**Note:**

* This is a strictly individual work. Sharing the solution with each other will be considered as violation of the honor code and any suspicious activity may be referred to the disciplinary committee. In case of any help, please consult the instructor.
* You can’t use any built-in function to implement following tasks.

**Submission Deadline: 22 November 2020, 11:55 PM**

**Total Marks: 10**

# **Complexity Analysis**

1. Indicate time complexities (in terms of Big-O notation) of all of the functions developed for Linked List, Circular Queue and Priority Queue.

|  |  |  |
| --- | --- | --- |
| **Circular Queue** | **Enqueue** | **Dequeue** |
| **O(1)** | **O(1)** |

|  |  |  |
| --- | --- | --- |
| **Priority Queue** | **Enqueue** | **Dequeue** |
| **O(N)** | **O(1)** |

|  |  |  |
| --- | --- | --- |
| **Linked List** | **Union** | **Intersection** |
| **O(N)** | **O(N)** |