

## Inventory Module – Instruction Manual

This guide will explain the usage of the inventory system. The system prints the actions you can perform. As a general note of the UI behavior, the input requested by the system from the user will be in a one-by-one fashion, for example - when adding an item each attribute of the item will be requested one at a time.

After the input is received the system will print a feedback message stating if the operation succeeded or failed.

### Available actions:

Those are the options the main menu prints after the setup of the program.

1. Show Item: this option will invoke after entering '1' in the main menu.  
the system will request the Item ID (instructions on correct format for ID are detailed in the "Add Item" description). If an item with that ID exists, the system will print the following information regarding the item: ID, name, cost price, selling price, shelf quantity, storage quantity, total quantity, minimum amount, shelf location, storage location and manufacturer ID.
2. Add Item: this option will invoke after entering '2' in the main menu.
  - a. Enter item ID: The item ID should be a number that does not start with the digit '0'.
  - b. Enter item name: for a neat and clean look of the reports and print of the system it is recommended to enter names that do not exceed 20 characters.
  - c. Enter cost price: this is the base price of an item without discounts that was bought from a supplier.
  - d. Enter selling price: this is the price of an item without sales that the store sells.
  - e. Enter minimum amount: this is the minimum amount of an item below which it is considered in shortage and an item order is due. If the total quantity is less than the minimum amount, the item will show up on the next Shortage Report.
  - f. Enter storage quantity: the current amount of the item in storage.
  - g. Enter shelf quantity: the current amount of the item on the shelves.
  - h. Enter storage location: the recommended format of the location is as follows: "ST-A<number>-<side>-S<number>". 'ST' stands of storage, followed by the aisle number marked with 'A'. 'L' or 'R' represent the left and right of the aisle. 'S' represents the shelf number the item is located on. (Note that the location format is not hard-coded, and any other desired format will also be accepted by the system).
  - i. Enter shelf location: the format is the same as of storage location but start with the prefix 'SH' to represent the location of the item on the shelf.
  - j. Enter manufacturer ID: a number that does not start with the digit '0'.

- k. Enter category: enter the name of the category for the new item to be associated with. For an uncategorized item enter nothing.
- 3. Edit item: this option will invoke after entering '3' in the main menu.
  - a. Requests the item to be edited.
  - b. Prints the item for review.
  - c. Requests the item attribute to be changed. The available options are all item attributes excluding the ID and the options for adding and removing suppliers.
  - d. Suppliers are saved as their unique ID. The ID should be a number that does not start with the digit '0'.
- 4. Remove Item: this option will invoke after entering '4' in the main menu.  
Enter the item ID that you want to delete from the system.
- 5. Show Category: this option will invoke after entering '5' in the main menu.  
Enter the category name. the following info will be printed: name, parent category, sub-categories' names and the items that are directly under those categories.
- 6. Add Category: this option will invoke after entering '6' in the main menu.  
the following information will be requested:
  - a. Enter category name: the name of the new category. Keep in mind that no two categories can have the same name.
  - b. Enter parent category name: The name of an existing category in the system. if no parent category is desired enter nothing. A category cannot be its own parent category.
- 7. Edit Item: this option will invoke after entering '7' in the main menu.  
The options to edit a category are as follows:
  - a. Change name: changes the name of the category.
  - b. Change parent category: changes the parent category. Be advised, entering a descendant (a sub-category and its descendants) or the same category name will result in a failure.
- 8. Remove Category: this option will invoke after entering '8' in the main menu.  
Enter the name of the category to be deleted. All of the category's direct items will be moved to the parent category and the sub-categories will be moved to the parent category. If there is no parent category the items new category will be 'Uncategorized' and the sub-categories will become first level category i.e. no parent category. The base 'Uncategorized' category cannot be removed and its attempt will result in failure.

9. Show Sale: this option will invoke after entering '9' in the main menu.  
Enter the name of the sale and the system will print the following information: sale name, discount given, dates and the related item or category to this sale. If the entered sale name doesn't exist in the system an appropriate error message will be printed.
10. Add Item Sale: this option will invoke after entering '10' in the main menu.  
Enter the following info as requested by the system to add a sale on an item.
- Enter sale name: the name of the sale. Must be unique.
  - Enter discount: the discount represented in a decimal form. For example, for 10% discount, enter 0.1 to the system.
  - Enter Start date: enter the starting date of the sale by following this format YYYY-MM-DD.
  - Enter End date: enter the starting date of the sale by following this format YYYY-MM-DD
  - Enter item ID: this is the ID of the item that the sale will apply on.
11. Add Category sale: this option will invoke after entering '11' in the main menu.  
The add category sale process is the same as the add item sale with the exception of the last entry which requires entering the category name rather than the item ID.
12. Edit sale: this option will invoke after entering '12' in the main menu.  
Enter the sale name to edit and the editing options will appear.  
The available editing options are:
- Change name: Enter a new name for the sale. Remember that sale names are unique so entering a name that already exists will result in failure.
  - Change discount: Enter the new discount for the sale according to the format presented in section 10b.
  - Change dates: the same process applies for both the starting and end dates. The entry is the same as described in sections 10c and 10d.
13. Show supplier discount: this option will invoke when entering '13' in the main menu.  
Enter the supplier ID and the date on which the discount occurred. The system will print all the discounts associated with the specified supplier and date. The info that will be shown is the supplier ID, the date of the discount, the amount of items acquired in the discount and the item or category of the discount.
14. Add item supplier discount: this option will invoke after entering '14' in the main menu. The following info is requested:
- Enter supplier ID.
  - Enter the item ID.
  - Enter the discount received.
  - Enter the date of the discount.
  - Enter the amount of items the discount applies for.

All the formats for entering the required attributes are already detailed above.

15. Add category supplier discount: this option will invoke after entering '15' in the main menu. The process is the same as item supplier discount except the name of the category is requested and not the item ID.
16. Record defect: this option will invoke after entering '16' in the main menu.  
For recording an item defect the following info is requested:
  - a. Enter item ID.
  - b. Enter defect amount.
  - c. Enter defect location: follow the format detailed in section 2h or 2i. The defect's location will be in either the storage or on the shelves but not in both of them. The system looks for the prefixes 'SH' for shelf and 'ST' for storage, and in the event neither of those is given as per the format suggested, the defect will be recorded by default in the storage.The defect will be recorded with the time of the operation.
17. Print inventory report: this option will invoke after entering '17' in the main menu. prints all the items in the system in one table in the same format as show item.
18. Print category report: this option will invoke after entering '18' in the main menu. Enter the category name for the report. If the category exists, all items in the category or in any of its sub-categories will be printed in the same format as inventory report.
19. Print shortage report: this option will invoke after entering '19' in the main menu. Prints all the items whose total quantity is less than the minimum amount for the item. The display will be in the same format as inventory report.
20. Print defect report: this option will invoke after entering '20' in the main menu. Enter the dates you would like to see defects for. All the defect entries that are within the date interval entered will be printed out. The format for the display of the defect entry is the following: date, item ID, item name, quantity, and location.