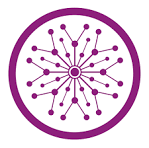
**Superior University**

**Lab no: 2**



**Name**: Bisaam Ahmad

**Roll no**: SU92-S24-BSSEM-097

**Section**: BSSE-3A

**Subject:** DSA (Lab)

**Submission Date:** 03-Febrary-2025

**Submission to**: Sir. Rasikh Ali

# **Task**

**Big O Notation:**

**Time Complexity =** 1 + n + n + 1 + n + n + n + 1 + 1 + 1

                  = 5n + 5;

                  = O(n)

**Explain:**

The time complexity of this code is O(n) because the for loop iterates n times and the cin condition also run n time and

int max = arr[0];

this statement runs 1 time so its O(1) constant.

for(int i = 0; i < size; i++){

        if (max < arr[i]){

            max = arr[i];

        }

    }

In this for loop runs n times and the condition inside it also check for n times. From all of these the Time complexity of this code is Big-O(n) because any term multiplying or dividing with n term ignores and take only n term so its answer is Big-O(n).

**Output:**

