Cube User Guide

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Cube

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1. What is Cube?

Cube is a simple Bookkeeping and Inventory Management System targeted for sellers looking to set-up a small online marketplace. This application is targeted at online store owners who wish to easily keep track of the various products and revenue earned from the products they are selling. If you are looking for an application to help kick start your business, look no further and give Cube a try!

2. About this document

This user guide aims to guide the user through setting up the application and how to utilise the various features provided in Cube.

The table below details the explanations behind various symbols and formatting that are used in this document.

`command`	A grey highlight indicates that this is a command that can be typed into the command line to be executed by the application.
important	A yellow highlight indicates key files or points of the instructions to be noted by the user.
keyboard	A green highlight indicates a key press or a keyboard shortcut to be entered by the user.
	This symbol indicates that there is some additional information to be taken note by the user.

3. Quick start guide

This section provides a quick guide on how to set-up and launch the application Cube.

1. Ensure you have Java 11 or above installed in your Computer.
2. Download the latest cube.jar from our releases page here.
3. Copy the file to the folder you want to use as the home folder for your Cube application.
4. Double-click the file to start the app. The program should launch in a few seconds and should resemble Figure 3.1 as shown below.

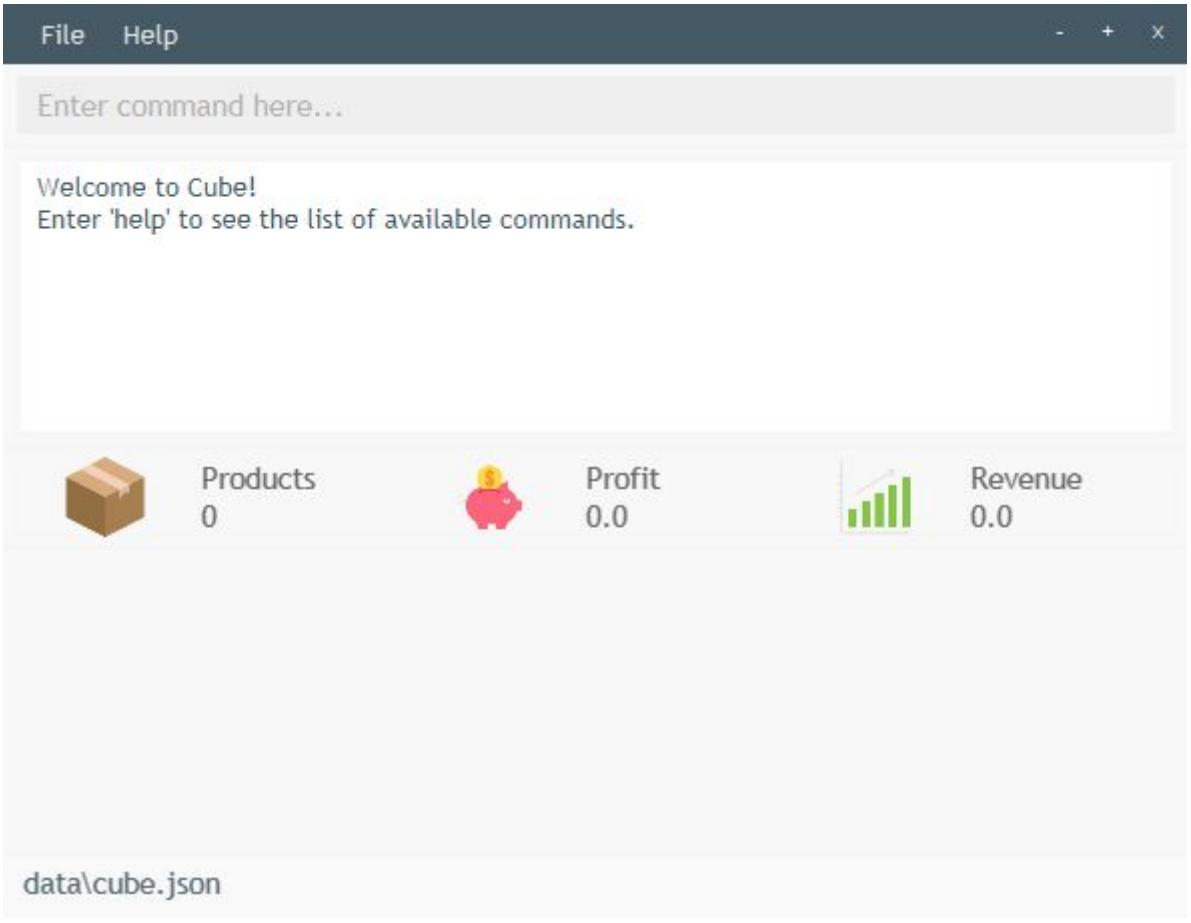


Figure 3.1 - Cube interface when being first launched.

5. Type the command in the command box and press Enter to execute it. For example, typing help and pressing Enter will list all the available commands.
6. Some example commands you can try

a. `list` : List all products stored (This should show an empty list on first launch).
b. `add PotatoChips -t Snack -p 5.00 -s 999 -e 31/12/2022` : Add a product named “PotatoChips” to Cube.
c. `delete -i 1` : Delete the 1st object shown in the current list.
d. `exit` : Exit the program

7. For a more in-depth explanation on the available commands, you can refer to Section 4 on features of the user guide.

4. Features

This section contains the detailed description of features that are available in Cube.

The table below details the various formats of syntaxes that are used in the description of the commands in this section.

`<UPPER_CASE>`	Words in `<UPPER_CASE>` are parameters to be supplied by the user for use in the command execution. E.g. `sold <NAME> -q <QUANTITY>`, `<NAME>` and `<QUANTITY>` are parameters which can be used as `sold Chips -q 10`.
`[-o OPTIONAL]`	Parameters in square brackets `[ ]` are optional and are not mandatory for the command to execute. E.g. `add <NAME> [-t TYPE]` can be used as `add Chips -t Food` or simply `add Chips`.
`(Type1 | Type2)`	Parameters in round brackets `( )` with a vertical bar symbol `|` are mandatory parameters where a selection is required between the options provided. E.g. `list -sort (expiry | stock | name)` can be used as `list -sort expiry`, `list -sort stock` or `list -sort name`.
`-p`	Inputs that precede with a `-` (dash) are processed as parameters in Cube.

	In Cube, repetitive parameters (even with different field values) are not allowed. E.g. if you input `-q QUANTITY1 -q QUANTITY2`, Cube will not accept this input.
	In Cube, all inputs with a `-` (dash) will be processed as parameters even if they are not. E.g. if you input `-p -1`, Cube will treat this as invalid parameter. This does not affect managing your price correctly as the application ought not to accept negative numbers after all.

4.1 Adding a product : add

This command allows you to add a new food product into Cube.

4.1.1 Command syntax

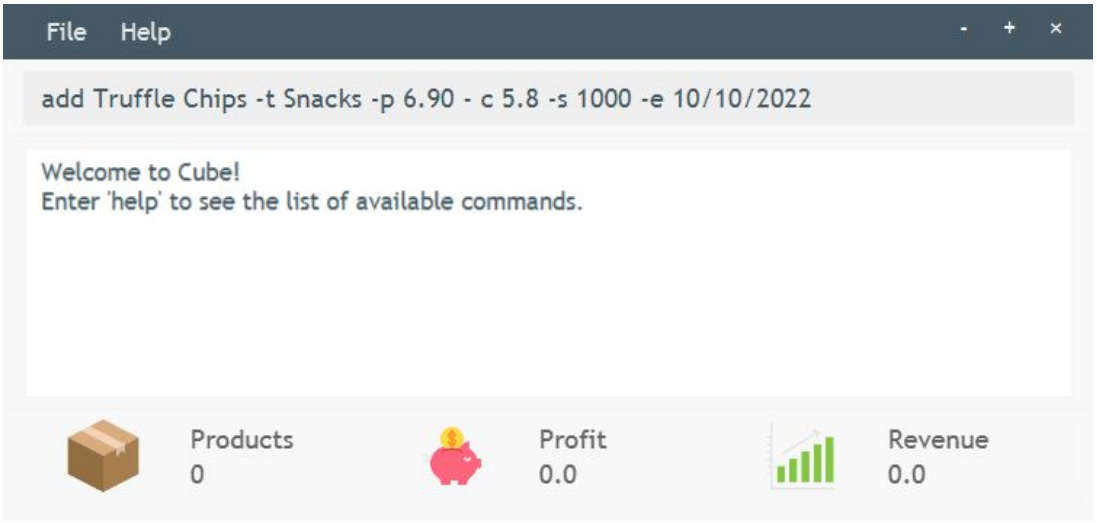
`add <FOOD_NAME> [-t FOOD_TYPE] [-p PRICE] [-c COST] [-s STOCK] [-e EXPIRY_DATE]`

- Adds a food product with the following parameters.
    - `<FOOD_NAME>` : Name of the product to be added.
    - `[-t FOOD_TYPE]` : Type of the product to be added.
    - `[-p PRICE]` : Price of the product to be added.
    - `[-c COST]` : Cost (a.k.a purchase price) of the product to be added.
    - `[-s STOCK]` : Quantity of the product to be added.
    - `[-e EXPIRY_DATE]` : Expiry date of the product to be added.

