

# CIRCULAR QUEUE

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int front = -1;
int rear = -1;

#define size 5

void insert (int ele, int queue[])
{
    if ((rear+1) % size == front)
        printf("Queue Overflow");
    else
    {
        rear = (rear+1) % size;
        if (front == -1)
            front = 0;
        queue[rear] = ele;
    }
}

int delete (int queue[])
{
    if (rear == -1)
        return -9999;
    else
    {
        item = queue[rear];
        if (front == rear)
        {
            front = -1;
            rear = -1;
        }
        else {
            front = (front+1) % size;
        }
        return item;
    }
}

void display (int queue[])
{
    if ((front == -1) && (rear == -1))
    {
        printf("Queue is empty");
    }
    else
    {
        for (int i = front; i <= rear; i++)
        {
            printf("queue[%d] %d\n", queue[i]);
        }
        else
        {
            for (int i = front; i <= size-1; i++)
                printf(" %d\n", queue[i]);
            for (int i = 0; i <= rear; i++)
                printf(" %d\n", queue[i]);
        }
    }
}

```