

### **Assumptions on input and user interaction:**

- 1- If a user enters an invalid instruction, or invalid values in the requested fields the command will not activate, no change will be made and no information will be displayed. The user will be asked to retry.
- 2- All ID's are positive integers.
- 3- Names do not contain commas or non ASCII characters.
- 4- The system is case insensitive and all strings are converted to lower.
- 5- The system is whitespace insensitive and all spaces are erased. (If you want a space in your name use \_ )
- 4- Date formats are <dd-mm-yyyy> if a month or day is single digit it will be entered with a padded 0.
- 5- A product cannot be entered while already expired
- 6- When listing items the system will only list the ID's (which is the only thing needed for interaction between components)
- 7- whenever these instructions say using it means entering the listed string or sequence followed by the 'enter' character (ASCII 15). Strings written in single quotes should be entered without the single quotes.

### **Instructions:**

**(Notice that all instructions are present in the system output as well)**

Setup: Initially you will be asked to choose whether to use pre-generated data (using 'pre') or start with an empty system (using 'empty'). The contents of the pre-generated data will be detailed at the end of this document.

Store selection: The system will then show you all stores which currently exist in the system. You may add new (empty) stores (using 'add') or choose to use an existing store (by typing the store ID) or exit the system (using 'exit').

Note: Any menu from this point on will contain the options to return back to the previous menu (using 'return') or exit the system (using 'exit'). These options will not be listed repeatedly in this instruction file but they do exist.

Store menu: When a store is chosen you will be presented with a store menu. You may choose to enter the report menu (using 'reports'), the category menu (using 'categories'), the type menu (using 'types'), the product menu (using 'products') or the discount menu (using 'discounts').

Report menu: you may choose get the weekly report (using 'weekly') , the waste report (using 'waste') or the missing items report (using 'missing')

Weekly report: you may choose to get the report for the entire store (using 'all') or get the report for specific categories (using 'category')

Weekly report by category: you may list the ID's of all existing categories (using 'list') for convenience. You may get the actual report by entering the ID's of the relevant categories separated by commas.

Category menu: you may list the ID's of all existing categories (using 'list') for convenience. You may get full category information on a single category at a time (using 'info' followed by the category ID separated by comma). You may add a new category (using 'add') or edit an existing category (using 'edit').

Add a category: you may add a category, which has no parent category, by simply entering a name. If the category has a parent category you should enter the name followed by the parent category ID separated by comma.

Edit a category: you may edit a category, so that it will have no parent category, by entering the category ID followed by its name separated by comma. If you want to edit the category so that it will have a parent category you should enter the current category ID then the new name followed by the new parent category ID separated by comma.

Type menu: you may list the ID's of all existing types (using 'list') for convenience. You may get full type information on a single type at a time (using 'info' followed by the type ID separated by comma). You may get the amount of a single type of product in the store (using 'store' followed by the type ID separated by comma). You may get the amount of a single type of product in the storage (using 'storage' followed by the type ID separated by comma). You may add a new type (using 'add') or edit an existing type (using 'edit').

Add a type: to add a new type, enter the type name followed by the minimum amount, the base price, the sale price, name of the producer the ID of the supplier and the ID of the parent category ID, all separated by comma.

Edit a category: to edit an existing type, enter the type ID followed by the new type name the new minimum amount, the new base price, the new sale price, new name of the producer the new ID of the supplier and the new ID of the parent category ID, all separated by comma.

Product menu: you may list all product types (using 'types') for convenience. You may list all products of a certain type (using 'list' followed by type ID separated by coma). You may get full product information on a single product at a time (using 'info' followed by the product ID separated by comma). You may add a new product (using 'add'), relocate an existing product (using 'relocate'), remove an existing product (using 'remove' followed by the product ID separated by comma) or report damage on an existing product (using 'damage' followed by the product ID separated by comma).

Add product: to add a product enter the product ID then its expiration date (in DD-MM-YYYY format) separated by comma.

Relocate product: To relocate a product enter the product ID then its target location (storage or store) then the new shelf number separated by comma.

Discount menu: You may choose to enter the supplier discount menu (using 'supplier') or the sale discount menu (using 'sale').

Supplier discount menu: To get supplier discounts for a specific type enter 'get' then the type ID separated by comma. You may add a new sale discount (using 'add').

Add supplier discount: To add a supplier discount for a specific type enter type ID then its discount percentage, then the start and the end date (in DD-MM-YYYY format) and then the supplier ID separated by comma.

Sale discount menu: To get sale discounts for a specific type enter 'get' then the type ID separated by comma. You may add a new sale discount (using 'add').

Add sale discount: To add a supplier discount for a specific type enter type ID then its discount percentage, then the start and the end date (in DD-MM-YYYY format) separated by comma. To add a supplier discount for a specific category enter category ID then its discount percentage, then the start and the end date (in DD-MM-YYYY format) separated by comma.

Initialized data: The system can be initialized with preset data. If this option is selected then the system will generate 10 root categories named 'root<i>' where I is the number (from 1 to 10). Then generate 20 child categories where the first 10 are children of the root categories and the others are children of other child categories named 'ch<i>' where I is the number of the parent (from 1 to 20). Then generate 15 product types for each category. Then generate for each product type 3 times its type ID products that all expire in about 20 days. And finally the system adds a single sale discount for 12% on all items in category 1 that lasts until 01-01-2050.

You are free to change any of these settings after the fact.