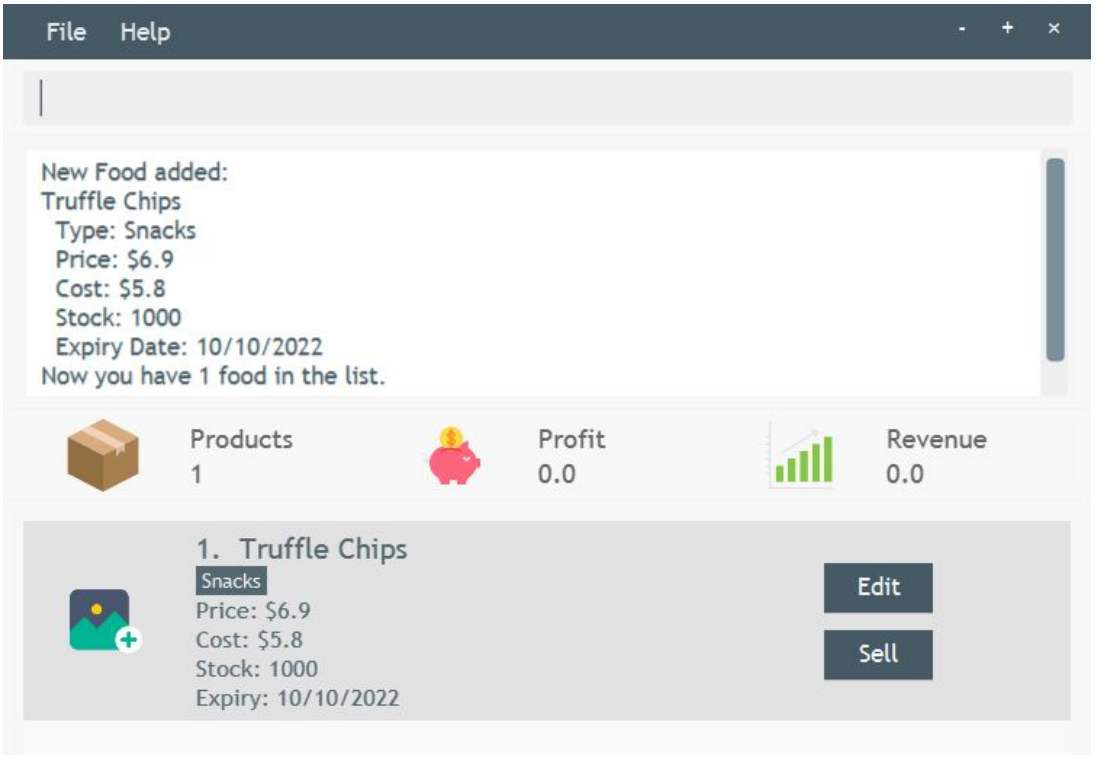
4.1.2 Example usage

You ordered a new product and would like to add it in your store inventory.

1. Get the details of your new product (E.g. Truffle Chips, Expires in 10/10/2022, 1000 quantity in total, etc.)
2. Type `add Truffle Chips -t Snacks -p 6.90 -c 5.8 -s 1000 -e 10/10/2022` in the command box in Cube and press `Enter` to add in your new product.



3. You should see that your product has been successfully added into Cube, and the shop summary values will be updated as well.



	In Cube, food name that contains '-' (dash) is not allowed.
	If price, cost or stock is not set, it will be set to 0 by default.

4.2 Finding a product: find

This command allows you to find one or some specific products you have added into Cube, as well as to give you an option to sort the result list ascendingly by expiry date, product name or stock quantity when you find by type.

4.2.1 Command syntax

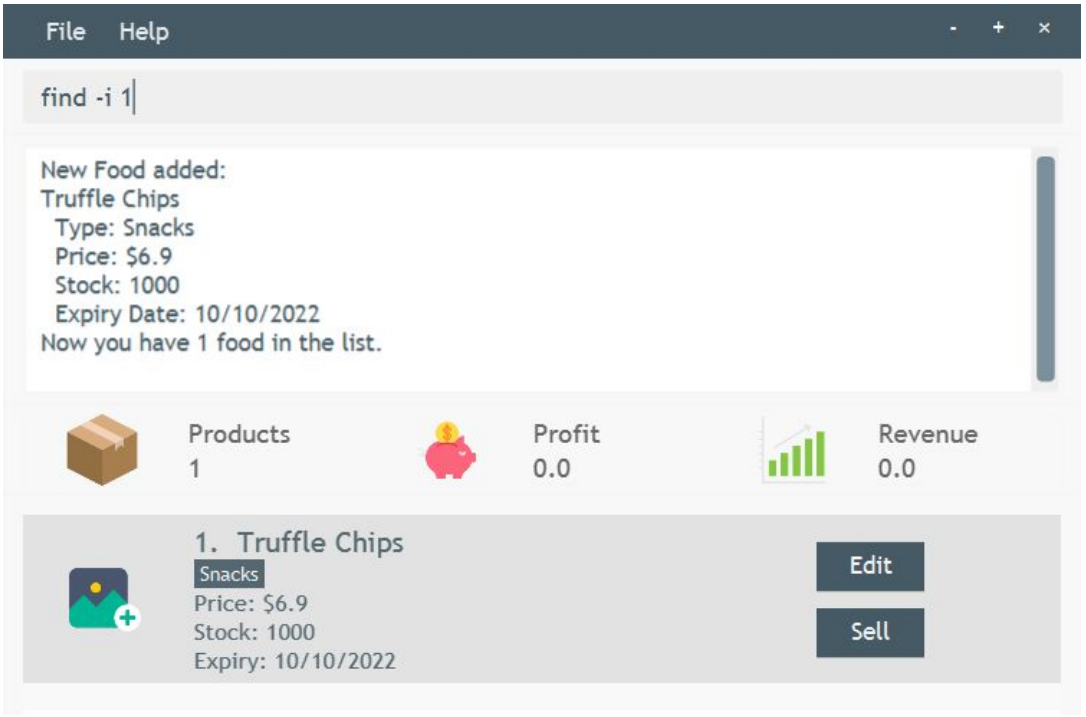
`find [-i INDEX] | [-n FOOD_NAME] | [-t FOOD_TYPE] [-sort (expiry | name | stock)]`

- Finds a food product or some food products with the following parameters.
    - `[-i INDEX]` : Index of the product in list (viewed by `list` command)
    - `[-n FOOD_NAME]` : Name of the product you want to find
    - `[-t FOOD_TYPE]` : Type of the product you want to find.
    - `[-sort (expiry | name | stock)]` : Type of `-sort` to apply when viewing the result of `find` command. Cube currently supports sorting by `expiry` date, product `name`, and remaining `stock` quantity in an ascending order.

