

13.QUEUE OPERATIONS:-

CODE:-

```
#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:-

```
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 :
65
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 :
95
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 : 65
1.Insert element to queue
2.Delete element from queue
3.Display all elements of queue
4.Quit
Enter your choice :
65
Wrong choice
1.Insert element to queue
2.Delete element from queue
3.Display all elements of queue
4.Quit
Enter your choice :
3
Queue is :
95 n1.Insert element to queue
2.Delete element from queue
3.Display all elements of queue
4.Quit
Enter your choice :
```