Name: Shaan Agarwal
UID: 2021300001
Batch: Comps A (A batch)
Experiment No: 1(B)

Aim: To find the running time of insertion sort and selection sort algorithm.

Algorithm:

1) Insertion Sort

```
insertionSort(unsorted array)
    n = length(A)
    for i = 1 to n – 1 do
        j = i
        while j > 0 and A[j – 1] > A[j] do
                swap(A[j], A[j – 1])
                j = j – 1
        end while
    end for
end of function
```

2) Selection Sort

```
selectionSort(array, size)
    repeat (size – 1) times
    set the first unsorted element as the minimum
    for each of the unsorted elements
        if element < currentMinimum
            set element as new minimum
    swap minimum with first unsorted position
end selectionSort
```

Conclusion: Thus, we have implemented insertion and selection sort algorithm on 1,00,000 randomly generated integers, found their running time and plotted them on a graph on excel sheet.