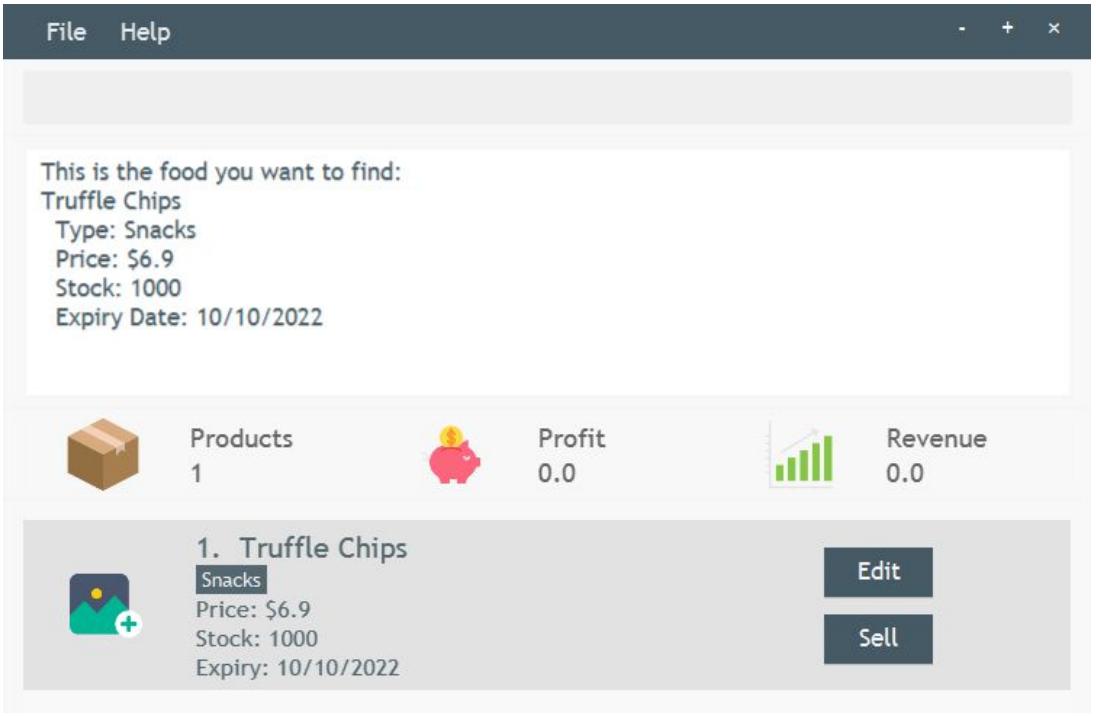
4.2.2 Example usage

You have added several products and would like to list all products in your inventory.

1. Type `find -i 1` in the command box in Cube and press `Enter` to view your first product in the list. The index in food list starts from 1.



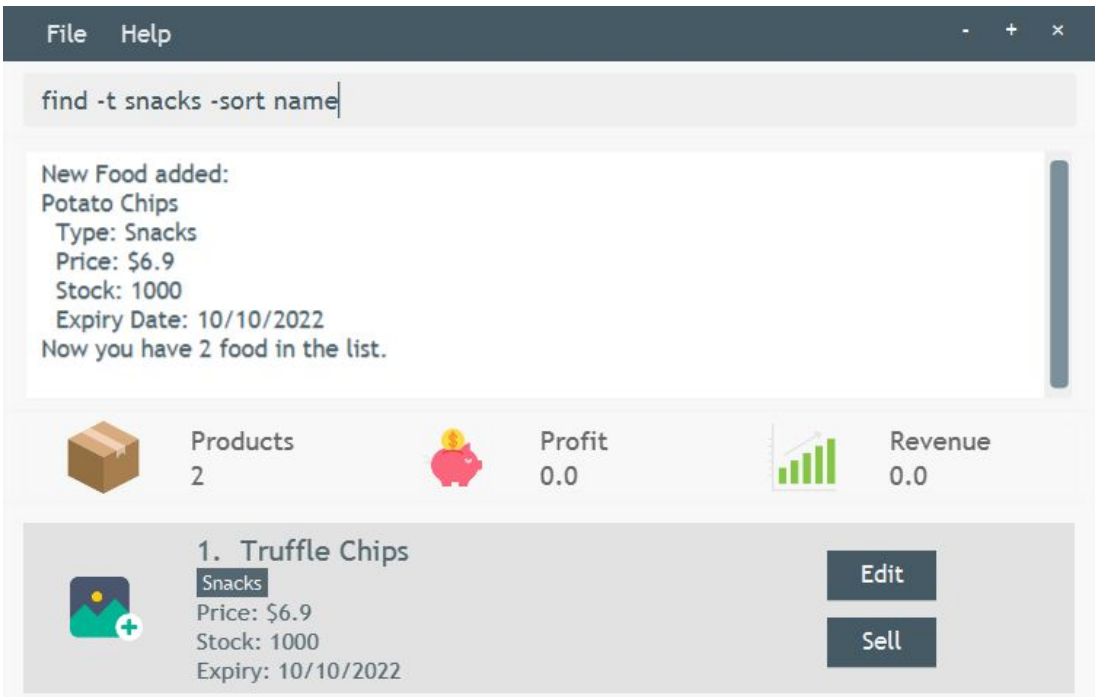
2. You should see the first product that you have added into Cube.



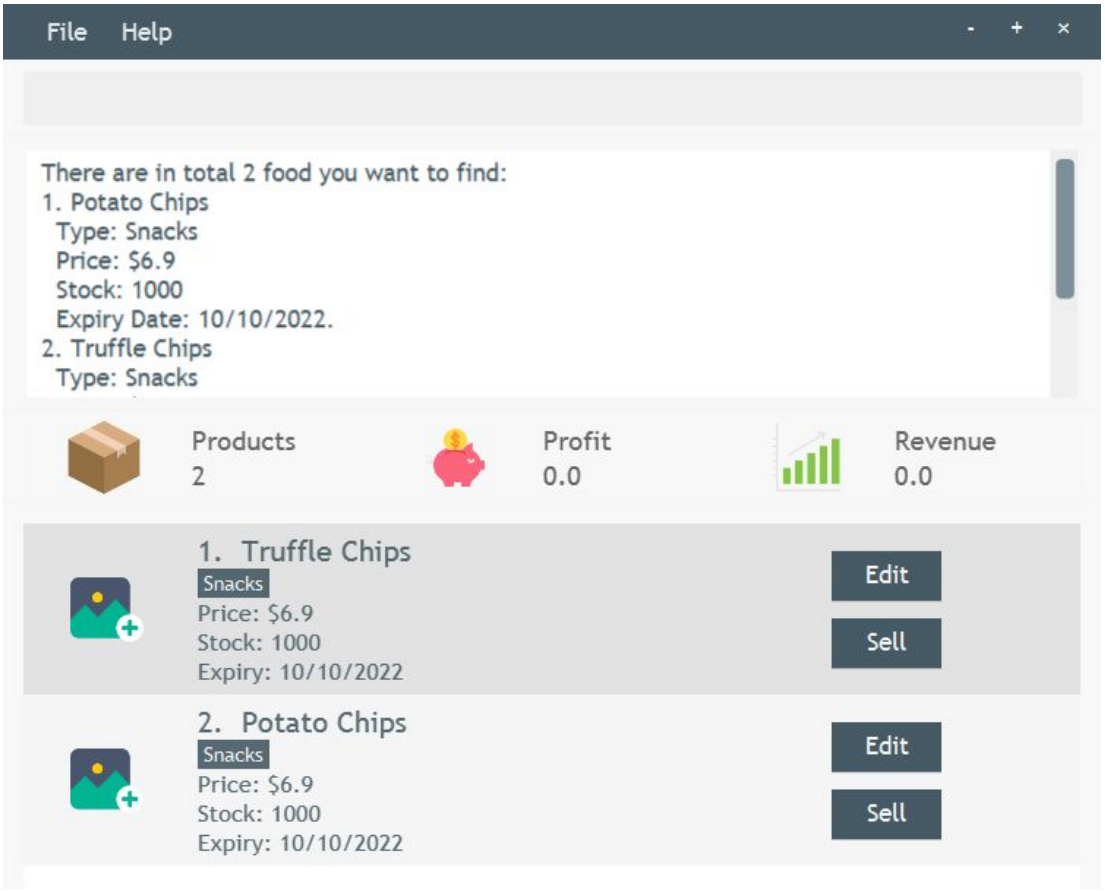
4.2.3 Another example usage

You would like to see products in your food list with type “snacks” and sort them in name order.

1. Type `find -t snacks -sort name` in the command box in Cube and press Enter.



2. You should now see all products with the type “snacks” and sorted in name order.



	In Cube, `find` command supports find by partial name. For example, `find -n test` will also give you “test1”, “trytest”, and “try test this” as results.

4.3 Listing all your products : list

This command allows you to list all the products you have added into Cube, as well as to give you an option to optionally sort the list ascendingly by expiry date, product name or stock quantity.

