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#include <stdio.h>
#include <stdlib.h>
#define MAX 5
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("\n Circular Queue\n");
    printf("\n1. Insert to Queue (EnQueue)");
    printf("\n2. Delete from the Queue (DeQueue)");
    printf("\n3. Display the content");
    printf("\n4. 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");
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            else
                printf("Removed element from the
                        queue %d", 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 {
      printf("\n Queue contents: \n");
      for (i = front; i <= rear; i++)
          printf ("%d \t", queue[i]);
      }
}
```