

**Modern Education Society's**  
**Wadia College of Engineering, Pune**

<b>NAME OF STUDENT:</b>	<b>CLASS:</b>
<b>SEMESTER/YEAR:</b>	<b>ROLL NO:</b>
<b>DATE OF PERFORMANCE:</b>	<b>DATE OF SUBMISSION:</b>
<b>EXAMINED BY:</b>	<b>EXPERIMENT NO: DSL E-31</b>

**TITLE : To implement double-ended queue.**

**PROBLEM STATEMENT:** A double-ended queue (deque) is a linear list in which additions and deletions may be made at either end. Obtain a data representation mapping a deque into a one-dimensional array. Write C++ program to simulate deque with functions to add and delete elements from either end of the deque.

**OBJECTIVES :**

1. To understand structure of double ended queues.
2. To understand data representation using double ended queue for one-dimensional array.

**OUTCOME :**

1. To operate on the various structured data.
2. To analyze the problem to apply suitable algorithm and data structure.
3. To discriminate the usage of various structure in approaching problem solution.

**PRE-REQUISITES :**

1. Knowledge of C++ Programming
2. Knowledge of queue and priority queue.

**APPARATUS :**

1. OS: Ubuntu 18.04.2 LTS
2. Processor: Intel® Core™ i7-4790S CPU
3. Graphics: GeForce GT 610/PCIe/SSE2
4. Storage: 400 GB
5. Text Editor: gedit
6. Compiler: python3
7. Terminal

**QUESTIONS:**

1. Describe double ended queue operations.
2. How can we process one-dimensional array using double ended queue?
3. What are advantages of double ended queue over simple queue?