```
#include <stdio.h>

#include <stdlib.h>


#define MAX 3

int qu[MAX];

int front = -1;

int rear = -1;

void insert();

int delete_q();

void display();

int main()

{

   while (1)

   {

      int choice,d;

      printf("\n1. insert \t 2.delete \t 3.display \t 4.exit\n");

      scanf("%d", &choice);

      switch (choice)

{

case 1:

   insert();

   break;

case 2:

   d=delete_q();
```

```
    if (d!= -1)
        printf("\n The number deleted is : %d", d);
    break;
case 3:
    display();
    break;
case 4:
    exit(0);
        }
    }
}
void insert()
{
    if (rear == MAX - 1)
    {
        printf("Queue is Full\n");
        return;
    }
printf("Enter the element to be inserted\n");
int a;
scanf("%d", &a);
if ((front == -1) && (rear == -1))
{
    front = rear = 0;
```

```
    }
    else
    {
        rear++;
    }
    qu[rear] = a;
}
int delete_q()
{
    int val;
    if(front==-1 ||rear<front)
    {
        printf("Underflow\n");
        return -1;
    }
    else{
        val=qu[front];
        front++;
    if(front>rear)
    {
        front=rear=-1;
    }
    return val;
}
```

```
}
void display()
{
    printf("the elements are:\t");
    for (int i = front; i <= rear; i++)
    {
        printf("%d \t", qu[i]);
    }
}
```

```
1. insert    2.delete    3.display   4.exit
1
Enter the element to be inserted
6
1. insert    2.delete    3.display   4.exit
1
Enter the element to be inserted
4
1. insert    2.delete    3.display   4.exit
1
Queue is Full
1. insert    2.delete    3.display   4.exit
2
The number deleted is : 5
1. insert    2.delete    3.display   4.exit
5
1. insert    2.delete    3.display   4.exit
3
the elements are:   6   4
1. insert    2.delete    3.display   4.exit
2
The number deleted is : 6
1. insert    2.delete    3.display   4.exit
2
The number deleted is : 4
1. insert    2.delete    3.display   4.exit
2
Underflow
```