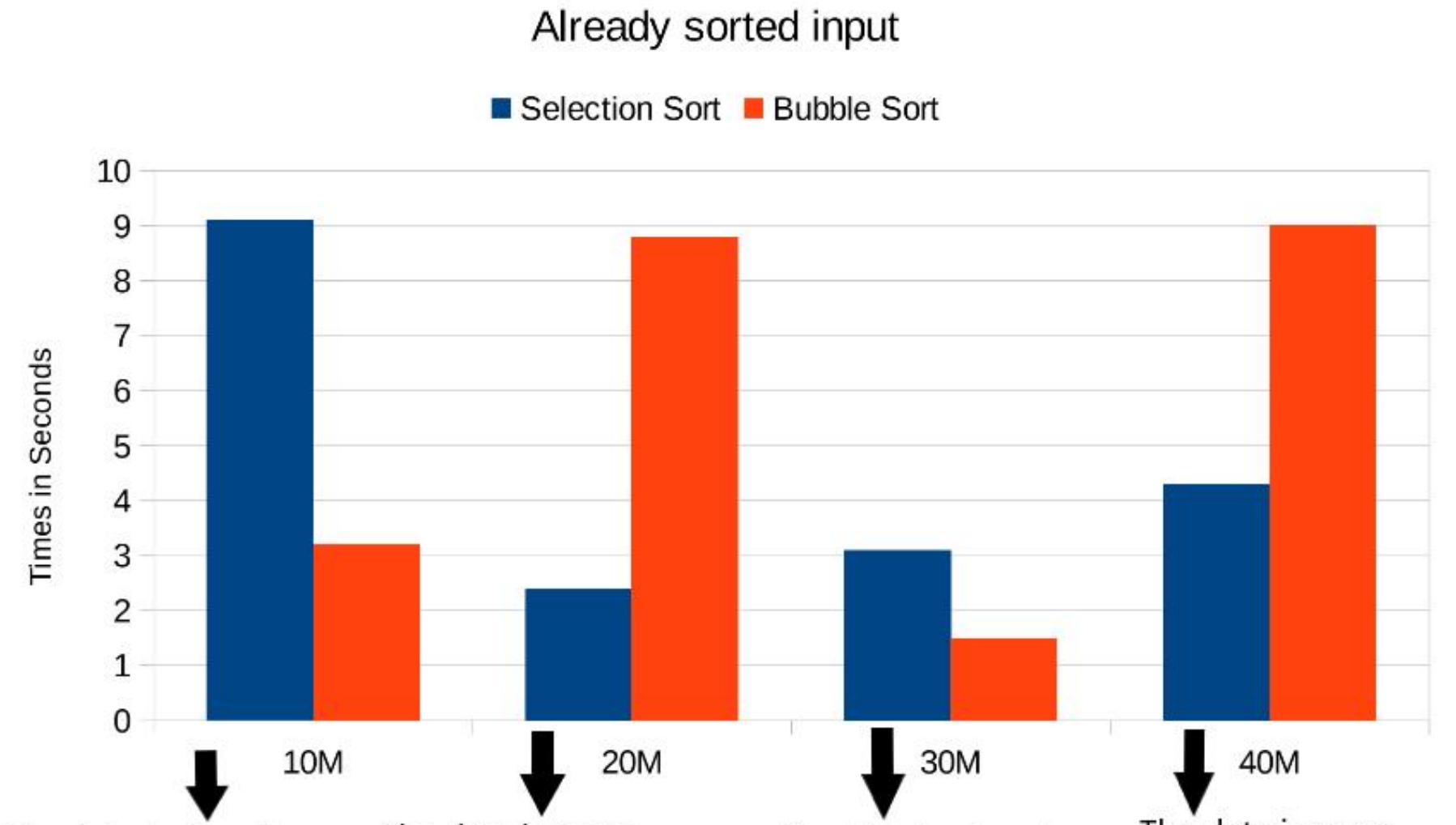
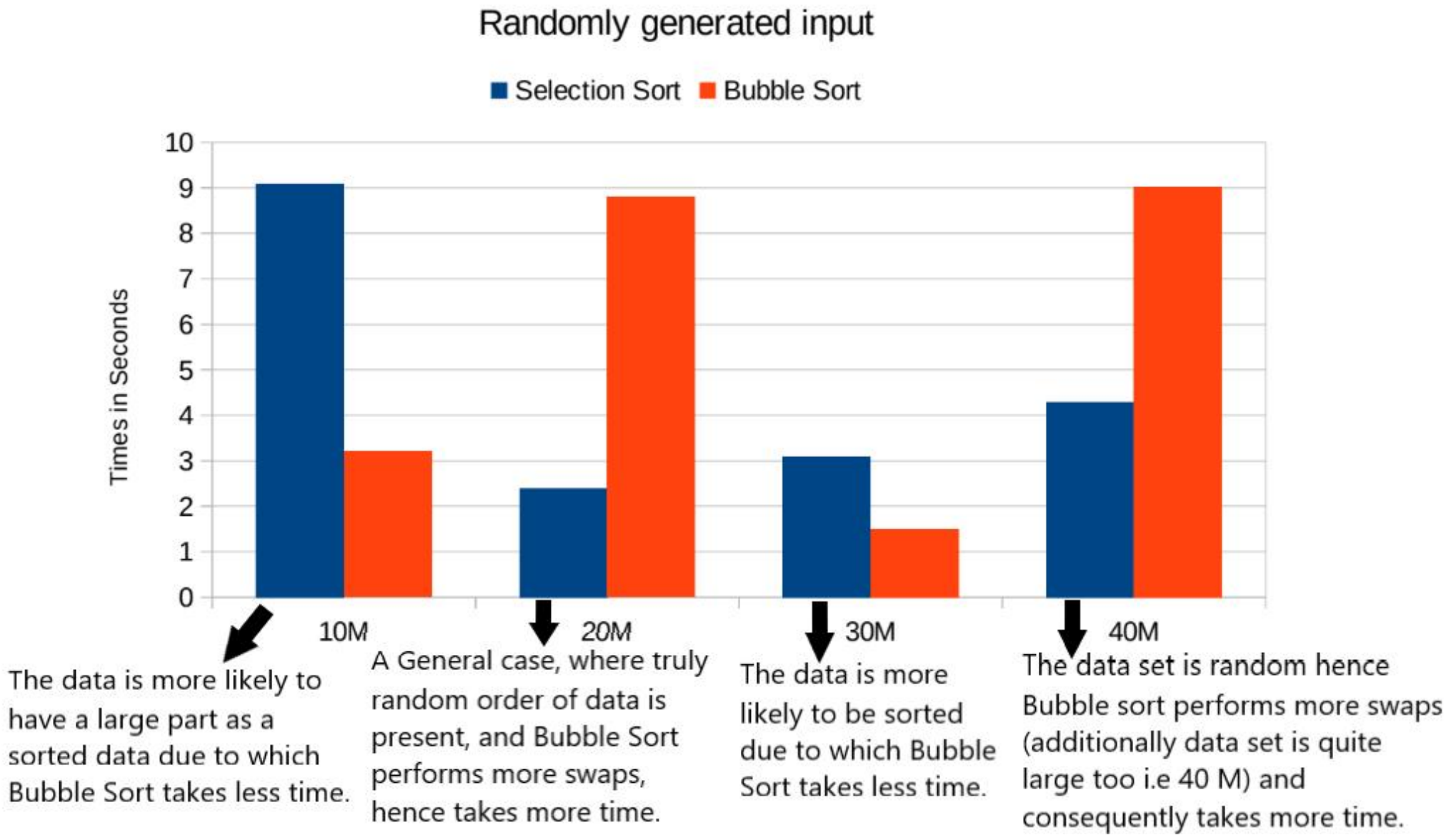


The data is already sorted in ascending order, hence Bubble Sort takes less time(O(n)=3 sec) than Selection Sort(O(n^2)=9 sec).

The data is more likely stored in descending order, hence bubble sort performs more operations and thus takes more time.

The data is stored in ascending order to some extent due to which Bubble Sort performs less swaps and hence takes less time.

The data is more likely stored in descending order, hence bubble sort perform more swaps and thus takes more time.


Randomly generated input
Selection Sort
Bubble Sort
Times in Seconds
10
9
8
7
6
5
4
3
2
1
0
10M
20M
30M
40M
The data is more likely to have a large part as a sorted data due to which Bubble Sort takes less time.
A General case, where truly random order of data is present, and Bubble Sort performs more swaps, hence takes more time.
The data is more likely to be sorted due to which Bubble Sort takes less time.
The data set is random hence Bubble sort performs more swaps (additionally data set is quite large too i.e 40 M) and consequently takes more time.