Data Structures Lab, Assignment-10
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Instructions

- Please do not use any global variable unless you are explicitly instructed so.
- Please use proper indentation in your code and comment.
- Paste the code on BB portal in due time.

consider the given code segment.

```
#define MAXSIZE 10
struct fifo
{
        int arr[MAXSIZE];
        int front;
        int rear;
};
typedef struct fifo Queue;
```

Write a C program to demonstrate the following:

1. Write a C function **Queue *createQueue()** to create a queue by initializing front and rear by suitable values.
2. Write a C function **int isFullQueue(Queue* q)** to check whether the given queue is Full or not.
3. Write a C function **int isEmptyQueue(Queue* q)** to check whether the given queue is empty or not.
4. Write a C function **Queue *ENQUEUE(Queue* q, int key)** to insert given key in the queue.
5. Write a C function **int DEQUEUE(Queue* q)** to remove an element from the queue.
6. Write a C function **void displayQueue(Queue* q)** to display the values in the queue.

7. Write a C function **int countQueue(Queue* q)** to count the values in the queue.
8. The skeleton of void main () is given as follow
    - Create a Queue
    - Enqueue 70,76,91,95,45 in the queue
    - Count the number of element.
    - Call displayQueue function to display the queue.
    - Call DEQUEUE function
    - Call DEQUEUE function
    - Call countQueue function
    - Call displayQueue function to display the queue.