Lab Program-2:

```c
# include <stdio.h>
# include <stdlib.h>
# define que_size 3
int item, front = 0, rear = -1, q[que_size], count=0;
void insert_rear()
{
    if (count == que_size)
    {
        printf ("queue overflow");
        return;
    }
    rear = (rear+1) % que_size;
    q[rear] = item;
    count++;
}
int delete_front()
{
    if (count == 0) return -1;
    item = q[front];
    front = (front +1) % que_size;
    count = count - 1;
    return item;
}
```

```c
void displayq()
{
    int i, f;
    if( count == 0)
    {
        printf ("queue is empty");
        return;
    }

    f = front;
    printf (" Contents of queue \n");
    for ( i=0; i <count; i++)
    {
        printf (" %d\n", q[f]);
        f = (f+1)% que-size;
    }
}

void main()
{
    int choice;
    for (;;)
    {
        printf ("\n 1. Insert rear \n 2. deletefront.
                 \n 3. display \n 4. exit \n ");
```

```c
printf ("Enter the choice: ");
scanf ("%d", &choice);
switch (choice)
{
    case 1: printf (" Enter the item to be inserted: ");
        scanf ("%d", &item );
        insertrear();
        break;
    case 2: item = deletefront ();
        if (item == -1)
        printf ("queue is empty \n");
        else
        printf ("item deleted is %d \n", item );
        break;
    case 3: displayq();
        break;
    default: exit (0);
}
}
}
```