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1BM19CS010

LAB-3

```
#include <stdio.h>
#include <stdlib.h>
#define maxsize 5
void enque(int *Q, int *front, int *rear)
{
int ele;
if (*rear >= maxsize-1)
{
printf("Queue is full\n");
return 0;
}
if (*front==-1)
{
(*front)++;
}
(*rear)++;
printf("Enter the element to be inserted");
scanf("%d", &ele);
*(Q+*rear)=ele;
}

void display(int *Q, int *front, int *rear)
{
if (*front == -1 && *rear==-1)
printf("Queue is empty!!!\n");
else
{
printf("Elements in queue are:\n");
```

```
for (int i = *front; i <= *rear; i++)
  {
    printf("%d", *(q+i));
  }
  printf("\n");
}

void dequeue(int *q, int *front, int *rear)
  {
  int ele;
  if (*front == -1 && *rear == -1)
    {
      printf("Queue is empty!!!!\n");
      return;
    }
  else if (*front == *rear)
    {
      ele = *(q + *front);
      *front = -1;
      *rear = -1;
    }

else {  ele = *(q + *front);
        (*front)++;
    }
    printf("Deleted Element are: %d\n", ele);
}
```

```
void main()
{
int front = -1, rear = -1
int queue[maxsize];
int choice;
printf("1. Enqueue\n");
printf("2. Dequeue\n");
printf("3. Display\n");
printf("4. Exit\n");

do
{
printf("Enter your choice");
scanf("%d", &choice);
switch(choice)
{
case1: enqueue(queue, &front, &rear);
       break;
case2: dequeue(queue, &front, &rear);
       break
case3: Display(queue, &front, &rear);
       break;
case4: exit(0);
       break;
default: printf("Please input correct choice\n");
       break;
}
while(choi != 4);
}
```