

Circular Queue

```

#define N 5
int front = -1, rear = -1;
void enqueue(int x) {
    if (front == -1 && rear == -1) {
        front = rear = 0;
        queue[rear] = x;
    } else if (rear == N - 1) {
        else if ((rear + 1) % N == front) {
            else {
                rear = (rear + 1) % N;
                queue[rear] = x;
            }
        }
    }
}
void dequeue() {
    if (front == -1) {
        printf("Underflow");
    } else if (front == rear) {
        front = rear = -1;
    } else {
        front = (front + 1) % N;
        queue[front] = ?item;
        printf("Deleted item is %d", item);
    }
}

```

Q

```

void display() {
    if (front == -1) {
        printf("Underflow");
    } else {
        for (i = 0; i < N; i++) {
            int i = front;
            while (1) {
                printf(queue[i]);
                if (i == rear) break;
                i = (i + 1) % N;
            }
            printf("These are the elements of queue");
        }
    }
}

```

Output: Enter your choice : 1. enqueue 2. dequeue 3. display 4. exit
1

Enter element : 2

Enter your choice : 1. enqueue 2. dequeue 3. display 4. exit
2

Deleted element : 2

Enter your choice : 1. enqueue 2. dequeue 3. display 4. exit
3

Queue is empty

Enter your choice : 1. enqueue 2. dequeue 3. display 4. exit
4

Exiting

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