

```

1  import java.util.*;
2
3  //document name and content print class
4  class Document
5  {
6      private String docName,text;
7
8      public Document(String docName,String text)
9      {
10         this.docName = docName;
11         this.text = text;
12     }
13     public String getText()
14     {
15         return text;
16     }
17     @Override
18     public String toString()
19     {
20         return "Document [docName=" + docName + ", text=" + text + "];"
21     }
22 }
23
24 /* Class arrayQueue input size of queue through array */
25 class arrayQueue
26 {
27     Document Queue[];
28     int front=-1,rear=-1,size,len;
29     public arrayQueue(int n)
30     {
31         size = n;
32         len = 0;
33         Queue = new Document[size];
34         front = -1;
35         rear = -1;
36     }
37
38     /* Function to insert an element to the queue */
39     public void enqueue(Document n)
40     {
41         //it execute when queue is full
42         if (rear == size-1)
43         {
44             System.out.println("Queue is Full");
45         }
46         //it execute when queue is empty
47         else if (front== -1 && rear== -1)
48         {
49             //front and rear at zero position
50             front=rear=0;
51             //always insert data from rear side and n is element
52             Queue[rear]=n;
53         }
54         //it execute when insert element in next position
55         else
56         {
57             //increment position until queue is full
58             rear++;
59             Queue[rear] = n;
60         }
61         //when insert element size is increase
62         len++;
63     }
64
65     /*Function to remove front element from the queue */
66     public void dequeue()
67     {
68         if (front== -1 && rear== -1)
69         {

```

```

70         System.out.println("Queue is Empty");
71     }
72     //it method execute when front and rear at same position
73     else if(front==rear)
74     {
75         front=rear=-1;
76     }
77     else
78     {
79         System.out.println("Deleted Queue is = "+Queue[front]);
80         //front increament for next position
81         front++;
82     }
83     //when delete element size is decrease
84     len--;
85 }
86
87 /* Function to get the size of the queue */
88 public int getSize()
89 {
90     return len ;
91 }
92
93 /* Function to check the front element of the queue */
94 Document peek()
95 {
96     if (front== -1 && rear== -1)
97     {
98         System.out.println("Queue is Empty");
99     }
100     return Queue[front];
101 }
102
103 /* Function to display the status of the queue */
104 public void display()
105 {
106     System.out.print("\nQueue = ");        //it print queue element
107
108     if (front== -1 && rear== -1)
109     {
110         System.out.print("Queue is Empty\n");
111     }
112     else
113     {
114         //suppose front 0 and rear at 2 pos then it compare until front value
115         //greater or equal to rear
116         for (int i=front;i<rear+1;i++)
117             System.out.print(Queue[i]+" ");
118     }
119     System.out.println();
120 }
121 }
122
123 /* Class QueueImplement */
124 public class PrintDocument
125 {
126     public static void main(String s[])
127     {
128
129         Scanner scan = new Scanner(System.in);
130         System.out.println();
131         System.out.println("***Printing A Document***\n");
132         System.out.println("Enter Size of Queue: ");
133         int n = scan.nextInt();
134
135         /* creating object of class arrayQueue */
136         arrayQueue q = new arrayQueue(n);
137         /* Perform Queue Operations */

```

```

138
139     int choice;
140
141     do
142     {
143         System.out.println("\n\t##Choose 1 to 5##");
144         System.out.println("\t1. Insert Document");
145         System.out.println("\t2. Delete Document");
146         System.out.println("\t3. Display Front Document");
147         System.out.println("\t4. Queue size");
148         System.out.println("\t5. Exit");
149         System.out.println("Enter your Choice: ");
150         choice = scan.nextInt();
151
152         switch (choice)
153         {
154             case 1 :
155                 System.out.println("Enter File Name: ");
156                 String name= scan.next();
157                 System.out.println("Type File Content: ");
158                 String text = scan.next();
159                 Document doc = new Document(name,text);
160                 q.enqueue(doc);
161                 break;
162             case 2 :
163                 System.out.println();
164                 q.dequeue();
165                 break;
166             case 3 :
167                 System.out.println();
168                 System.out.println("Front Document = "+q.peek());
169                 break;
170             case 4 :
171                 System.out.println();
172                 System.out.println("Size = "+ q.getSize());
173                 break;
174             case 5 :
175                 System.exit(0);
176                 break;
177             default :
178                 System.out.println("Wrong Entry \n ");
179                 break;
180         }
181         /* display Queue */
182         q.display();
183     } while (choice !=5);
184
185 }
186

```