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| Client | Empresa desarrolladora del sistema de gestion de tareas y recordatorios |
| User | Usuario que usa el sistema |
| REQUERIMIENTOS FUNCIONALES | R1. El sistema debe permitir almacenar tareas y recordatorios  R2. El sistema debe permitir la gestión de prioridades de las tareas y los recordatorios  R3. El sistema debe permitir deshacer acciones |
| CONTEXT OF THE PROBLEM | Se está desarrollando un sistema de gestión de tareas y recordatorios para los usuarios. Este sistema utiliza una tabla hash para almacenar información clave, como por ejemplo título, descripción y fecha límite de las tareas. La interfaz de usuario permite a los usuarios agregar, modificar y eliminar tareas, así como ordenarlas por fecha límite o prioridad. Se implementa una cola de prioridades para gestionar tareas importantes primero, y se incluye una categoría para tareas no prioritarias que se manejan en orden de llegada. Además, se ha integrado una función de deshacer utilizando una pila para revertir las acciones del usuario, brindando flexibilidad y control en la administración de tareas y recordatorios. |
| NON-FUNCTIONAL REQUIREMENTS | RNF1. Visualizacion de tareas  RNF2. Interfaz intuitive |

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| Nombre o identificador | **R1:** **El sistema debe permitir almacenar tareas y recordatorios** | | |
| Resumen | The application must allow the user to enter information about the products, including name, description, price, quantity available, category and number of times purchased. Categories such as books, electronics, clothing and accessories, food and beverages, stationery, sports, beauty and  personal care products, toys and games should be considered. | | |
| Entradas | Nombre entrada | Tipo de dato | Condición de selección o  repetición |
| Name | String |  |
| Description | String |  |
| Price | double | The prices must be equals or greater than 0 |
| Amount Available | int | The amount must be  equals or greater than 0 |
| Category | String |  |
| Amount purchased | int | The amount has to be equals or greater than 0 |
| **Actividades generales necesarias para obtener los resultados** | * The user is allowed to enter the name, description, price, and quantity available. * Existing categories are displayed * user is allowed to enter the category and units sold * Required and formatting fields are validated to ensure data integrity. | | |
| **Resultado o**  **postcondición** | **T**he result is a product with the correct data added in the system. | | |
| **Salidas** | **Nombre Salida** | **Tipo de dato** | **Condición de selección o**  **repetición** |
| Register status | boolean |  |

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| Nombre o identificador | **R2: El sistema debe permitir la gestión de prioridades de las tareas y los recordatorios** | | |
| Resumen | The application should allow the user to enter order information, including the name of the buyer, the list of products, but the total price is calculated with respect to the products and the date is calculated at the time of purchase. When an order is generated, the inventory quantity of the  purchased products must be updated. | | |
| Entradas | Nombre entrada | Tipo de dato | Condición de selección o  repetición |
| Buyer name | String |  |
| Products list | String |  |
| **Actividades generales necesarias para obtener los resultados** | * The user is allowed to enter the personal name * The user is allowed to select a product and quantity, until the user decides not to add more products. * Validation of required fields and formatting to ensure the integrity of the data entered by the user * The system calculates the total order price * The total price is displayed on the screen. * The user is allowed to accept the purchase of the order * The date of the order is saved. * The system updates the available quantity of purchased products in the application's product database. | | |
| **Resultado o postcondición** | * 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. | | |
| **Salidas** | **Nombre Salida** | **Tipo de dato** | **Condición de selección o**  **repetición** |
| Order status | boolean | No exceptions have been lodged |

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| Nombre o identificador | **R3: El sistema debe permitir deshacer acciones** | | |
| Resumen | Allow the user to increase the quantity of a product already registered. | | |
| Entradas | Nombre entrada | Tipo de dato | Condición de selección o  repetición |
| Product | String |  |
| Quantity to be added | int | The amount must be greater than 0 |
| **Actividades generales necesarias para**  **obtener los resultados** | * Search for the product in the application's product database. * Update the product quantity by adding the quantity provided by the user. | | |
| **Resultado o**  **postcondición** | The quantity of the product is updated by adding the quantity provided by  the user. | | |
| **Salidas** | Nombre Salida | Tipo de dato | Condición de selección o  repetición |
| Process status | boolean |  |

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| Nombre o identificador | **R4: Search a product by unique attribute** | | |
| Resumen | The program should allow the user to look for a product using a single attribute. | | |
| Entradas | Nombre entrada | Tipo de dato | Condición de selección o  repetición |
| search criteria | String |  |
| search value | String |  |
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| **Actividades generales necesarias para obtener los resultados** | 1.The user is allowed to enter the search criteria 2.The user is allowed to enter the search Value   1. If the search criteria is numeric, the system will parse the search value to an Integer. 2. The system will search the product in the product container structure using the   binary search algorithm according to the search criteria. | | |
| **Resultado o**  **postcondición** | The system will show the product if it was found or will show an alert if the  product was not found. | | |
| **Salidas** | **Nombre Salida** | **Tipo de dato** | **Condición de selección o**  **repetición** |

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|  | Product Found Info | String | If the product was found |
| Warning message | String | If the product wasn't found |

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