## **Nombre (código)**

**Requerimientos**

| Cliente | Mercado libre |
| --- | --- |
| Usuario | Sellers and buyers users in the Mercado Libre application |
| Requerimientos funcionales | R1: The application allows you to enter the inventory of the virtual store.  R2: Allows the user to search and delete products  R3: It allows the user to register the orders of the buyers of the application.  R4: Allows the user to search for products and look up orders.  R5: The algorithm uses the binary search algorithm to find matches in the product records.  R6: the program must have data persistence through JSON serialization.  R7: Allows range searches for numeric attributes, such as price, quantity available, or the number of times purchased.  R8: the program must handle exceptions to avoid unexpected states during product entry and search.  R9: Allows the user to specify a minimum and maximum value to search for products within a range.  R10: The search engine must allow the user to choose the order (ascending or descending) of the data displayed and the ordering variable.  R11: Develop the project using TDD. |
| Contexto del problema | development of an application for MercadoLibre that allows the online sale of its virtual store. The task is to create a program that allows to enter the inventory of the virtual store and allows the search and deletion of products. In addition, the program must allow registering the orders made by the users of the store.  The application must allow the user to enter information about each product, including its name, description, price, quantity available, category, and number of times purchased. It must also allow the user to enter information such as the buyer's name, product list, total price, and date of purchase.  The application must have a product search engine and an order search engine that allows searching by name, price, category, number of times purchased, buyer's name, total price, and date of purchase. In addition, you must allow range searches for numeric attributes and range searches for string type attributes.  Data persistence must be through JSON serialization to ensure data integrity and the application must handle exceptions to avoid unexpected states during check-in and product lookup. |

Especificar cada requerimiento en el siguiente formato

| Nombre o identificador | **R1:addProductoInTheStore** | | |
| --- | --- | --- | --- |
| Resumen | Sellers upload their products to the platform with their specifications such as name, description, price, quantity available, category and number of times purchased; the seller customer data such as name, list of products, total price and date of purchase | | |
| Entradas | **Nombre entrada** | **Tipo de dato** | **Condición de selección o repetición** |
| name | String | diferent null |
| description | String | diferent null |
| price | double | greather thann 0 |
| quantity | int | greather than 0 |
| category | int | among the options available |
| Actividades generales necesarias para obtener los resultados | The product type object is created with the parameters it is added to the products arrayList. | | |
| Resultado o Postcondición | rewritten the product in the Json file | | |
| Salidas | **Nombre salida** | **Tipo de dato** | **Condición de selección o repetición** |
| message | String | Any condition |

| Nombre o identificador | **R2:** Allows the user to search and delete products | | |
| --- | --- | --- | --- |
| Resumen | Allow the user to enter and delete orders from the virtual store | | |
| Entradas | **Nombre entrada** | **Tipo de dato** | **Condición de selección o repetición** |
| ProductName  Product list  TotalPrice | String  Array | different null |
| Actividades generales necesarias para obtener los resultados | 1. The user enters the search term  2. The system uses search algorithm to find the products that match the search criteria.  3. The system shows the list of products found to the user, with the option to delete them.  4. If the user decides to delete a product, the system displays a confirmation message before deleting it. | | |
| Resultado o Postcondición | The products selected by the user have been removed from the inventory of the virtual store. | | |
| Salidas | **Nombre salida** | **Tipo de dato** | **Condición de selección o repetición** |
| ConfirmationMessage | String |  |

| Nombre o identificador | **R3:** It allows the user to register the orders of the buyers of the application. | | |
| --- | --- | --- | --- |
| Resumen | Allow the user to register the orders made by the users of the virtual store | | |
| Entradas | **Nombre entrada** | **Tipo de dato** | **Condición de selección o repetición** |
| buyer Name | String | different null |
|  | productsList | Array | different null |
|  | purchase Date | date | different null |
| Actividades generales necesarias para obtener los resultados | The product type object is created with the parameters it is added to the products arrayList. | | |
| Resultado o Postcondición | rewritten the product in the Json file | | |
| Salidas | **Nombre salida** | **Tipo de dato** | **Condición de selección o repetición** |
| msj | String | Any condition |

| Nombre o identificador | **R4:SearchProductByName** | | |
| --- | --- | --- | --- |
| Resumen | allows you to search for the product in the entire store | | |
| Entradas | **Nombre entrada** | **Tipo de dato** | **Condición de selección o repetición** |
| Name | String | diferente de null |
| Actividades generales necesarias para obtener los resultados | search for products from the entire store and return the product if not say that this product does not exist | | |
| Resultado o Postcondición | product | | |
| Salidas | **Nombre salida** | **Tipo de dato** | **Condición de selección o repetición** |
| Product | Product |  |

| Nombre o identificador | **R5:SearchProductByName** | | |
| --- | --- | --- | --- |
| Resumen | allows you to search for the product in the entire store | | |
| Entradas | **Nombre entrada** | **Tipo de dato** | **Condición de selección o repetición** |
| Name | String | diferente de null |
| Actividades generales necesarias para obtener los resultados | search for products from the entire store and return the product if not say that this product does not exist | | |
| Resultado o Postcondición | product | | |
| Salidas | **Nombre salida** | **Tipo de dato** | **Condición de selección o repetición** |
| Product | Product |  |