



Title :-

Write a C++ program to implement queue.

Objective :-

To add elements from rear end of Queue.

To delete elements from front end of Queue.

Problem Statement :-

Pizza parlor accepting maximum M orders. Orders are served in first come first served basis. Order once placed cannot be cancelled. Write C++ program to simulate the system using circular queue using array.

Theory and Concepts :-

Double Ended Queue :- The word dequeue is a short form of double ended queue.

It is representation of both stack and queue and can be used as stack and queue. In a deque, insertion as well as deletion can be carried out either at the rear end or the front end. Dequeue can be classified into two types;

A) Input Restricted Dequeue.

The following operation are possible in an input restricted dequeue;

- 1) Insertion of an element at the rear end
- 2) Deletion of an element from front end
- 3) Deletion of an element from rear end

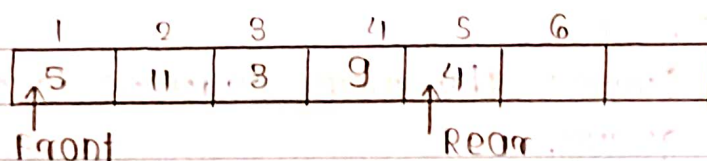
B) Output Restricted Dequeue.

The following operation are possible in an output



- 1) Deletion of an element from front end
- 2) Insertion of an element at rear end
- 3) Insertion of an element at the front end

- a) Using a circular array
- b) Using a singly linked list
- c) Using a singly circular linked list
- d) Using a doubly linked list
- e) Using a doubly circular linked list.



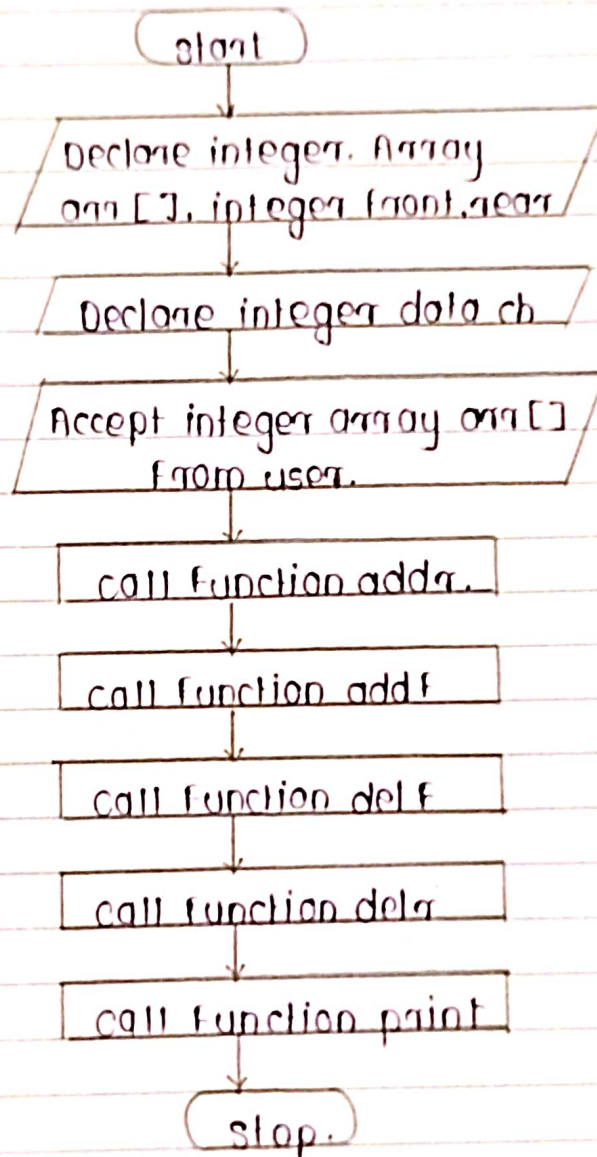
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Step 1:- Start
Step 2:- Declare integer array, integer front, rear.
Step 3:- Declare integer data, ch.
Step 4:- Accept integer array from user
Step 5:- call function addf
Step 6:- call function addr
Step 7:- call function delF
Step 8:- call function delr
Step 9:- call function Print
Step 10:- Stop.

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Flowchart :-



Conclusion :-

By using above code we successfully implemented CIRCULAR Queue.