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| Client | Company developing the task and reminder management system. |
| User | User utilizing the system. |
| FUNCTIONAL REQUIREMENTS | R1. The system must allow storing tasks and reminders.  R2. The system must allow the management of priorities for tasks and reminders.  R3. The system must allow undoing actions. |
| CONTEXT OF THE PROBLEM | A task and reminder management system is under development for users. This system utilizes a hash table to store key information such as the title, description, and deadline of tasks. The user interface allows users to add, modify, and delete tasks, as well as sort them by deadline or priority. A priority queue is implemented to manage important tasks first, and a category for non-priority tasks is included, managed on a first-come, first-served basis. Additionally, an undo function has been integrated using a stack to reverse user actions, providing flexibility and control in the management of tasks and reminders. |
| NON-FUNCTIONAL REQUIREMENTS | RNF1. Task Display  RNF2. Intuitive Interface. |

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| Identifier or Name | **R1. The system must allow storing tasks and reminders.** | | |
| Summary | The application must be able to store tasks and reminders using hash tables, employing a key-value pair system. This allows the use of a unique identifier as a key, facilitating the retrieval of a single corresponding value. | | |
| Inputs | Input name | Data type | Condition or valid values |
| Id | String | Must be unique. |
| Title | String | N/A |
| Description | String | N/A |
| Due date | Calendar | in format dd/mm/yyyy |
| Type of item | int | Must be 1 or 2 |
| Priority of the task | int | Must be 1 or 2 |
| Importance level | int | Must be 1, 2, 3 or 4 |
| **General activities required to achieve the results:** | * Insert elements into the table * Search for elements in the table * Delete elements from the table * Calculate hash index * Verify if the hash table is empty * Get the complete hash table | | |
| **Outcome or Postcondition** | The table is updated correctly after performing insertion, search, or deletion operations. | | |
| **Outputs** | **Output name** | **Data type** | **Selection or Repetition Condition** |
| Mensaje de confirmación | String |  |

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| Identifier or Name | **R2: The system must allow the management of priorities for tasks and reminders.** | | |
| Summary | The system should have two categories for tasks: "Priority" and "Non-priority."  a. Priority Tasks:  Utilize a priority queue to organize tasks based on their level of importance.  When a user adds a new task, it is inserted into the priority queue according to its level of importance, ensuring that important tasks are handled first.  b. Non-priority Tasks:  Establish a category for non-priority tasks to manage those without assigned priority. This category allows handling tasks based on their order of arrival, following the First In, First Out (FIFO) principle. | | |
| Inputs | Input name | Data type | Condition or valid values |
| Priority of the task | Int | Debe ser 1 o 2 |
| **General activities required to achieve the results:** |  | | |
| **Outcome or Postcondition** | * Order information must be stored in the application's order database. * The inventory quantity of the purchased products must be updated in the product database of the application. | | |
| **Outputs** | **Output name** | **Data type** | **Selection or Repetition Condition** |
| Msg | String |  |

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| Nombre o identificador | **R3: The system must allow undoing actions.** | | |
| Resumen | Implement a user interface feature that allows users to undo the last performed action. When the user chooses the "Undo" option, it triggers the undo() method, which reverses the most recent action. | | |
| Entradas | Input name | Data type | Condition or valid values |
| Select option | int | Must be 4 |
| **Actividades generales necesarias para**  **obtener los resultados** | * Pop the stack | | |
| **Outcome or Postcondition** | Undo the last action, whether it's an addition, a deletion, or an edition. | | |
| **Outputs** | **Output name** | **Data type** | **Selection or Repetition Condition** |