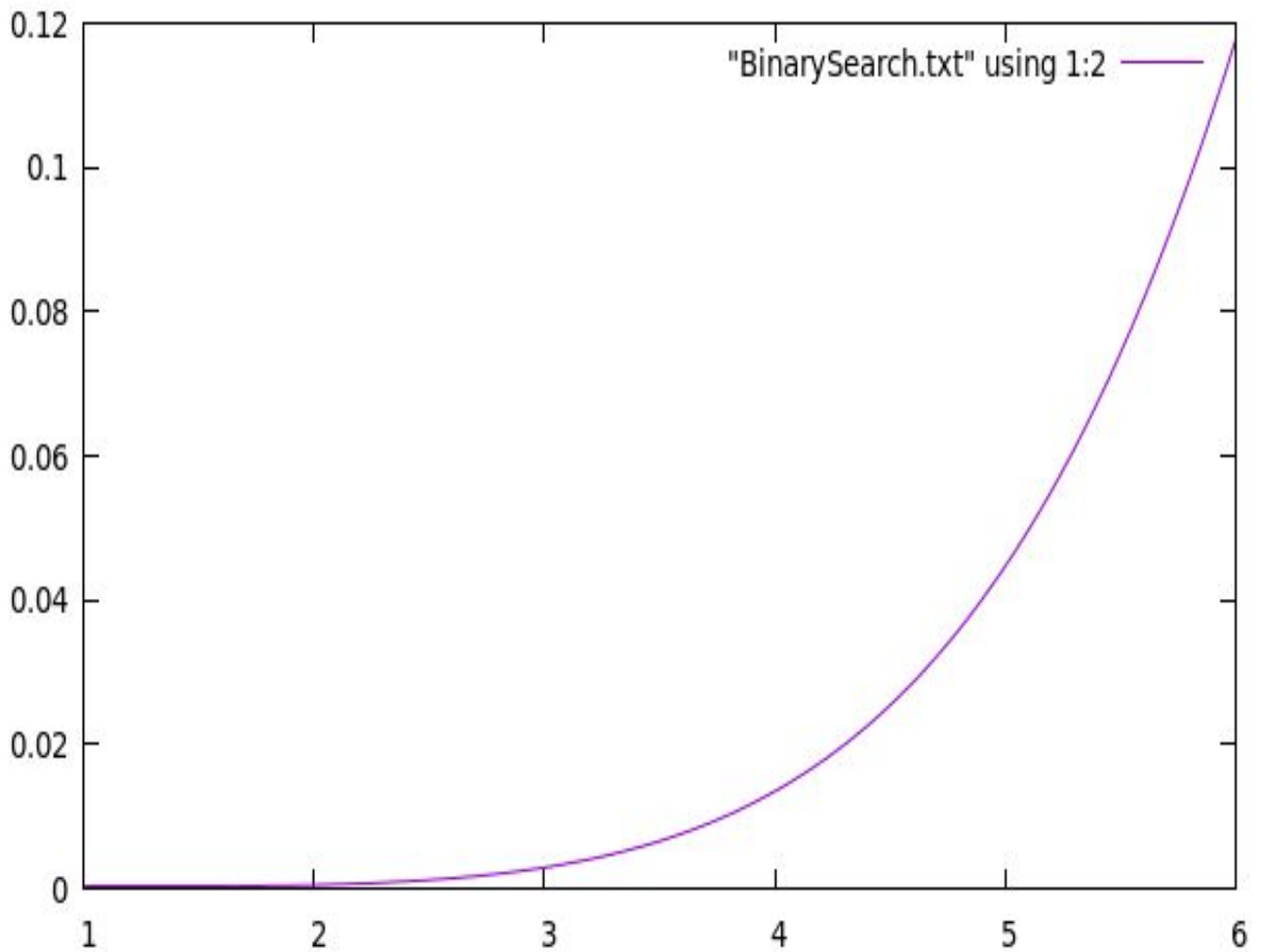


ASSIGNMENT 3 PLOTS

$\text{Time}(t) = 100 * (\text{time taken for execution}) / \text{CLOCKS_PER_SEC}$.

n: no.of elements in the vector/ no.of rows in the matrix.

