

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

```
#define max 5
```

```
int front = -1;
```

```
int rear = -1;
```

```
void insert();
```

```
void display();
```

```
int deleteq();
```

```
int q[max];
```

```
void insert() {
```

```
    int val;
```

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

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

```
    if ((rear + 1) % max == front) {
```

```
        printf("Queue is full.");
```

```
    } else if (rear == -1) {
```

```
        rear = front = 0;
```

```
        q[rear] = val;
```

```
        printf("Inserted successfully.");
```

```
    } else {
```

```
        rear = (rear + 1) % max;
```

```
        q[rear] = val;
```

```
        printf("Inserted successfully.");
```

```
    }
```

```
}
```

```
int deleteq() {
```

```
    int val;
```

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

```
        printf("Queue is empty.");
```

```
        return -1;
```

```
    } else if (front == rear) {
```

```
        val = q[front];
```

```
        front = rear = -1;
```

```
        printf("Deleted value: %d", val);
```

```
        return val;
```

```
    } else {
```

```
        val = q[front];
```

```
        front = (front + 1) % max;
```

```

        printf("Deleted value: %d", val);
        return val;
    }
}

void display() {
    int i;

    if (front == -1) {
        printf("Queue is empty.");
    } else {
        printf("Queue is: ");
        for (i = front; i != rear; i = (i + 1) % max) {
            printf("%d ", q[i]);
        }
        printf("%d", q[i]);
    }
}

int main() {
    int choice;

    do {
        printf("\n**** Main Menu ****\n");
        printf("1.Insert\n");
        printf("2.Delete\n");
        printf("3.Display\n");
        printf("Enter your choice: ");
        scanf("%d", &choice);
        printf("\n");

        switch (choice) {
            case 1:
                insert();
                break;

            case 2:
                deleteq();
                break;

            case 3:
                display();
                break;

            case 4:
                break;
        }
    }
}

```

```
} while (choice != 4);
```

```
return 0;
```

```
}
```