LAB6- Circular Queue

```
#include <stdio.h>
#include <stdlib.h>
int item, front=0, rear=-1, q[10], count=0, qsize;

void insert()
{
    if (count==qsize)
    {
        printf("queue overflow\n");
        return;
    }
    rear=(rear+1)%qsize;
    q[rear]=item;
    count++;
}

int delete()
{
    if (count==0)
    {
        return(-1);
    }
    item=q[front];
    front=(front+1)%qsize;
    count--;
```

```
    return item;
}

void display()
{
    if (count == 0)
    {
        printf ("Queue is empty \n");
        return;
    }
    printf ("Contents of queue:\n");
    int f = front;
    for (int i=1; i<= count ; i++)
    {
        printf ("\t%d\n", q[f]);
        f=(f+1) % q.size;
    }
}

int main()
{
    int n;
    for (;;)
    {
        printf ("\n1. Insert \n2. Delete \n3. Display
                \n4. Exit \n");
```

```
scanf("%d", &n);
switch(n)
{
    case 1: printf("Enter item \n");
            scanf("%d", &item);
            insert();
            break;
    case 2: item = delete();
            if (item == -1)
                printf("Queue is empty \n");
            else
                printf("deleted item: %d \n",
                        item);
            break;
    case 3: display();
            break;
    default: exit(0);
    }
  }
}
```