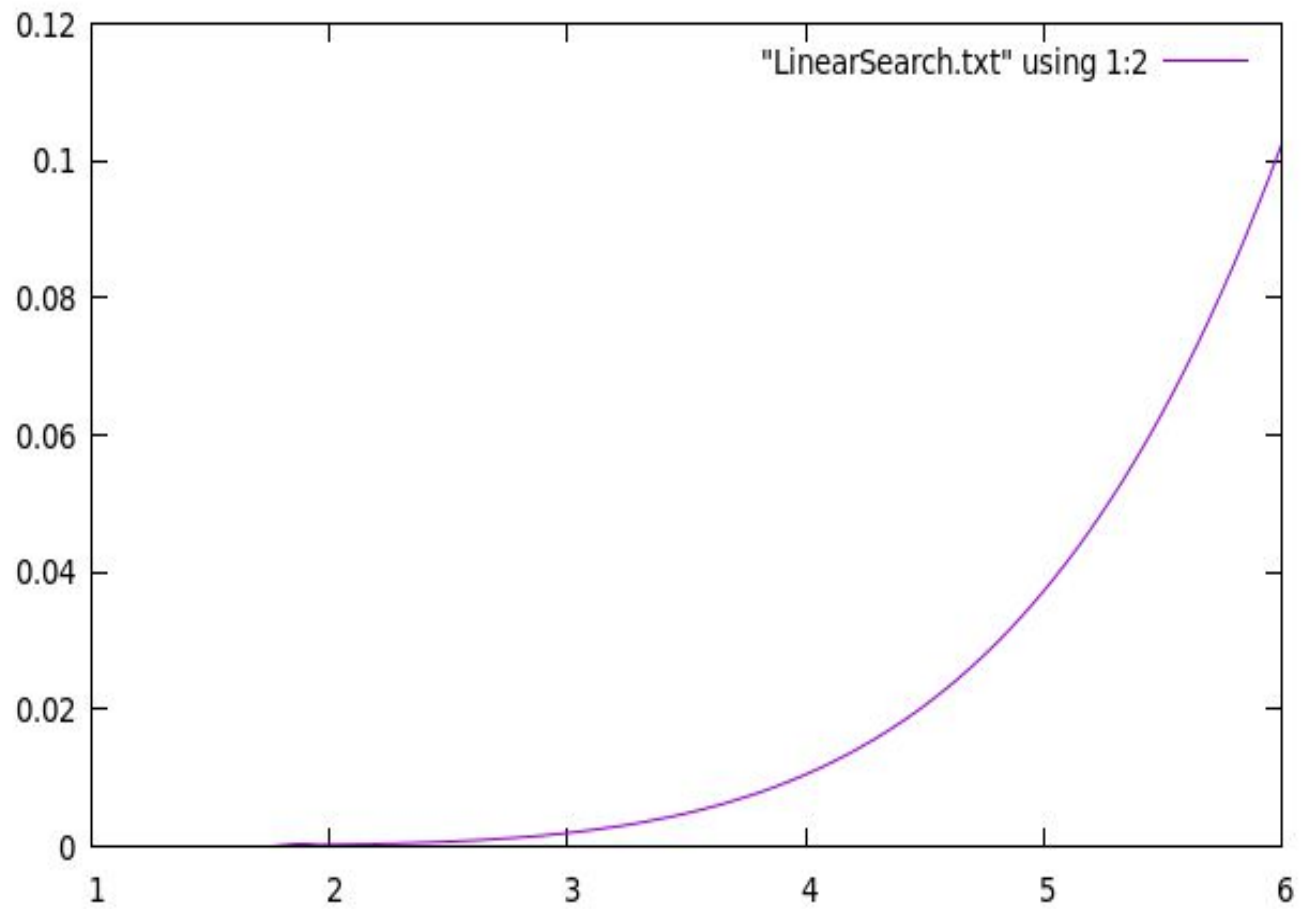
m: no.of columns in the matrix.



Binary Search:

X-axis: $\log_{10}(n)$, Y-axis: $\text{time}(t)$.

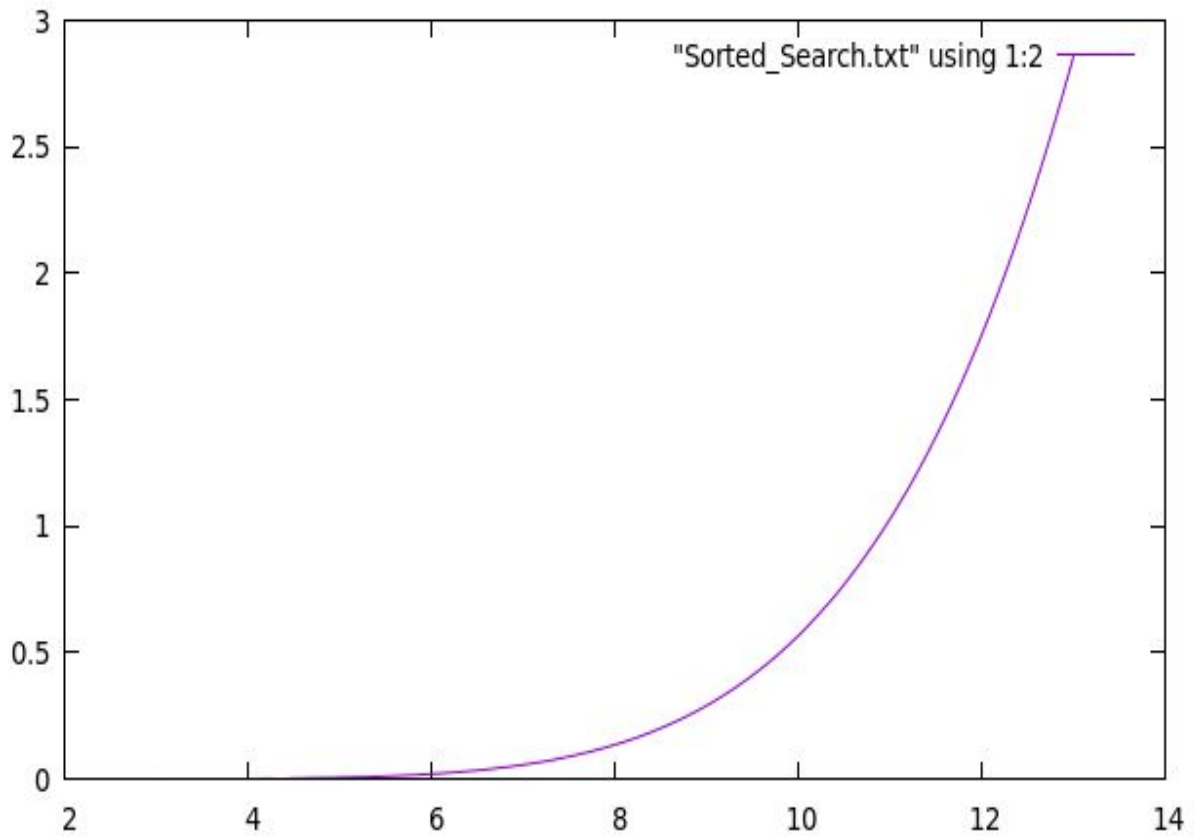
$\text{Time}(t)$ is $O(\log_{10}(n))$ so the graph should be linear curve.



