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#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);
```

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}
    } 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
    {
        printf("\n Queue contents:\n");
        for(i=front; i<=rear; i++)</pre>
            printf("%d", queue[i]);
    }
}
```