Tasks and reminders management system

Client	Computer Science and Discrete Structures 1 Teachers
User	Course monitors and users.
Functional requirements	RF0: Create tasks and reminders. RF1: Check tasks and reminders. RF2: Modify tasks and reminders. RF3: Delete tasks and reminders. RF4: Priority management RF5: Undo the last user action.
Context of the problem	A Task and Reminder Management System needs to be developed to help users organize their daily activities, set reminders, and effectively track their pending tasks. The system must be easy to use, accessible from different devices and provide an intuitive and efficient user interface.
Non-functional requirements	The code must be written in Java, structures seen in class must be used (such as stacks, queues, or hash tables).

Identifier and name	*[RF0-*Create tasks and reminders*]*		
Summary	The system must allow the user to create tasks and reminders with the following data: title, description, deadline, priority, etc. It must be stored in a hash table and must generate a unique identifier.		
Appetizer	**Entry name**	**Datatype**	**Condition valid values**
	title	String	*It must have at least two characters and be unique.*

	limitDate	Calendar	*The date must be later than the current date and no more than 5 years.*
	description	String	*Must be at least 10 characters*
	priority	int	*non-negative numbers*
Result or Postcondition	The reminder or task will be saved in the system		
Departures	**Output name**	**Datatype**	**Format**
	created	String	*"Created"*
	notCreated	String	*“Could not be created, title already exists”*

Identifier and name	*[*RF1: Check tasks and reminders*]*		
Summary	The system must be able to show the user their pending tasks and reminders.		
Appetizer	**Entry name**	**Datatype**	**Condition valid values**
	id	int	
Result or Postcondition	The system will search and display the search result (whether it was found or not).		

Departures	**Output name**	**Datatype**	**Format**
	found	String	*title + “, priority: “ + priority + “ “ + id+\n”* *+description + ”\ndate: ” limitDate*
	not found	String	*“No reminders or tasks found”*

Identifier and name	*[*RF2: Modify tasks and reminders*]*		
Summary	The system must allow the user to modify any reminder or task. You can modify each of the aspects except the id (title, description, date, priority) or you can leave them as they were. The user chooses according to the unique identifier of each task or reminder.		
Appetizer	**Entry name**	**Datatype**	**Condition valid values**
	id	String	
	newLimitDate	Calendar	*The date must be later than the current one and no more than 5 years.*
	newTitle	String	*must be at least two characters*
	newDescription	String	*Must be at least 10 characters*

	newPriority	int	*non-negative numbers*
Result or Postcondition	The system will replace the information		
Departures	**Output name**	**Datatype**	**Format**
	valid	String	*“modified”*
	inValid	String	*“id not found”*

Identifier and name	*[*RF3: Delete tasks and reminders*]*		
Summary	The system must allow the user to delete tasks or reminders. If it is a priority task, the highest priority must be eliminated; if it is not a priority task, the oldest task (the one that entered first) is eliminated.		
Appetizer	**Entry name**	**Datatype**	**Condition valid values**
	option	int	*1 if the task is a priority task, 2 if it is not a priority task*
Result or Postcondition	Delete the task or reminder given the identifier		
Departures	**Output name**	**Datatype**	**Format**

	eliminated	String	*“Successfully removed”*
	notEliminated	String	*“Could not delete, the id does not exist”*

Identifier and name	*[*RF4: Priority management*]*		
Summary	The system must manage a priority system, the highest priority tasks will always be carried out before the lowest priority ones in all cases. If the task has the same priority as another or the priority is null, then the one that was created before in the task queue will be performed first.		
Appetizer	**Entry name**	**Datatype**	**Condition valid values**
Result or Postcondition	The system is responsible for managing priorities when adding or modifying a task.		
Departures	**Output name**	**Datatype**	**Format**

Identifier and name	*[*RF5: undo the last user action.*]*		
Summary	The system must allow the user to return their last action, such as adding, deleting or modifying a task.		
Appetizer	**Entry name**	**Datatype**	**Condition valid values**
Result or Postcondition	The system will return to the previous system state.		
Departures	**Output name**	**Datatype**	**Format**