```
#include <stdio.h>
#include <stdlib.h>
#define MAX 3

int front=-1;
int rear=-1;

int queue[MAX];

void Enque(int);
int Deque();
void display();
int main(int argc, char **argv)
{
        int option;
    int item;
    do{
       printf("Circular Queue\n");
       printf("\n 1. Insert to Queue (EnQueue)");
       printf("\n 2. delete from the Queue (DeQueue)");
       printf("\n 3. Display the content ");
       printf("\n 4. Exit\n");
       printf("Enter the option :");
       scanf("%d",&option);
       switch(option)
       {
          case 1:  printf("Enter the element\n");
                   scanf("%d",&item);
                   Enque(item);
                   break;
          case 2: item=Deque();
                  if(item==-999)
                     printf("Queue is empty");
                  else
                  printf("Removed element %d from the queue",item);
                  break;
          case 3: display();
                  break;
          case 4: exit(0);
       }
    } while (option!=4);
        return 0;
}

void Enque(int ele)
{
    if(((front == 0 && rear == MAX - 1))|| (front == rear + 1) )
    {
       printf("Queue is full\n");return;

    }
    else
    {
      rear=(rear+1)%MAX;
      queue[rear]=ele;
      if(front ==-1)
         front=0;


    }
```

```
}
int Deque()
{
    int item;
    if((front == -1)&&(rear == -1))
    {

        return(-999);
    }
    else
    {
        item=queue[front];

        if(front==rear)
        {
            front=-1;
            rear=-1;
        }
        else
        {
            front=(front+1)%MAX;
        }
        return item;
    }

}

void display()
{
    int i;
    if(((front==-1)&& (rear==-1))|| (front==rear))
    {

        printf("Queue is empty\n");return;

    }
    else
    {
        for (i = front; i != rear; i = (i + 1) % MAX)
        {
             printf("%d ", queue[i]);
        }
             printf("%d ", queue[i]);
    }
}
```