```
#include <stdio.h>
 #define MAX 50

void insert();
void delete();
void display();
int queue[MAX];
int rear = - 1;
int front = - 1;
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 : ");
      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("Inset the element in queue : ");
      scanf("%d", &item);
      rear = rear + 1;
      queue[rear] = item;
   }
}

void delete()
{
   if (front == - 1 || front > rear)
   {
      printf("Queue Underflow \n");
      return ;
   }
   else
   {
      printf("Element deleted from queue is : %d\n", queue[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[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
Inset the element in queue : 2
1.Insert element to queue
2.Delete element from queue
3.Display all elements of queue
4.Quit
Enter your choice : 1
Inset the element in queue : 3
1.Insert element to queue
2.Delete element from queue
3.Display all elements of queue
4.Quit
Enter your choice : 1
Inset the element in queue : 5
1.Insert element to queue
2.Delete element from queue
3.Display all elements of queue
4.Quit
Enter your choice : 3
Queue is :
2 3 5
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 : 2
1.Insert element to queue
2.Delete element from queue
3.Display all elements of queue
4.Quit
Enter your choice : 3
Queue is :
3 5
1.Insert element to queue
2.Delete element from queue
3.Display all elements of queue
4.Quit
Enter your choice : 4
```