

# forNextDay 8

Code of the program

```
1 // first.c
2 #include <stdio.h>
3 #include <stdlib.h>
4 #define MAX 256
5 #define ADD 1
6 #define REMOVE 0
7 #define LIST 2
8 int main(int argc, char * * argv)
9 {
10     int queue[MAX];
11     int size = 0;
12     int front = 0;
13     int pos = 0;
14     int val;
15     int iChoice;
16     int iNRead;
17     int counter;
18     /* Processing Loop */
19     printf("Choice (1=add, 0=remove, 2=list): ");
20     iNRead = scanf("%d", &iChoice);
21     while(iNRead == 1)
22     {
23         switch(iChoice)
24         {
25             case ADD:
26                 printf("Value to add: ");
27                 // Read the element, add it to the queue
28                 scanf("%d", &val);
29                 if (size < MAX)
30                 {
31                     pos = (front+size) % MAX;
32                     queue[pos] = val;
33                     size++;
34                 }
35                 break;
```

```

36     case REMOVE:
37         // Print out the last element and remove it.
38         if (size == 0)
39         {
40             printf("There is nothing in the queue\n");
41         }
42         if (size > 0)
43         {
44             printf("%d\n", queue[front]);
45             val = queue[front];
46             front = (front+1) % MAX;
47             size--;
48         }
49         break;

50     case LIST:
51         // Print out the queue elements
52         counter = 0;
53         if (size == 0)
54         {
55             printf("The queue is empty\n");
56         }
57         else
58         {
59             while (counter < size)
60             {
61                 printf("%d\n", queue[front + counter]);
62                 counter++;
63             }
64         }
65         break;
66     }
67     printf("Choice (1=add, 0=remove, 2=list): ");
68     iNRead = scanf("%d", &iChoice);
69 }
70 return EXIT_SUCCESS;
71 }

```

## Terminal output

```
C:\Users\momou\Desktop\University\CS 2263\ForNextDay\ForNextDay\08\Lec8src\playQueue.exe
Choice (1=add, 0=remove, 2=list): 1
Value to add: 1
Choice (1=add, 0=remove, 2=list): 1
Value to add: 2
Choice (1=add, 0=remove, 2=list): 1
Value to add: 3
Choice (1=add, 0=remove, 2=list): 1
Value to add: 4
Choice (1=add, 0=remove, 2=list): 1
Value to add: 5
Choice (1=add, 0=remove, 2=list): 0
1
Choice (1=add, 0=remove, 2=list): 2
2
3
4
5
Choice (1=add, 0=remove, 2=list):
```