4.3.1 Command syntax

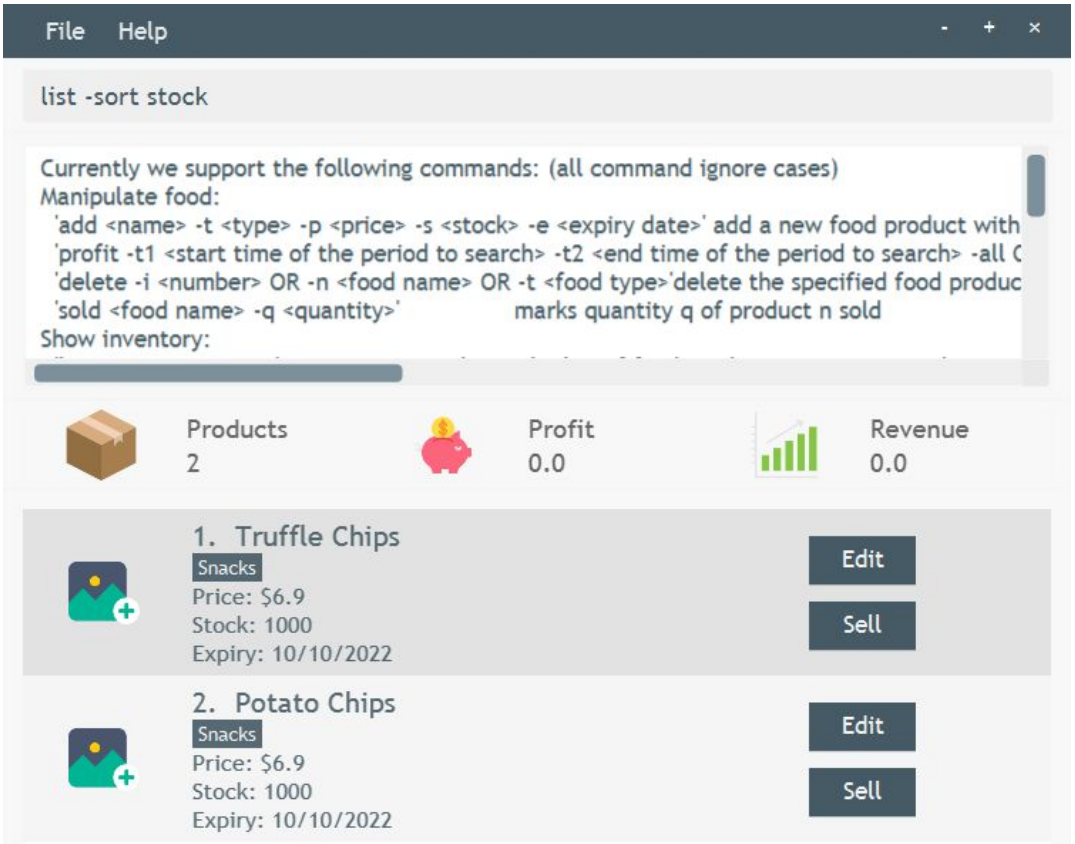
`list [-sort (expiry | name | stock)]`

- Lists all your food products, or list the products in a sorted manner by listing the parameters.
    - `No parameters` : Lists all the products in Cube without sorting.
    - `[-sort (expiry | name | stock)]` : Type of `sort` to apply when sorting the list. Currently supports sorting by `expiry` date, product `name` and remaining `stock` quantity in an ascending manner.

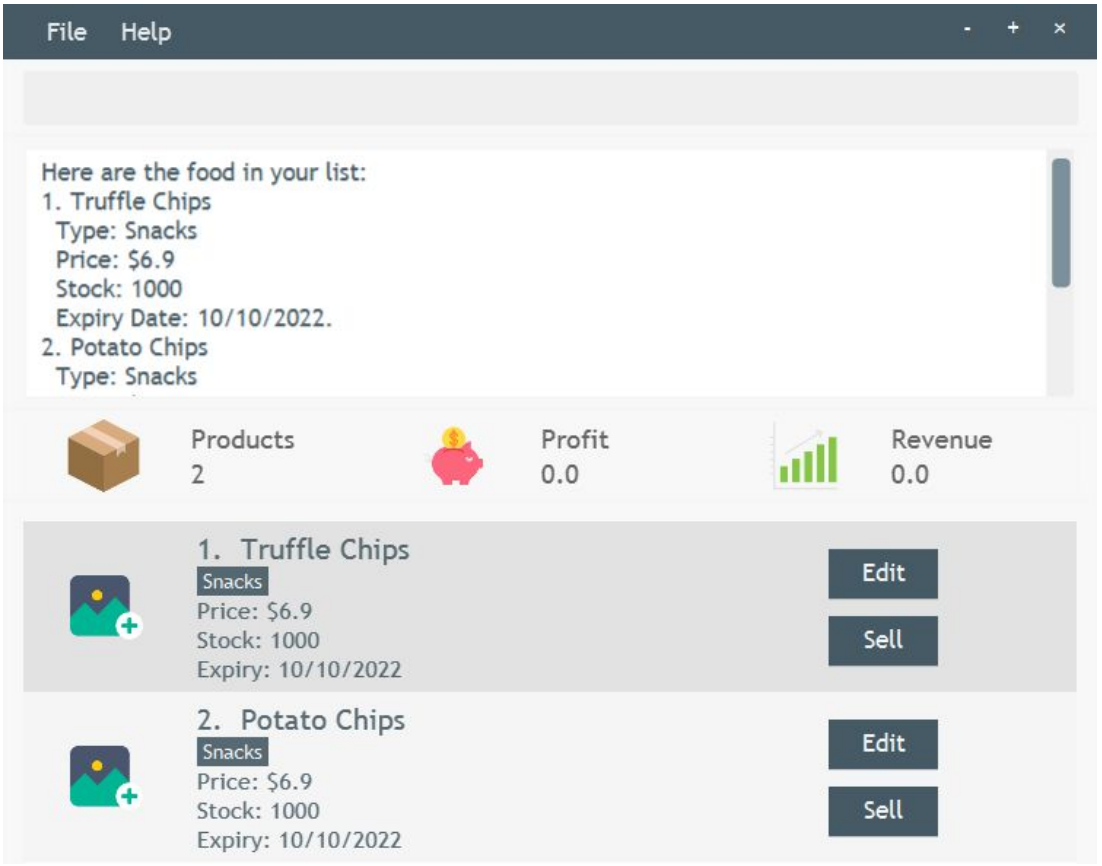
4.3.2 Example usage

You would like to see products that are running low in stock so you can prepare for restocking of the products.

1. Type `list -sort stock` in the command box in Cube and press `Enter`.



2. You should now see products that are lowest in quantity listed at the top, followed by the products with the highest remaining quantity at the bottom.



	[-sort expiry] will have the food with unspecified expiry date in the front.

4.4 Deleting a product : delete

This command allows you to delete food product from Cube.

4.4.1 Command syntax

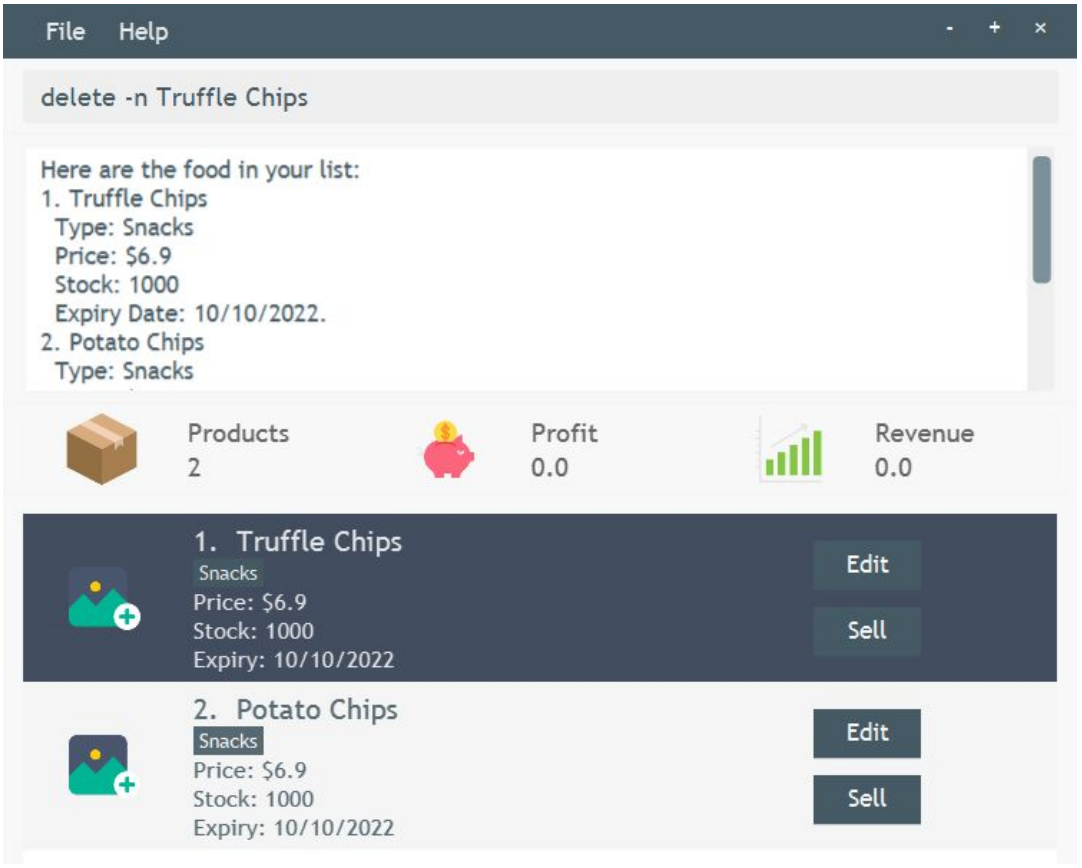
`delete [-i INDEX] | [-n FOOD_NAME] | [-t FOOD_TYPE] | [-all]`

