

```
1 import components.map.Map;
2 import components.map.Map.Pair;
3 import components.queue.Queue;
4
5 /**
6  * Manages a to-do list with event details and sorting
   capabilities.
7  *
8  * Provides methods for adding events, setting their importance and
   date,
9  * and converting importance and date values to strings. Includes
   fields for
10 * storing event information and sorted queues for efficient
   retrieval.
11 *
12 * @Convention
13 * Importance values range from -1 to 3, representing different
   levels of
14 * importance. Date values are 6-digit integers in the format
   YearMonthDay.
15 *
16 * @Correspondence
17 * - {@code event}: String representation of an event.
18 * - {@code ALL_EVENTS_IMP}: Map of events and their importance.
19 * - {@code ALL_EVENTS_DATE}: Map of events and their date.
20 * - {@code SORTED_BY_IMP}: Queue of events sorted by importance.
21 * - {@code SORTED_BY_DATE}: Queue of events sorted by date.
22 *
23 * @author Jahnvi Acharya
24 */
25 public class ToDoList1 extends ToDoListSecondary {
26
27     @Override
28     public final int getImportance(String event) {
29         // TODO Auto-generated method stub
30         return ALL_EVENTS_IMP.value(event);
31     }
32
33     @Override
34     public final int getDate(String event) {
35         // TODO Auto-generated method stub
36         return ALL_EVENTS_DATE.value(event);
37     }
38
39     @Override
```

```
40     public final void addImportance(String event, int imp) {
41         ALL_EVENTS_IMP.replaceValue(event, imp);
42     }
43 }
44
45 @Override
46 public final void addDate(String event, int date) {
47     ALL_EVENTS_DATE.replaceValue(event, date);
48 }
49 }
50
51 @Override
52 public final String getStringImportance(int i) {
53     String imp = "";
54     if (i == 0) {
55         imp = "No Importance";
56     } else if (i == 1) {
57         imp = "Low Importance";
58     } else if (i == 2) {
59         imp = "Medium Importance";
60     } else if (i == 3) {
61         imp = "High Importance";
62     } else {
63         imp = "Completed";
64     }
65     return imp;
66 }
67
68 @Override
69 public final String getStringDate(int i) {
70     String date = "";
71     if (i == 0) {
72         date = "No Date";
73     } else {
74         int dateInt = i;
75         int year = dateInt / 10000;
76         dateInt = dateInt % 10000;
77         int month = dateInt / 100;
78         dateInt = dateInt % 100;
79         int day = dateInt;
80         date = month + "/" + day + "/" + year;
81     }
82     return date;
83 }
84 }
```

```
85     @Override
86     public final void clear() {
87         while (ALL_EVENTS_IMP.size() != 0) {
88             ALL_EVENTS_IMP.removeAny();
89         }
90
91         while (ALL_EVENTS_DATE.size() != 0) {
92             ALL_EVENTS_DATE.removeAny();
93         }
94
95         while (SORTED_BY_IMP.length() != 0) {
96             SORTED_BY_IMP.dequeue();
97         }
98
99         while (SORTED_BY_DATE.length() != 0) {
100             SORTED_BY_DATE.dequeue();
101         }
102     }
103
104     @Override
105     public final ToDoList newInstance() {
106         ToDoList hello = new ToDoList1();
107         return hello;
108     }
109
110     @Override
111     public final void transferFrom(ToDoList source) {
112         this.clear();
113         this.setAllEventsImp(source.getAllEventsImp());
114         this.setAllEventsDate(source.getAllEventsDate());
115         this.setSortedByImp(source.getSortedByImp());
116         this.setSortedByDate(source.getSortedByDate());
117         source.clear();
118
119     }
120
121     @Override
122     public final int compareTo(ToDoList o) {
123         if (this.equals(o)) {
124             return 0;
125         } else {
126             return 1;
127         }
128     }
129 }
```

```
130     @Override
131     public final Map<String, Integer> getAllEventsImp() {
132         // TODO Auto-generated method stub
133         return ALL_EVENTS_IMP;
134     }
135
136     @Override
137     public final Map<String, Integer> getAllEventsDate() {
138         // TODO Auto-generated method stub
139         return ALL_EVENTS_DATE;
140     }
141
142     @Override
143     public final Queue<Pair<String, Integer>> getSortedByImp() {
144         // TODO Auto-generated method stub
145         return SORTED_BY_IMP;
146     }
147
148     @Override
149     public final Queue<Pair<String, Integer>> getSortedByDate() {
150         // TODO Auto-generated method stub
151         return SORTED_BY_DATE;
152     }
153
154     @Override
155     public final void setAllEventsImp(Map<String, Integer> o) {
156         ALL_EVENTS_IMP.transferFrom(o);
157     }
158
159
160     @Override
161     public final void setAllEventsDate(Map<String, Integer> o) {
162         ALL_EVENTS_DATE.transferFrom(o);
163     }
164
165
166     @Override
167     public final void setSortedByImp(Queue<Pair<String, Integer>>
o) {
168         SORTED_BY_IMP.transferFrom(o);
169     }
170
171
172     @Override
173     public final void setSortedByDate(Queue<Pair<String, Integer>>
```

```
    o) {  
174         SORTED_BY_DATE.transferFrom(o);  
175  
176     }  
177  
178 }  
179
```