

```

#include <stdio.h>
#include <stdlib.h>
#define MAX 3

int front=0;
int rear=-1;

int queue[MAX];

void Enque(int);
int Deque();
void display();
int main(int argc, char **argv)
{
    int option;
    int item;
    do{
        printf("\n 1. Insert an element to Queue (EnQueue)");
        printf("\n 2. Delete an element from the Queue (DeQueue)");
        printf("\n 3. Display the content of the Queue ");
        printf("\n 4. Exit\n");
        printf("Enter the option :");
        scanf("%d",&option);
        switch(option)
        {
            case 1: printf("Enter the element\n");
                    scanf("%d",&item);
                    Enque(item);
                    break;
            case 2:
                    item=Deque();
                    if(item==-1)
                        printf("Queue is empty\n");
                    else
                        printf("Removed %d element from the queue",item);
                    break;
            case 3: display();
                    break;
            case 4: exit(0);
        }
    } while (option!=4);
    return 0;
}

void Enque(int ele)
{
    if (rear==MAX-1)
        printf("Queue is full\n");

```

```

else
{
    rear++;
    queue[rear]=ele;
}
}
int Dequeue()
{
    int item;
    if(front == -1)
        return -1;
    else
    {
        item=queue[front];
        front++;
        if(front>rear)
        {
            front=-1;
            rear=-1;
        }
        return item;
    }
}

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

```

```
isha — codelite-exec.sh — pattern ◀ codelite-exec.sh — 80x24
1. Insert an element to Queue (EnQueue)
2. Delete an element from the Queue (DeQueue)
3. Display the content of the Queue
4. Exit
Enter the option :1
Enter the element
4

1. Insert an element to Queue (EnQueue)
2. Delete an element from the Queue (DeQueue)
3. Display the content of the Queue
4. Exit
Enter the option :1
Enter the element
5

1. Insert an element to Queue (EnQueue)
2. Delete an element from the Queue (DeQueue)
3. Display the content of the Queue
4. Exit
Enter the option :1
Enter the element
6
```

```
isha — codelite-exec.sh — pattern • codelite-exec.sh — 80x24
6
1. Insert an element to Queue (EnQueue)
2. Delete an element from the Queue (DeQueue)
3. Display the content of the Queue
4. Exit
Enter the option :1
Enter the element
7
Queue is full. Max size is 3
1. Insert an element to Queue (EnQueue)
2. Delete an element from the Queue (DeQueue)
3. Display the content of the Queue
4. Exit
Enter the option :3
Queue contents:
4
5
6
1. Insert an element to Queue (EnQueue)
2. Delete an element from the Queue (DeQueue)
3. Display the content of the Queue
4. Exit
```

```
isha — codelite-exec.sh — pattern • codelite-exec.sh — 80x24
1. Insert an element to Queue (EnQueue)
2. Delete an element from the Queue (DeQueue)
3. Display the content of the Queue
4. Exit
Enter the option :2
Removed 4 element from the queue
1. Insert an element to Queue (EnQueue)
2. Delete an element from the Queue (DeQueue)
3. Display the content of the Queue
4. Exit
Enter the option :2
Removed 5 element from the queue
1. Insert an element to Queue (EnQueue)
2. Delete an element from the Queue (DeQueue)
3. Display the content of the Queue
4. Exit
Enter the option :2
Removed 6 element from the queue
1. Insert an element to Queue (EnQueue)
2. Delete an element from the Queue (DeQueue)
3. Display the content of the Queue
4. Exit
Enter the option :2
Queue is empty
```