

What is Circular Queue?

Circular Queue is a linear data structure in which the operations are performed based on FIFO (First In First Out) principle and the last position is connected back to the first position to make a circle. It is also called 'Ring Buffer'.

In a normal Queue, we can insert elements until queue becomes full. But once queue becomes full, we can not insert the next element even if there is a space in front of queue.

Circular Queue operations:

1. enqueue(Insert new element).
2. dequeue(Delete element).
3. isFull(Check if Queue is full).
4. isEmpty(Check if Queue is empty).
5. display(Display all queue elements).

Time complexity:

1. enqueue $O(1)$.
2. dequeue $O(1)$.
3. isFull $O(1)$.
4. isEmpty $O(1)$.
5. display $O(n)$.