

Department of Computer Science and Engineering Indian Institute of Technology Jodhpur CSL2020 - Data Structures and Algorithms

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Lab - 4

- 1. Write a **Python program** to implement a **Circular Queue using array**. The queue needs to store only positive integers. An empty space in the queue is represented by 0. Ask user to provide maximum size of the queue to define it. Subsequently display a menu for the user and call appropriate function with inputs provided.
 - On menu input 1, call a function to insert data into the queue. The input will be given as a sequence of positive integers where the first integer will tell the number of values to be inserted. Ex. 4, 3, 7, 5, 1.
 - On menu input 2, call a function to delete data from the queue. The input will be an integer which will tell the number of values to be deleted.
 - On menu input 3, display the front and rear elements of the queue and their corresponding indices. Also display the current length of the queue.

Important: At each menu input, content of the array should be printed after completing the operation. If at any time underflow or overflow occurs, the error message "underflow" or "overflow" should be printed, respectively.