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HOME

December 05, 2021

IMPLEMENTATION OF QUEUE USING STACK

```
1. /*
2.  implemaintaction Of Queue using Stack
3. */
4. #include<stdio.h>
5. #define N 5
6.
7. int stack1[N],stack2[N];
8. int top1=-1,top2=-1,count=0;
9.
10. void Enqueue(int x);
11. void Dequeue();
12. void Display();
13. void push1(int data);
14. void push2(int data);
15. int pop1();
16. int pop2();
17.
18. int main(){
19.     int choice,x;
20.     do{
21.         printf("\n***Circular Queue***\n");
22.         printf("1. Enqueue\n");
23.         printf("2. Dequeue\n");
24.         printf("3. Display\n");
25.         printf("0 To Exit\n");
26.         printf("Enter Choice ");
27.         scanf("%d",&choice);
28.         switch(choice){
```

```

29.             case 1:
30.                 printf("Enter x ");
31.                 scanf("%d",&x);
32.                 Enqueue(x);
33.                 break;
34.             case 2:
35.                 Dequeue();
36.                 break;
37.             case 3:
38.                 Display();
39.                 break;
40.             default:
41.                 printf("\n!Wrong Choice!\n");
42.             }
43.         }while(choice!=0);
44.         return 0;
45.     }
46.
47. void Enqueue(int x){
48.     push1(x);
49.     count++;
50. }
51. void Dequeue(){
52.     int i,a,b;
53.     if(top1== -1 && top2== -1){
54.         printf("\nQueue Is Empty");
55.     }
56.     else{
57.         for(i=0;i<count;i++){
58.             a=pop1();
59.             push2(a);
60.         }
61.         b=pop2();
62.         printf("Dequeued Element is %d",b);
63.         count--;
64.         for(i=0;i<count;i++){
65.             a=pop2();
66.             push1(a);
67.         }
68.     }
69. }
70. void push1(int data){
71.     if(top1==N-1){

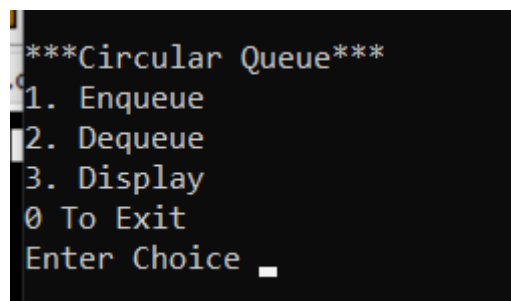
```

```

72.             printf("\nOverflow\n");
73.         }
74.     else{
75.         top1++;
76.         stack1[top1]=data;
77.     }
78. }
79. void push2(int data){
80.     if(top2==N-1){
81.         printf("\nOverflow\n");
82.     }
83.     else{
84.         top2++;
85.         stack2[top2]=data;
86.         count++;
87.     }
88. }
89. int pop1(){
90.     return stack1[top1--];
91. }
92. int pop2(){
93.     return stack2[top2--];
94. }
95. void Display(){
96.     int i;
97.     for(i=0;i<=top1;i++){
98.         printf("%d ",stack1[i]);
99.     }
100. }

```

OUTPUT



```

***Circular Queue***
1. Enqueue
2. Dequeue
3. Display
0 To Exit
Enter Choice _

```

Share

Labels: implementation of Queue Using Stack