- Deletes a food product with the following parameters.
  - `[-i INDEX]` : Index of the product to be deleted in list (viewed by `list` command).
  - `[-n FOOD_NAME]` : Name of the product to be deleted.
  - `[-t FOOD_TYPE]` : Type of the product to be deleted.
  - `[-all]` : Delete all food in the list.

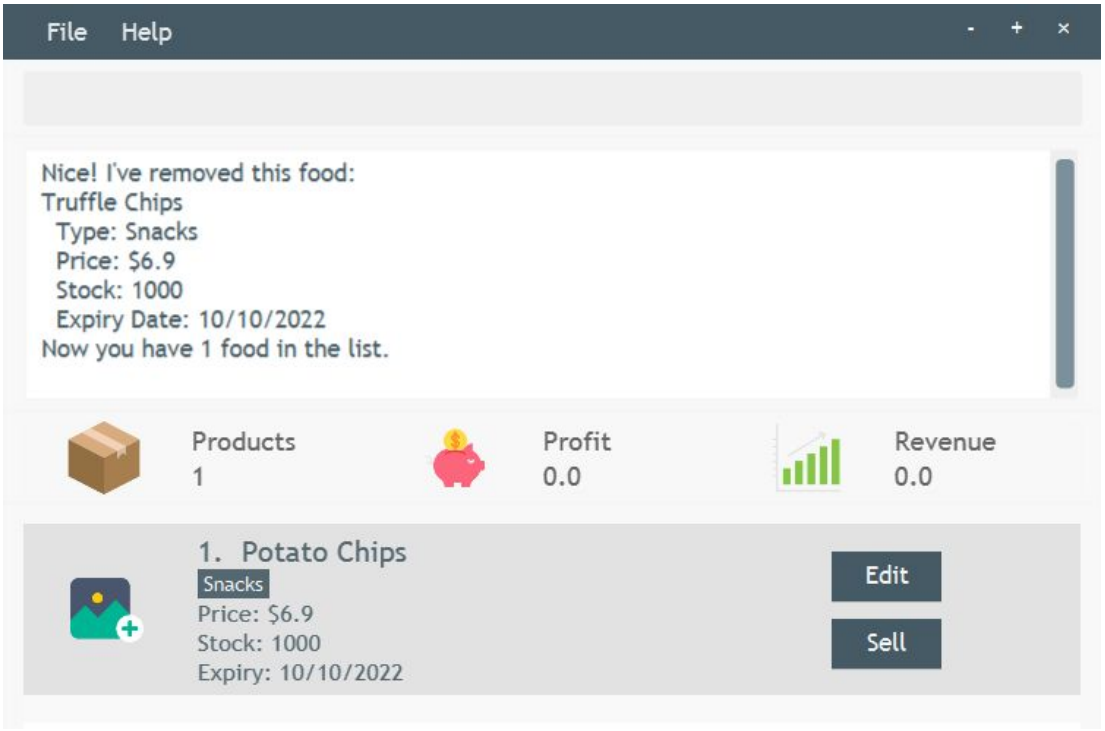
4.4.2 Example usage

You no longer want to sell a certain product and want to delete it from your store inventory.

1. Get the name of your product you want to delete.
2. Type `delete -n Truffle Chips` in the command box in Cube and press `Enter` to delete the product “Truffle Chips”.



3. You should see that your product has been successfully deleted from Cube, and the shop summary values will be updated as well.



	The INDEX in optional parameter [-I INDEX] refers to the index seen in list command and is not permanent. It may be changed if you have used list --sort
	Delete will not delete the sale record. Therefore, even if a food item is deleted, once an item with the same name is added back again, records in sale history will regard the two items as the same. Please take note of this.

4.5 Updating a product : update

This command allows you to update information of a food item.

4.5.1 Command syntax

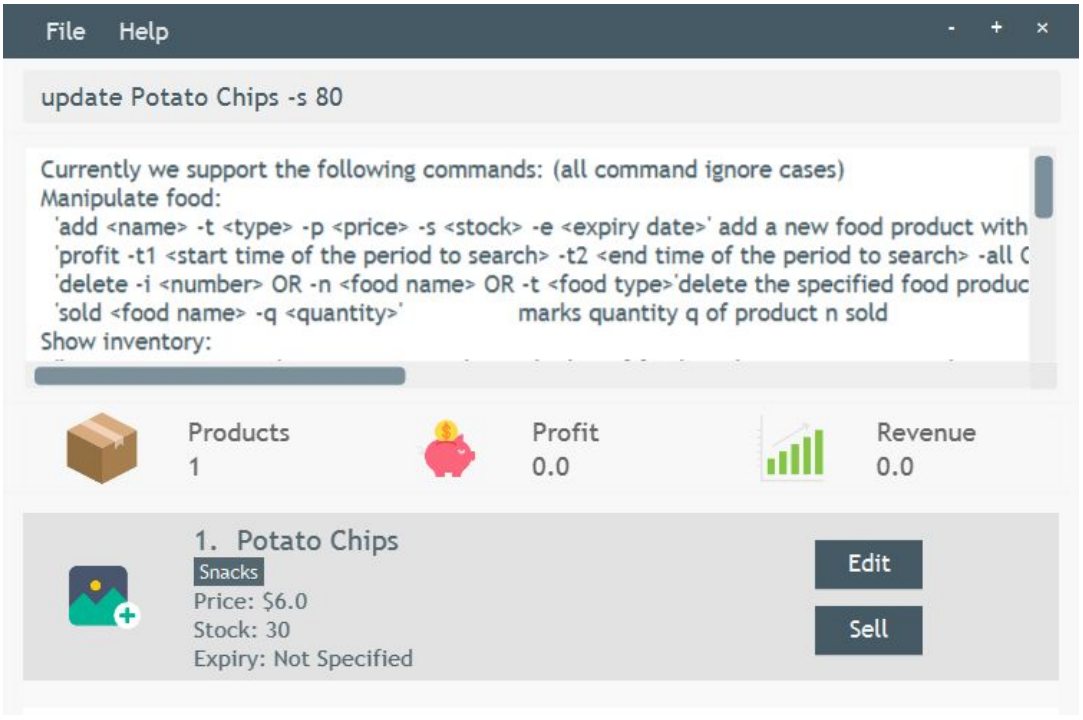
update <FOOD_NAME> ([-t FOOD_TYPE]| [-p PRICE] | [-c COST]| [-s STOCK] | [-e EXPIRY_DATE])

- Updates a food product with the following parameters.
  - <FOOD_NAME> : Name of the product to be updated
  - [-t FOOD_TYPE] : New type to be updated to the food
  - [-q QUANTITY] : New quantity to be updated to the food
  - [-p PRICE] : New price to be updated to the food
  - [-c COST] : New cost to be updated to the food
  - [-s STOCK] : New stock to be updated to the food
  - [-e EXPIRY_DATE] : New expiry date to be updated to the food

