DEV KANSAL
1BM19CS046
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```
# include <stdio.h>
 # include <stdlib.h>
  # define MAX 3
   int front = -1
   int rear = -1
   int queue [MAX];
void enqueue (int);
  int deque ();
  void display ();
 int main (int argC, char ** argv)
 {
 int option;
 int item;
 do
 {
printf(" circular queue \n");
Printf(" \n1. Insert the queue (Enqueue)\n2. delete
        from the queue (Dequeue) \n 3. Display the
     content \n 4. Exit\n");
 scanf(" %d", & option);
  switch (option)
   { case 1 :  printf("enter the element\n");
              scanf("%d", & item)
           Enqueue(item)  break;
case 2 : item= Dequ( );
      if (item==-999)
      printf(" Queue is empty");
  else
    printf("Removed element from the queue %d",item);
       break;
    case 3 : Display() ;
               break;
  case 4: exit(0);
     }
    } while(option!=4);
       return0;
    }
   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 ( (front = = -1 ) && (rear = = -1) || (front = = rear))
   { printf ("Queue is empty \n"); return ;
     }
```

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

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