**Requirements**

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| Client | Mercado Libre |
| User | Workers of Mercado Libre |
| Functional requirements | R1: Register the products with all its attributes  R2. Delete Products.  R3. Allow the user to modify the amount of the product  R4. Register order with its attributes.  R5: The user must be able to search products  R6: The users must be able to search orders.  R7: The user must be able to filter products by a range of one of its attributes  R8: The user must be able to filter products by a similar name  R9: Allow the user to choose an order for the shown data.  R10: Use persistency of data through JSON serialization to storage the information inside files. |
| Context of the problem | Mercado libre has hired us to develop an app which will allow the process of selling online.  The program must be efficient and with a user-friendly interface.  It must accomplish the entire requirements the client has told us. |

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| Name or identifier | R1: Register the products with all its attributes | | |
| Summary | The user can be able to register the information of the products with their attributes, name, price, amount available, category, bought amount. | | |
| Inputs | **Input name** | **Data Kind** | **Condition of selection** |
| name | String | input is not null |
|  | description | String | input is not null |
|  | price | double | input is not null |
|  | amount | int | input is not null |
|  | category | int | input is not null |
|  | number\_bought | int | input is not null |
| Previous needed activities. | The user must have chosen the option to add the product, registered the information and the system must have validated it. | | |
| Results | The product is registered inside the database. | | |
| Outputs | **Output name** | **Data Kind** | **Condition of selection** |
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| Name or identifier | R2: Delete products. | | |
| Summary | The user has the option to delete the products of the virtual store | | |
| Inputs | **Input name** | **Data Kind** | **Condition of selection** |
| name | String | input is not null |
| Previous needed activities. | The products must be already registered | | |
| Results | The product is deleted from the database | | |
| Outputs | **Output name** | **Data Kind** | **Condition of selection** |
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| Name or identifier | R3: Allow the user to modify the amount of the product | | |
| Summary | The user can modify the amount of any registered product with its name | | |
| Inputs | **Input name** | **Data Kind** | **Condition of selection** |
| name | String | The input is not null |
| amount | int | The input is not null |
| Previous needed activities | The user must input the name of the product | | |
| Result | SThe amount of the product is modified | | |
| Outputs | **Output name** | **Data Kind** | **Condition of selection** |
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| Name or identifier | **R4:** Register order with its attributes. | | |
| Summary | The system can register the orders inside the user information after it bought something. | | |
| Inputs | **Input name** | **Data Kind** | **Condition of selection** |
| name\_buyer | String | input is not null |
|  | list\_product | String[] | input is not null |
|  | total\_price | double | input is not null |
|  | date\_buy | String | input is not null |
| Previous needed activities. | The user must have chosen this option and the system must have validated it. | | |
| Results | The order is registered, and the amount of product is modified | | |
| Outputs | **Output name** | **Data Kind** | **Condition of selection** |
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| Name or identifier | R5: The user must be able to search products | | |
| Summary | Permite buscar productos en el inventario de la tienda virtual por nombre, precio, categoría y número de veces comprado.  It allows the user to search for products inside the virtual store with one of its chosen attributes. | | |
| Inputs | **Input name** | **Data Kind** | **Condition of selection** |
| nameProduct | String | Input isnt null and input exist |
| price | double | Input isnt null and exist some product with this price. |
| category | String | Input isnt null and the category exist |
| CountPush | Int | Input isnt null and the count is greater than zero |
| limitLow |  | Input isnot null |
| limitTop | Int | Imput isnot null |
| parameter | String | Imput isnot null |
| Previous needed activities. | The user must have chosen the attribute which the product is going to be searched | | |
| Results | A list of products that match the specifications of the user | | |
| Outputs | **Output name** | **Data Kind** | **Condition of selection** |
| list | String |  |

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| Name or identifier | R6: The users must be able to search orders. | | |
| Summary | The method lets the user search for any order | | |
| Inputs | **Input name** | **Data Kind** | **Condition of selection** |
| consumerName | String | Input isnt null and input exist |
|  | priceTotal | double | Input isnt null and the price is greather than zero. |
|  | date | calendar | Imput isnot null |
| Previous needed activities. | The user must have chosen this option and entered the search item of the order | | |
| Results | The order found | | |
| Outputs | **Output name** | **Data Kind** | **Condition of selection** |
| list | String |  |

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| Name or identifier | **R7:** Allow searching items by an range of one of its atributtes. | | |
| Summary | The searcher will let the user seek for an item through a range of one numericatributtes. | | |
| Inputs | **Output name** | **Data Kind** | **Condition of selection** |
| MinRange | Int | Input is positive integer |
| MaxRange | Int | Input is positive integer |
| Previous needed activities. | Previously the user has to chose the atribute which will implement the range of the items that will be sorted | | |
| Results | A list with the items that match the atribute inside the range | | |
| Outputs | **Input name** | **Data Kind** | **Condition of selection** |
| rangedList | List | The items have to be saved correctly |

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| Name or identifier | **R8:** Allow searching items by a range of a String attribute | | |
| Summary | The searcher will let the user seek for an item through a range of one String attributes. | | |
| Inputs | **Input name** | **Data Kind** | **Condition of selection** |
| SearchItem | String | Input is not null |
| Previous needed activities. | Previously the user had to choose a similar word for one of the attributes that must match. | | |
| Results | A list with the items that are like the input | | |
| Outputs | **Output name** | **Data Kind** | **Condition of selection** |
| rangedList | List | The items must be saved correctly |

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| Name or identifier | **R9:** Filter the items by an elected order | | |
| Summary | The user must be able to filter the list of items which will be sorted | | |
| Inputs | **Input name** | **Data Kind** | **Condition of selection** |
| Option | Int | Input is not null |
| Previous needed activities. | Previously the user had to search an element | | |
| Results | A list with the items that are like the | | |
| Outputs | **Output name** | **Data Kind** | **Condition of selection** |
| rangedList | List | The items must be saved correctly |

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| Name or identifier | **R10:** Use persistency of data through JSON serialization to storage the information inside files. | | |
| Summary | The information entered the app is going to be storage inside files | | |
| Inputs | **Input name** | **Data Kind** | **Condition of selection** |
| file | String | Input is not null |
| Previous needed activities. | The information must be serialized first before sending it through a JSON format. | | |
| Results | The information is saved inside a JSON file | | |
| Outputs | **Output name** | **Data Kind** | **Condition of selection** |
| File\_out | FileOutputStream | The items must be saved correctly |