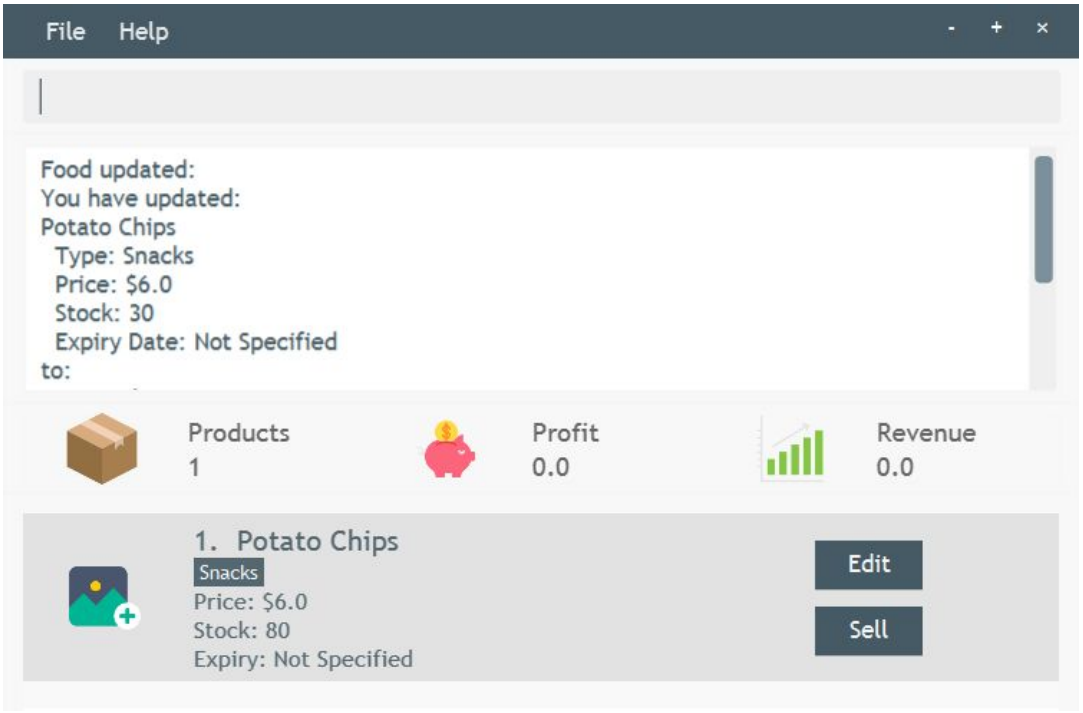
4.5.2 Example usage

Now you have 30 bags of Potato Chips in Cube and you have stocked 50 more bags. You want to update the stock information of Potato Chips in Cube.

1. Type update Potato Chips -s 80 in the command box in Cube and press Enter to add in your new product.



2. You should see that the stock of Potato Chips has been successfully updated to 80.



4.6 Recording a sale : sold

This command allows you to record a sale of food.

4.6.1 Command syntax

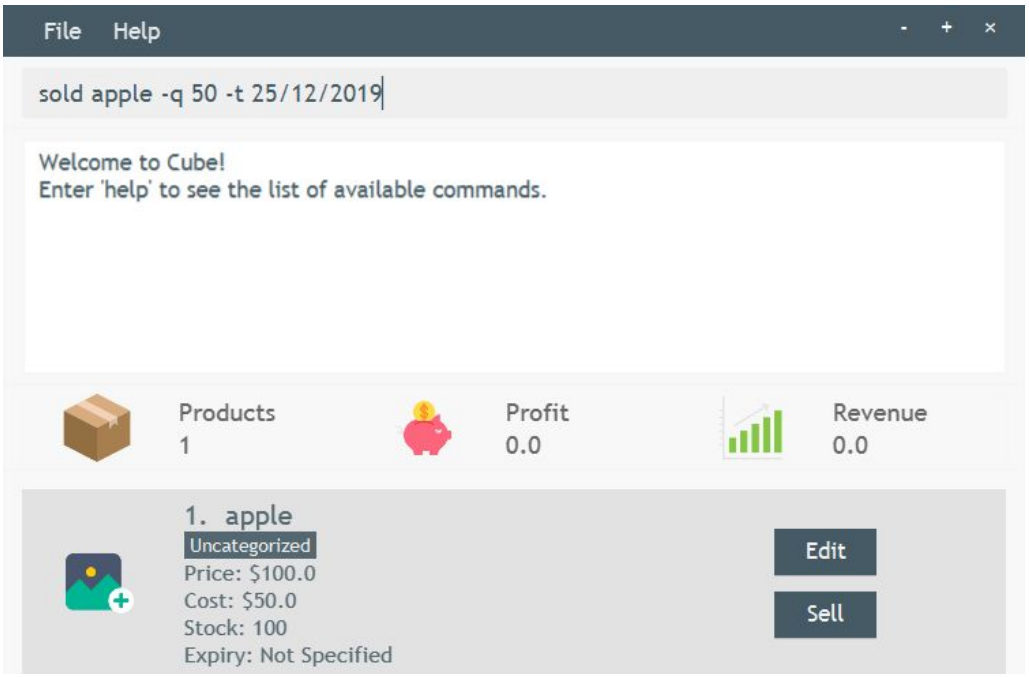
`sold <FOOD_NAME>  <-q QUANTITY> [-t DATE_OF_SALE]`

- Adds a food product with the following parameters.
  - `<FOOD_NAME>` : Name of the product sold.
  - `<-q QUANTITY>` : Name of the product sold.
  - `[-t DATE_OF_SALE]` : Date of the transaction made.

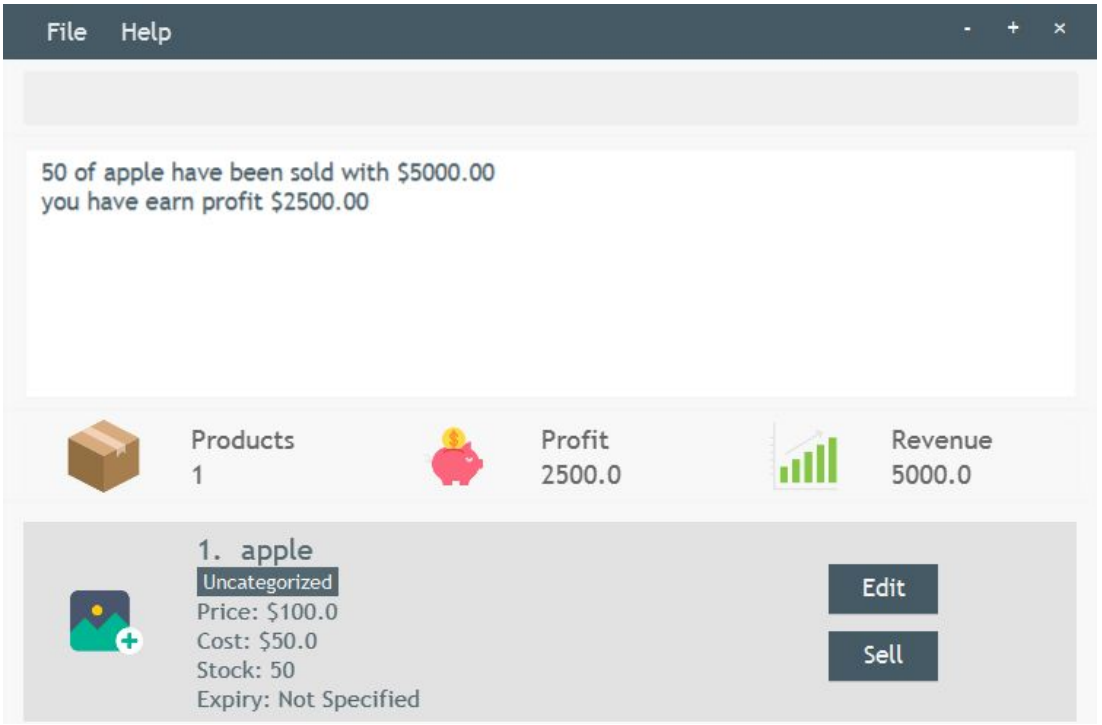
4.6.2 Example usage

You have sold 50 apples on 25th December 2019, and want to record the sale in Cube.

1. Type `sold apple -q 50 -t 25/12/2019` in the command box in Cube and press `Enter` to add in your new product.



2. You should see that your sale has been successfully recorded in Cube. It will also tell you how much revenue and profit you have made from this sale.



