

```

#include <stdio.h>
#include <stdlib.h>
#define MAX 5
void insert ();
void delete ();
void display ();
int queue_array[MAX];
int rear = -1;
int front = -1;
int main ()
{
    int choice;
    while(1)
    {
        printf("1. Insert element to enqueue n\n");
        printf("2. Delete element to dequeue n\n");
        printf("3. Display all elements of queue\n");
        printf("4. Quit\n");
        printf("Enter your choice : ");
        scanf("%d", &choice);
        switch (choice)
        {
            case 1:
                insert();
                break;
            case 2:
                delete();
                break;
            case 3:
                display();
                break;
            case 4:
                exit(1);
            default:
                printf("Wrong choice n\n");
        }
    }
}

```

```
void insert ( )
```

```
{
```

```
    int item;
```

```
    if (rear == max-1)
```

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

```
    else
```

```
    {
```

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

```
            front = 0;
```

```
            printf ("Insert the element in queue : \n");
```

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

```
            rear = rear + 1;
```

```
            queue-array[rear] = item;
```

```
        }
```

```
    }
```

```
void delete ( )
```

```
{
```

```
    if (front == -1 || front > rear)
```

```
    {
```

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

```
        return ;
```

```
    }
```

```
    else
```

```
    {
```

```
        printf ("Element deleted from queue is: \n %d",
```

```
                queue-array[front];
```

```
                front = front + 1;
```

```
    }
```

```
}
```

```
void display ( )
```

```
{
```

```
    int i;
```

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

```
        printf ("Queue is empty \n");
```

```
    else
```

{

```
printf("Queue is : ");  
for (i = front; i <= rear; i++)  
printf("%d", queue_array[i]);  
printf("\n");
```

}

}