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LAB-3

0-3) WAP to stimulate the working of a queue of integers using an array. Provide the following operations. a) Insert b) Delete c) Display. The program should print appropriate messages for queue empty & queue overflow conditions

→
```
# include <stdio.h>
# include <stdlib.h>
# define N 5
int queue[N];
void enq (int a, int *front, int *rear)
{   if (rear == N-1)
        printf("\n QUEUE IS FULL");
    else
{ if (*front == -1)
    *front = 0;
 (*rear)++;
queue[*rear] = a;
printf("\n Insertion Done !"); }}

void deq (int *front, int *rear)
{   if (*front == *rear)
    printf ("\n Queue is empty");
else
{ printf("\n deleted element %d", queue);
    *front = *front + 1;
}}
void display (int *front, int *rear)
{   if (*rear == -1)
    printf("\n QUEUE IS EMPTY");
    else { int i;
```


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```
printf ("In QUEUE ELEMENTS ARE:\t");
for (i=*front ; i<=*rear; i++)
printf(" %d \t", queue[i]); }}

int main()
{ int a, choice;
int *front = -1, rear=-1;
while (1)
{ printf ("\n ENTER \n");
  printf ("\n To INSERT ");
  printf ("\n To DELETE ");
  printf("\n To DISPLAY");
  printf("\n To EXIT);
  printf("\n Enter your choice");
  scanf ("%d", &choice);
  switch (choice)
{ case 1:
  printf ("Enter the value to inserted");
  scanf("%d", &a);
  enq (a, &front, &rear);
  break;
case 2:
  deq (&front, &rear);
  break;
case 3:
  display (&front, &rear);
  break;
case 4:
  return 0;
default:
  printf ("\n INVALID");
} } return 0;
```

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