Linear Search:

X-axis: $\log_{10}(n)$, Y-axis: $\text{time}(t)$.

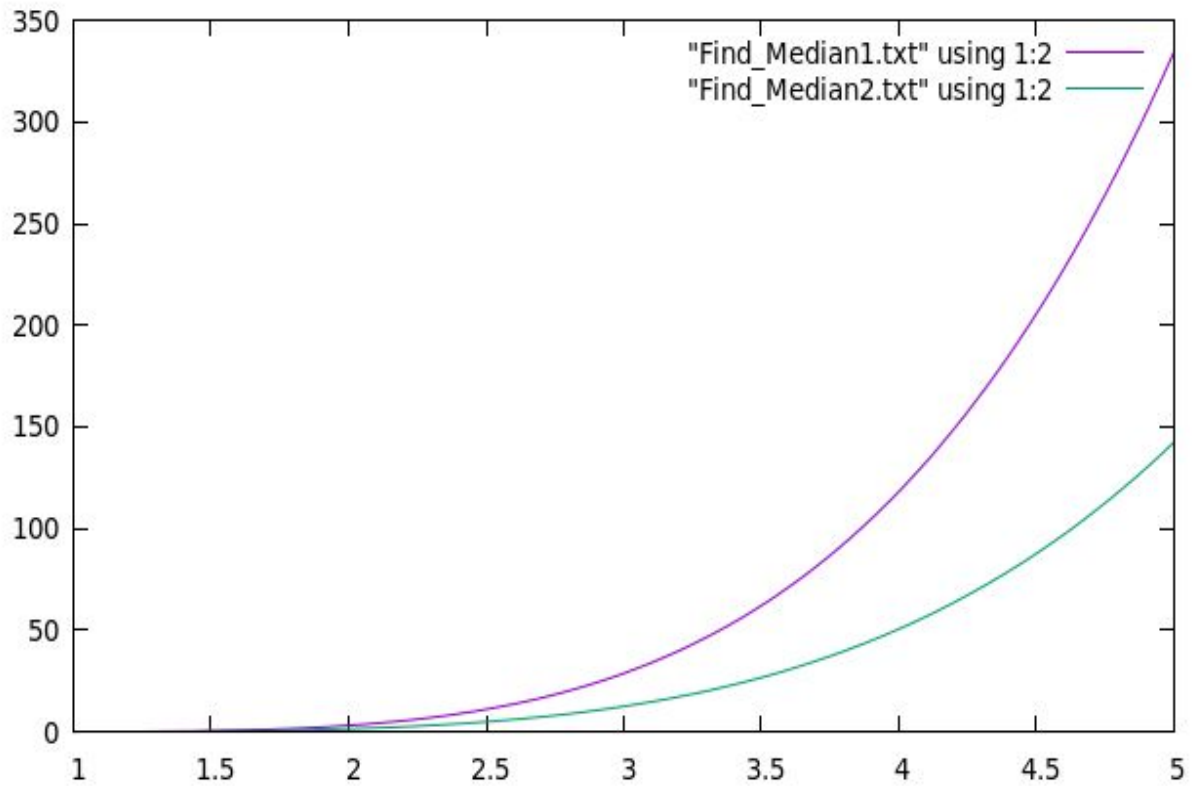
$\text{Time}(t)$ is $O(n)$ so the graph is exponential curve.



Sorted Search:

X-axis: $\log_2(n+m)$, Y-axis: time(t),

Time(t) is $O(n+m)$ so the graph should be exponential curve.



Find Median:

X-axis: $\log_{10}(n)$, Y-axis: time(t).

Time(t) is $O(n \cdot \log(m))$, m is constant for find_median1, find_median2 so it should be exponential graph.