IMPLEMENTATION OF QUEUE USING ARRAY

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1   #include<stdio.h>
2   int A[100],n,i;
3   int item,opt;
4   int front=-1;
5   int rear=-1;
6   void ENQUEUE(int item){
7         if(rear==n-1){
8            printf("Queue is FULL. Insertion is not possible.\n");
9         }
10        else if(front==-1){
11        printf("Enter the item to be inserted: ");
12        scanf("%d", &item);
13        front=0;
14        rear=0;
15        A[rear]=item;
16        }
17        else{
18        printf("Enter the item to be inserted: ");
19        scanf("%d", &item);
20        rear++;
21        A[rear]=item;
22        }
23  }
24  void DEQUEUE(){
25        if(front==-1){
26        printf("Queue is EMPTY\n");
27        }
28        else if(front==rear)
29        {
30        printf("Deleted item is %d",A[front]);
31        front=-1;
32        rear=-1;
33        }
34        else{
35        printf("Deleted item is %d",A[front]);
36        front++;
37        }
38        }
39  void DISPLAY(){
40
41        if(front==-1){
```

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42              printf("Queue is EMPTY\n");
43          }
44          else{
45          printf("The entered queue elements are:\n");
46          for(i=front;i<=rear;i++){
47          printf("%d\t", A[i]);
48          }
49          printf("\n");
50          }
51      }
52      void main(){
53      printf("Enter the size of the queue: ");
54      scanf("%d", &n);
55      do{
56      printf("\nEnter the option: \n");
57      printf("1.ENQUEUE \n2.DEQUEUE \n3.DISPLAY \n4.EXIT\n");
58      scanf("%d", &opt);
59        switch(opt){
60              case 1: ENQUEUE(item);
61                      break;
62              case 2: DEQUEUE();
63                     break;
64              case 3: DISPLAY();
65                     break;
66              case 4: break;
67              default: printf("Invalid option...");
68      }
69      } while(opt!=4);
70      }
71
```