

PROGRAM 13:

```
#include <stdio.h>

#include<stdlib.h>

#define MAX 50

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 queue \n");

printf("2.Delete element from queue \n");

printf("3.Display all elements of queue \n");

printf("4.Quit \n");

printf("Enter your choice : \n");

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");  
}  
}  
}  
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 : %d\n", queue_array[front]);
front = front + 1;
}
}

void display()
{
int i;
if(front == - 1)
printf("Queue is empty \n");
else
{
printf("Queue is : \n");
for(i = front; i <= rear; i++)
printf("%d ", queue_array[i]);
printf("\n");
}
}
```

OUTPUT:

```
C:\Users\A.V.NAGA KAVYA\Documents\ds13.exe
1.Insert element to queue
2.Delete element from queue
3.Display all elements of queue
4.Quit
Enter your choice :
1
Insert the element in queue :
12
1.Insert element to queue
2.Delete element from queue
3.Display all elements of queue
4.Quit
Enter your choice :
2
Element deleted from queue is : 12
1.Insert element to queue
2.Delete element from queue
3.Display all elements of queue
4.Quit
Enter your choice :

```