

LAB-3

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#include <stdio.h>
#include <stdlib.h>
#define QUE_SIZE 3
int item, front = 0, rear = -1, q[QUE_SIZE];
void insertrear()
{
    if (rear == QUE_SIZE - 1)
        printf("queue overflow\n");
    else
        rear = rear + 1;
    q[rear] = item;
}
int deletefront()
{
    if (front > rear)
        printf("queue underflow\n");
    else
        front = front + 1;
    return q[front];
}
void displayQ()
{
    int i;
    if (front > rear)
        printf("queue is empty\n");
    else
        printf("Contents of queue\n");
        for (i = front; i <= rear; i++)
            printf("%d\n", q[i]);
}

```

```
int main () {  
    int choice;  
    for( ; ; )  
    {  
        printf ("1: insertrear 2: deletefront 3: display  
              4: exit \n");  
        printf ("enter the choice\n");  
        scanf ("%d", &choice);  
        switch (choice)  
        {  
            Case 1: printf ("enter the item to be inserted\n");  
            Scanf ("%d", &item);  
            insertrear();  
            break;  
            Case 2: item = deletefront();  
            if (item == -1)  
                printf ("queue is empty");  
            else  
                printf ("item deleted=%d\n", item);  
            break;  
            Case 3: displayQ();  
            break;  
            default: exit(0);  
        }  
    }  
}
```