

```
#include <stdio.h>
```

```
#include <stdlib.h>
```

```
#define MAX_SIZE 5
```

```
int queue[MAX_SIZE];
```

```
int front = -1, rear = -1;
```

```
void enqueue() {
```

```
    int n;
```

```
    printf("Enter number: ");
```

```
    scanf("%d", &n);
```

```
    if (rear == MAX_SIZE - 1) {
```

```
        printf("Queue Overflow");
```

```
        exit(1);
```

```
    }
```

```
    if (front == -1) {
```

```
        front = 0; // If the queue is empty, set front to 0
```

```
    }
```

```
    rear++;
```

```
    queue[rear] = n;
```

```
    printf("Inserted %d into the queue.\n", n);
```

```
}
```

```
void dequeue() {
```

```
    if (front == -1) {
```

```
        printf("Queue Underflow");
```

```

        return;
    }

    printf("Deleted %d from the queue.\n", queue[front]);

    if (front == rear) {
        // If there was only one element in the queue, reset front and rear
        front = -1;
        rear = -1;
    } else {
        front++;
    }
}

void display() {
    if (front == -1) {
        printf("Queue Underflow.\n");
        exit(1);
    }

    printf("Elements in the queue: ");
    for (int i = front; i <= rear; i++) {
        printf("%d ", queue[i]);
    }
    printf("\n");
    exit(1);
}

void main() {
    while(1){
        int choice;

```

```

printf("Enter 1 for Enqueue \nEnter 2 for Dequeue \nEnter 3 for Display");
printf("Enter your choice: ");
scanf("%d", &choice);
switch(choice){
    case 1: enqueue();
        break;
    case 2: dequeue();
        break;
    case 3: display();
        break;
}
}
printf("Shreyash Sinha 1BM22CS273");
}

```

```

Enter 1 for Enqueue
Enter 2 for Dequeue
Enter 3 for DisplayEnter your choice: 1
Enter number: 23
Inserted 23 into the queue.
Enter 1 for Enqueue
Enter 2 for Dequeue
Enter 3 for DisplayEnter your choice: 1
Enter number: 46
Inserted 46 into the queue.
Enter 1 for Enqueue
Enter 2 for Dequeue
Enter 3 for DisplayEnter your choice: 2
Deleted 23 from the queue.
Enter 1 for Enqueue
Enter 2 for Dequeue
Enter 3 for DisplayEnter your choice: 3
Elements in the queue: 46

```