	If parameter `[-t DATE_OF_SALE]` is not specified, the default value is the time of input.

4.7 Handling promotions: promotion

This feature allows the user to add a promotion to a particular food item.

4.7.1 Command syntax

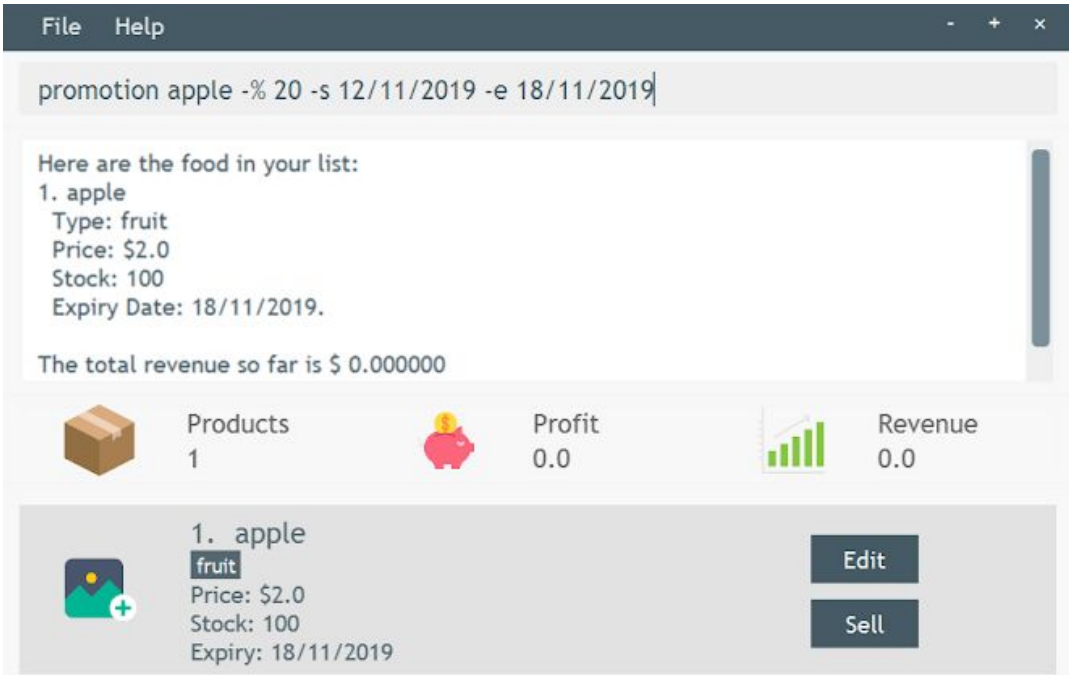
`promotion <FOOD_NAME> <-% DISCOUNT> [-s START_DATE] <-e END_DATE>`
`promotion -delete (INDEX | -all)`
`promotion -list`

- Adds a promotion for a food item with the following parameters.
  - `<FOOD_NAME>` : Name of the food item
  - `<-% DISCOUNT>` : Percentage of discount
  - `[-s START_DATE]`: Start date of promotion period
  - `<-e END_DATE>`: End date of promotion period
- Deletes a promotion for a food item with the following parameters.
  - `INDEX` : Index number of the promotion in the list
  - `-all` : Deletes all the promotions in the list
- Lists all the promotions in the promotion list.

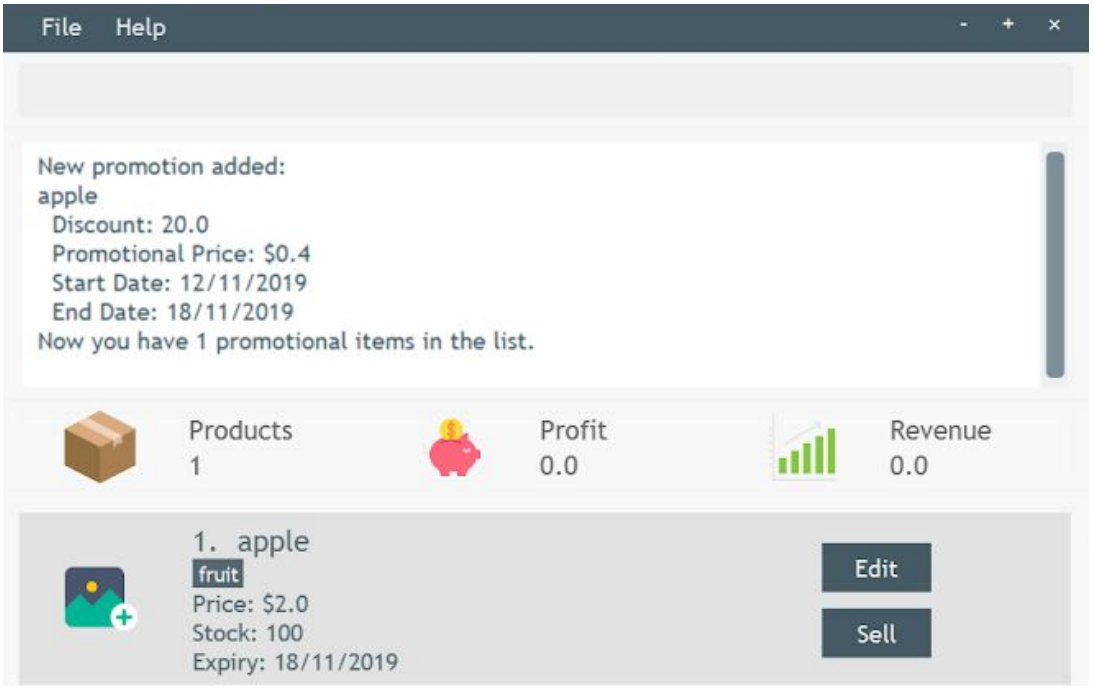
4.7.2 Example usage

You want to add a promotion for a certain product.

1. Type `promotion apple -% 20 -s 12/11/2019 -e 18/11/2019` in the command box in Cube and press `Enter` to add in your new promotion.



2. You should see that your promotion has been successfully recorded in Cube. It will also tell you the total number of promotions you have in your promotion list.



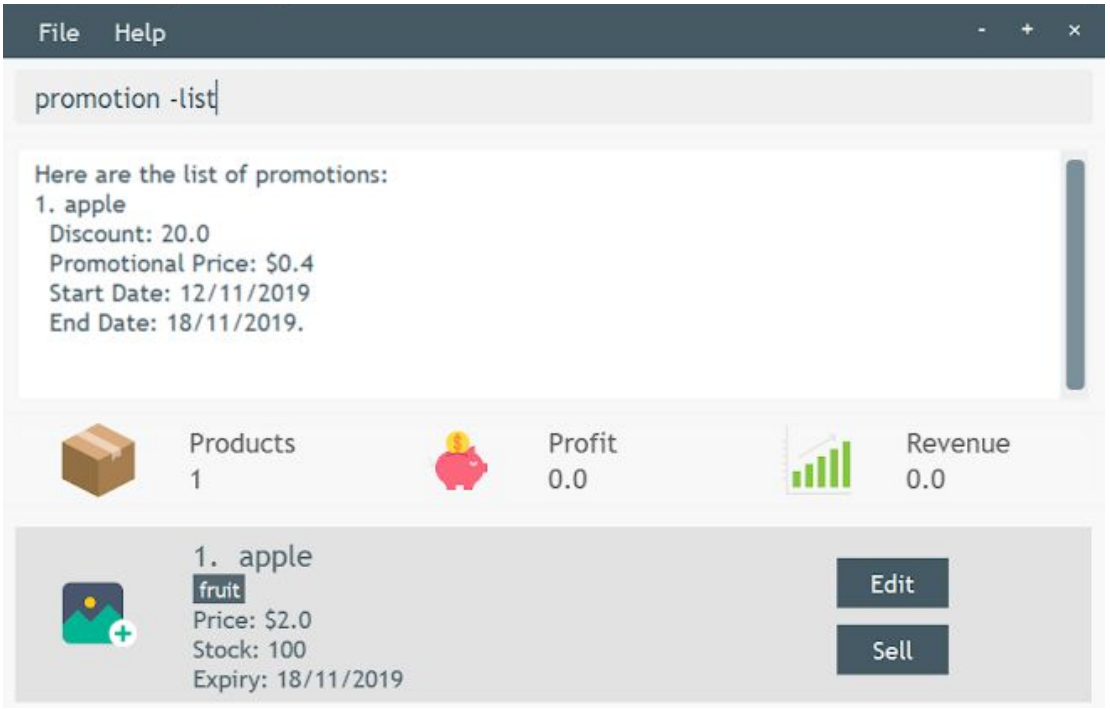
	A promotion can only be added if the food item exists in the inventory

	The `INDEX` parameter refers to the index seen in the `promotion -list` command.

