```
#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 (front == 0 && rear == MAX_SIZE - 1) {
 printf("Queue Overflow");
 exit(1);
 }
 if (front == -1 && rear == -1) {
 front = rear = 0; // If the queue is empty, set front to 0
 }
 else if(rear == MAX_SIZE-1 && front != 0)
 {
 rear = 0;
 }
 else
 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 if(front == MAX_SIZE-1){
 front = 0;
 }
 else {
 front++;
 }
}
void display() {
 if (front == -1) {
 printf("Queue Underflow.\n");
 exit(1);
 }
 printf("Elements in the queue: ");
 if( rear >= front){
 for (int i = front; i <= rear; i++) {
 printf("%d ", queue[i]);
 }
 }
 else{
 for (int i = front; i <= MAX_SIZE-1; i++) {
 printf("%d ", queue[i]);
 }
 for (int i = 0; i <= rear; i++) {
 printf("%d ", queue[i]);
 }
}
```

```
 printf("Shruti Khandelia 1BMM2CS274");
 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;
 }
 }
}
```

```
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 Shruti Khandelia 1BMM2CS274
```