```
Lab program 3:-
#includexstdio.h>
#include < proces h>
# define QUE - SIZE 3
int item, front=0, new=-1, qr[10];
void insert reas ()
  if ( noor = = QUE-SIZE-1)
   print[" \n - - - - - - \n QUEUE OVERFLOW \n-
    return;
   reer+=1;
   or [rear] = item;
 int delete front ()
  ib ( front 7 heer)
     (0 = trony
     roar = -1;
     return -1;
    return of [front++];
          page
          Date
```

```
void display Olls
  iv tu
     14 (Hent > rear)
  plintf ("m ----
                              INQUEUE ISEMPTYIN - --
  nesturn;
  printf ("londont of the queue \n");
   for (1= front; (=700); 1++)
  * print("xd m", q(1));
void main()
ind chaice;
for (i : i)
      printf("In 1: Instra Reas In 2: Delete Front In 3: Display In 4: EXITY);
     printf ("Enter your chaice: ");
     Sanf (" / d", Achola);
  Switch (choia)
      off 1: printf ("In Enter the value to be injerted: ");
             scanf ("/d" xitem);
               injertros ();
               bleek;
        cose 2: item = delete front();
            if (item = = -1)
               printf ("\n - - - - - - - n QUEUE IS EMPTY n - - - - . Wit
              else
             printf (" In I tem deleted = xd In item);
             breek;
        (se 3: Deyol);
               break;
         defaut: return;
```

```
#include<stdio.h>
#include<process.h>
#define QUE_SIZE 3
int item, front=0, rear=-1,q[10];
void insertrear()
-
   if(rear==QUE_SIZE-1)
      printf("\n----\nQUEUE OVERFLOW\n----\n");
      return;
   rear+=1;
   q[rear]=item;
}
int deletefront()
•
   if(front>rear)
       front=0;
      rear=-1;
       return -1;
   return q[front++];
}
void displayQ()
{
   int i;
   if(front>rear)
                       -----\nQUEUE IS EMPTY\n-----\n");
      printf("\n--
      return;
   printf("Contents of the queue:\n");
   for(i=front;i<=rear;i++)
      printf("%d\n",q[i]);
```

```
void main()
{
   int choice;
   for(;;)
       printf("\n1:Insert Rear\n2:Delete Front\n3:Display Queue\n4:EXIT\n");
       printf("Enter your choice: ");
       scanf("%d",&choice);
       switch(choice)
       1
           case 1:printf("\nEnter the value to be inserted: ");
                 scanf("%d",&item);
insertrear();
           break;
case 2:item=deletefront();
                  if(item==-1)
                   printf("\n----\nQUEUE IS EMPTY\n-----
                    printf("Item Deleted= %d\n",item);
                 break;
           case 3:displayQ();
                break;
           default:return;
```

```
1:Insert Rear
2:Delete Front
3:Display Queue
4:EXIT
Enter your choice: 1
Enter the value to be inserted: 12
1:Insert Rear
2:Delete Front
3:Display Queue
4:EXIT
Enter your choice: 1
Enter the value to be inserted: 13
1:Insert Rear
2:Delete Front
3:Display Queue
4:EXIT
Enter your choice: 1
Enter the value to be inserted: 14
1:Insert Rear
2:Delete Front
3:Display Queue
4:EXIT
Enter your choice: 1
Enter the value to be inserted: 15
QUEUE OVERFLOW
```

```
1:Insert Rear
2:Delete Front
3:Display Queue
4:EXIT
Enter your choice: 3
Contents of the queue:
12
13
14
1:Insert Rear
2:Delete Front
3:Display Queue
4:EXIT
Enter your choice:
                    2
Item Deleted= 12
1:Insert Rear
2:Delete Front
3:Display Queue
4:EXIT
Enter your choice:
                    2
Item Deleted= 13
1:Insert Rear
2:Delete Front
3:Display Queue
4:EXIT
Enter your choice:
Item Deleted= 14
1:Insert Rear
2:Delete Front
3:Display Queue
4:EXIT
Enter your choice:
QUEUE IS EMPTY
```

1:Insert Rear

2:Delete Front

3:Display Queue

4:EXIT

Enter your choice: 4

PS D:\DS 3rd Sem Notes\DS Lab\Week 5> []