LINEAR QUEUE

```
#include <stdio.h>
#define MAX 5
int queue[MAX];
int rear=-1,front=-1;
void insert()
{
  int add_item;
  if (rear == MAX - 1)
  printf("Queue Overflow \n");
  else
  {
    if (front == - 1)
        front = 0;
    printf("Enter the element to be inserted:");
    scanf("%d", &add_item);
    rear = rear + 1;
    queue[rear] = add_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 \n", queue[i]);
    printf("\n");
 }
}
main()
{
  int choice;
  while (1)
  {
    printf("1:INSERT\n");
     printf("2:DELETE\n");
    printf("3:DISPLAY\n");
    printf("4.EXIT\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");
           }
     }
}
  ::DISPLAY
LEXIT
Enter your choice : 1
inter the element to be inserted:34
L:INSERT
E:DELETE
E:DISPLAY
 3:DISPLAY
4.EXIT
Enter your choice : 1
Enter the element to be inserted:45
1:INSERT
2:DELETE
3:DISPLAY
4.EXIT
Enter your choice : 2
Element deleted from queue is : 34
1:INSERT
2:DELETE
3:DISPLAY
4.EXIT
Enter your choice : 3
   nter your choice : 3
ueue is :
  L:INSERT
2:DELETE
3:DISPLAY
4.EXIT
Enter your choice : _
```