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| CLIENT |  |
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| USER | Country base data users |
| FUNCTIONAL REQUIREMENTS | R1.Insert command  R1.1 Insert country  R1.2 Insert city  R1.3. Search and filter and organize  R1.4.Delete  R2. Load data  R3. Save data  R4. Import data |
| PROBLEM | The client needs a program to import, save, search, filter, organize and delete information from countries and cities around the world. |

| NAME | R1. Insert command | | |
| --- | --- | --- | --- |
| SUMMARY | The user can select this option to enter an action in the form of a command to the system | | |
| INPUTS | Name | Type | Selection condition |
| command | String | The command must conform to one of the following formats |
| RESULT | Execute the action of the command wrote | | |
| OUTPUTS | Name | Type | Selection condition |
| Confirmation of registration | String | If the action was execute |

| NAME | R1.1 Insert country | | |
| --- | --- | --- | --- |
| SUMMARY | If the user selects the insert a command option and the command complies with the insert country format, the system inserts a country with the data. | | |
| CONDITION | The command has the format: INSERT INTO countries(id, name, population, countryCode) VALUES ('6ec3e8ec-3dd0-11ed-b878-0242ac120002', 'Colombia', 50.2, '+57') | | |
| INPUTS | Name | Type | Selection condition |
| name | String |  |
| population | Double |  |
| countryCode | String |  |
| RESULT | The county is created with an auto-generated id | | |
| OUTPUTS | Name | Type | Selection condition |
| RegistrationConfirm | String | If the action was execute |

| NAME | R1.2 Insert city | | |
| --- | --- | --- | --- |
| SUMMARY | If the user selects the insert a command option and the command complies with the insert city format, the system inserts a city with the data. | | |
| CONDITION | The command has the format: INSERT INTO cities(id, name, countryID, population) VALUES ('e4aa04f6-3dd0-11ed-b878-0242ac120002', 'Cali', '6ec3e8ec-3dd0-11ed-b878-0242ac120002', 2.2) | | |
| INPUTS | Name | Type | Selection condition |
| name | String |  |
| population | Double |  |
| countryID | String | The country must already exist or it will throw an exception |
| RESULT | The city is created with an auto-generated id | | |
| OUTPUTS | Name | Type | Selection condition |
| RegistrationConfirm | String | If the action was executed |

| NAME | R1.3 Search, filter and organize | | |
| --- | --- | --- | --- |
| SUMMARY | If the user selects the insert a command option and the command complies with the search and filter and/or organize, the system prints a list with the data. | | |
| CONDITION | The command has the format:  SELECT \* FROM cities WHERE name = 'Colombia'  or  SELECT \* FROM countries WHERE population > 100  or  SELECT \* FROM cities WHERE name = 'Guadalajara' ORDER BY population | | |
| INPUTS | Name | Type | Selection condition |
| TypeOfRegion | String |  |
| filterObjetive | Double | if the command has “WHERE” |
| filterCondition | String |
| organizeCondition | String | if the command has “Order By” |
| RESULT | The specified elements are searched and listed | | |
| OUTPUTS | Name | Type | Selection condition |
| List | String | If there are elements with the selected conditions |

| NAME | R1.4 Delete | | |
| --- | --- | --- | --- |
| SUMMARY | If the user selects the insert a command option and the command complies with the delete, the system executes the action of delete. | | |
| CONDITION | The command has the format:  DELETE FROM cities WHERE country = 'Colombia'  DELETE FROM cities WHERE population > 50 | | |
| INPUTS | Name | Type | Selection condition |
| TypeOfRegion | String |  |
| filterObjetive | Double | if after the command has “WHERE” |
| filterCondition | String |
| RESULT | The specified elements are deleted | | |
| OUTPUTS | Name | Type | Selection condition |
| DeleteConfirm | String | If the action was executed |

| NAME | R2. Load data from JSON | | |
| --- | --- | --- | --- |
| SUMMARY | The system imports the previous information of the database from a JSON type of file. | | |
| CONDITION | The file exists | | |
| RESULT | Each object of the JSON is save as a country or city | | |
| OUTPUTS | Name | Type | Selection condition |
| LoadConfirm | String | If the action was executed |

| NAME | R3. Save data | | |
| --- | --- | --- | --- |
| SUMMARY | The system saves the information of the database in a JSON type of file. | | |
| RESULT | Each country and city is save in the JSON as and object | | |
| OUTPUTS | Name | Type | Selection condition |
| SaveConfirm | String | If the action was executed |

| NAME | R4. Import data | | |
| --- | --- | --- | --- |
| SUMMARY | The user can select this option to import a SQL file with insert commands that are going to be executed. | | |
| CONDITION | The SQL file exist | | |
| INPUTS | Name | Type | Selection condition |
| filePath | String | The command must have the insert format |
| RESULT | Execute the action of each insert command | | |
| OUTPUTS | Name | Type | Selection condition |
| ImportConfirmation | String | If the action was execute |