

```
1 package queue;
2
3 import java.util.Scanner;
4
5 class Queue{
6     int rear,front;
7     int max =5;
8     int q[] = new int[max];
9
10    Queue() {
11        rear = -1;
12        front = -1;
13    }
14
15    public boolean enqueue(Scanner sc) {
16
17        if(rear == max-1 ) {
18            System.out.println("Queue is full...");
19        }
20        else if(front == -1 && rear == -1){ // check if the queue is empty or not if empty
21            then insert at front or rear
22
23            front = 0; rear =0;
24            System.out.println("Enter value into the queue.");
25            q[rear] = sc.nextInt();
26        }
27        else { // normal condition i.e, neither the queue is full or empty. we have space to
28            fill in the elements
29
30            rear++;
31            System.out.println("Enter value to the queue.");
32            q[rear] = sc.nextInt();
33        }
34
35        return true;
36    }
37
38    boolean dequeue() {
39        if(front == -1) { //if the queue is empty
40            System.out.println("Queue is empty.");
41        }
42        else if(front == rear) { // only single element in the queue
43
44            front = rear = -1;
45        }
46        else {
47            System.out.println("Deleted:"+q[front]);
48            front++; //moving one step further
49        }
50        return true;
51    }
52
53    boolean display() {
54
55
```

```
56         if(front==-1) {
57             System.out.println("No elemets in the queue.");
58         }
59         else {
60             for(int i=front; i<= rear ;++i) {
61
62                 System.out.print(q[i] + " ");
63             }
64
65         }
66         return true;
67     }
68 }
69 public class SimpleQueue {
70
71     public static void main(String[] args) {
72
73         Scanner sc = new Scanner(System.in);
74
75         Queue q1_obj = new Queue();
76
77         int ch;
78
79         do {
80             System.out.println("\n Please enter your choice:\t 1. Enqueue \t 2. DeQueue \t 3.
Display \t 4. Quit.");
81             ch = sc.nextInt();
82
83             switch(ch){
84
85                 case 1:
86                     q1_obj.enqueue(sc);
87                     break;
88                 case 2:
89                     q1_obj.dequeue();
90                     break;
91                 case 3:
92                     q1_obj.display();
93                     break;
94                 case 4:
95                     System.exit(0);
96
97             }
98         }while(ch < 5);
99
100     }
101
102
103 }
104
```