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1 /**
2  * {@code ToDoList} interface provides methods for managing to-do
3  * list events.
4  * It extends {@code Comparable<ToDoList>} and {@code
5  * ToDoListKernel}.
6  *
7  * @initially The methods of this interface provide functionality to
8  * add and
9  * remove events, order events by importance or date, and
10 * display
11 * events that need to be done or completed.
12 *
13 * @author Jahnvi Acharya
14 */
15 public interface ToDoList extends Comparable<ToDoList>,
16     ToDoListKernel {
17
18     /**
19      * Adds a new event to the to-do list.
20      *
21      * @param event
22      *     the event to be added
23      * @requires event is not an uncompleted event already on the
24      * list
25      * @ensures the specified event is added to the to-do list or
26      * added again if
27      * it was completed
28      */
29     void addEvent(String event);
30
31     /**
32      * Adds a new event with specified importance or date to the to-
33      * do list.
34      *
35      * @param event
36      *     the event to be added
37      * @param importance
38      *     the importance of the event
39      * @param date
40      *     the date of the event
41      * @requires importance is between -1 and 3 inclusive and date
42      * is a 6 digit
43      * integer in the format YearMonthDay and event is not
44      * an
45      * uncompleted event already on the list

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36     * @ensures the specified event with importance and date is
    added to the
37     *         to-do list
38     */
39     void addEvent(String event, int importance, int date);
40
41     /**
42     * 'Removes' (by changing importance to -1) a specific event
    from the to-do
43     * list based on its name and date.
44     *
45     * @param event
46     *         the event to be 'removed'
47     * @param dateRem
48     *         the date of the event when completed
49     * @requires date is a 6 digit integer in the format
    YearMonthDay and event
50     *         is not an uncompleted event already on the list
51     * @ensures the specified event is set as a -1 importance in the
    to-do list
52     */
53     void removeEvent(String event, int dateRem);
54
55     /**
56     * Orders the events in the to-do list by their importance.
57     *
58     * @ensures the events in the to-do list are ordered by
    importance
59     */
60     void orderByImportance();
61
62     /**
63     * Orders the events in the to-do list by their date.
64     *
65     * @ensures the events in the to-do list are ordered by date
66     */
67     void orderByDate();
68
69     /**
70     * Displays the events that need to be done.
71     *
72     * @return a string representing the events that need to be done
73     */
74     String displayEventsNeedToDo();
75

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76     /**
77      * Displays the events that have been completed.
78      *
79      * @return a string representing the events that have been
      completed
80      */
81     String displayEventsCompleted();
82
83 }
84
```