

## FILE QUEUE EXERCISES SOLUTIONS

```
main.c x
1  #include <stdio.h>
2  #define MAX 10
3
4  int front = 0, rear = 0, ch, i;
5  int q[MAX], ele;
6
7  void Insert() {
8      if (rear == MAX) {
9          printf("\nQueue is full\n");
10     } else {
11         printf("\nEnter an element: ");
12         scanf("%d", &ele);
13         q[rear] = ele;
14         rear++;
15         printf("\nElement inserted successfully\n");
16     }
17 }
18 void Delete() {
19     if (front == rear) {
20         printf("\nQueue is empty\n");
21     } else {
22         ele = q[front];
23         front++;
24         printf("The deleted element is: %d\n", ele);
25     }
26 }
27 void Display() {
28     if (front == rear) {
29         printf("\nQueue is empty\n");
30     } else {
31         printf("\nThe elements in the queue are: ");
32         for (i = front; i < rear; i++) {
33             printf("%d ", q[i]);
34         }
35         printf("\n");
36     }
37 }
38 int main() {
39     int flag = 1;
40     do {
41         printf("\n*** MENU ***");
42         printf("\n1. Insert\n2. Delete\n3. Display\n4. Exit");
43         printf("\nEnter your choice: ");
44         scanf("%d", &ch);
45         switch (ch) {
46             case 1: Insert(); break;
47             case 2: Delete(); break;
48             case 3: Display(); break;
49             case 4: flag = 0; break;
50             default: printf("Enter a correct choice\n");
51         }
52     } while (flag);
53
54     return 0;
55 }
```

Workspace  
Gabon\_Johnrey\_Queue\_Exercises\_Solutions\_Prog1  
Sources

```
*** MENU ***
1. Insert
2. Delete
3. Display
4. Exit
Enter your choice: 1

Enter an element: 11

Element inserted successfully

*** MENU ***
1. Insert
2. Delete
3. Display
4. Exit
Enter your choice: 1

Enter an element: 12

Element inserted successfully

*** MENU ***
1. Insert
2. Delete
3. Display
4. Exit
Enter your choice: 1

Enter an element: 13

Element inserted successfully
```

```
*** MENU ***
1. Insert
2. Delete
3. Display
4. Exit
Enter your choice: 2
The deleted element is: 11

*** MENU ***
1. Insert
2. Delete
3. Display
4. Exit
Enter your choice: 3

The elements in the queue are: 12 13

*** MENU ***
1. Insert
2. Delete
3. Display
4. Exit
Enter your choice: 1
```

```
*** MENU ***
1. Insert
2. Delete
3. Display
4. Exit
Enter your choice: 2
The deleted element is: 12

*** MENU ***
1. Insert
2. Delete
3. Display
4. Exit
Enter your choice: 2
The deleted element is: 13

*** MENU ***
1. Insert
2. Delete
3. Display
4. Exit
Enter your choice: 3

Queue is empty
```

```
*** MENU ***
1. Insert
2. Delete
3. Display
4. Exit
Enter your choice: 3

The elements in the queue are: 11 12 13
```

```
*** MENU ***
1. Insert
2. Delete
3. Display
4. Exit
Enter your choice: 4

Process returned 0 (0x0)   execution time : 120.419 s
Press any key to continue.
```