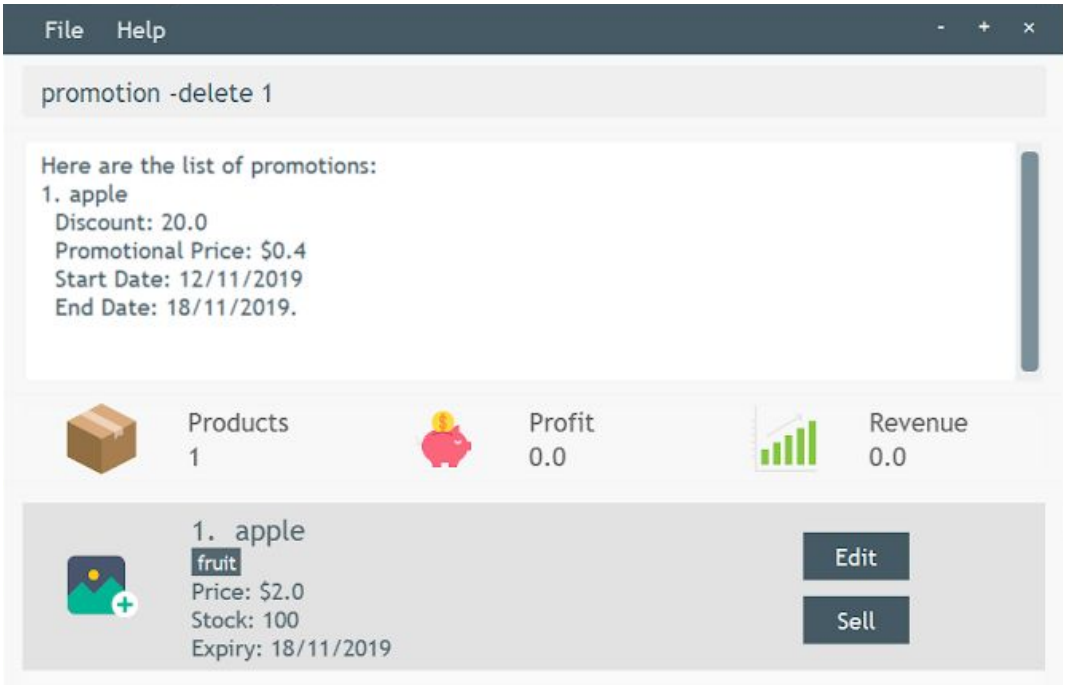
4.7.3 Another example usage

You want to delete a promotion for a certain product.

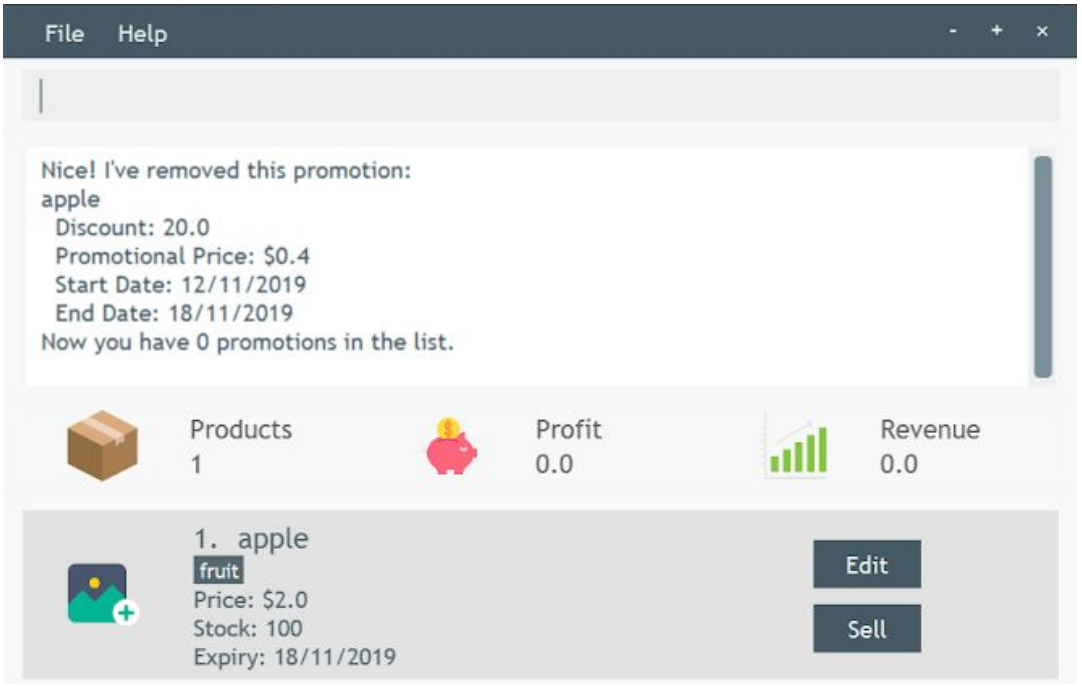
1. Type `promotion -list` in the command box in Cube and press `Enter` to view all your promotions.



2. Choose the product whose promotion you want to delete and keep note of its index number. Say you want to delete the promotion for the product “apple” , so its index number is 1.
3. Type `promotion -delete 1` in the command box in Cube and press `Enter` to delete the promotion for “apple”.



4. You should see that your product has been successfully deleted from Cube.



4.8 Viewing profits and revenue: profit

This feature allows the user to view the profits and revenue of a specific food item, or those of all the food belonging to one food type, within a specified time frame.

4.8.1 Command syntax

profit -t1 <START_TIME> -t2 <END_TIME> (-all | -i <INDEX> | -n <FOOD_NAME> | -t <FOOD_TYPE>)

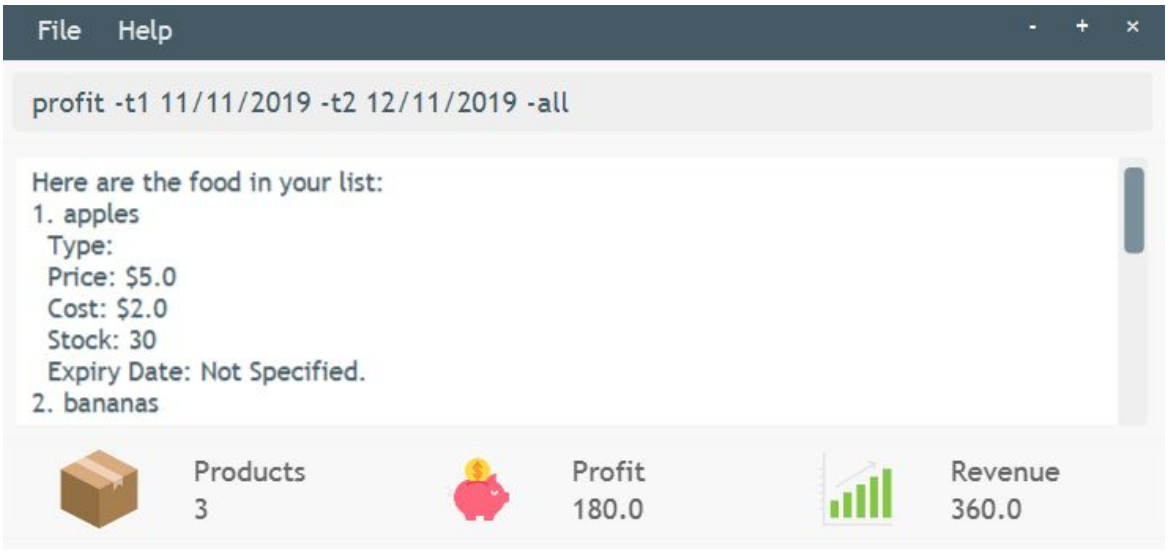
- View the profits and revenue for a food item or all the food items of a singular food type with the following parameters.
    - <START_TIME> : The start date of the time period within which the profits and revenue are to be generated
    - <END_TIME> : The end date of the time period within which the profits and revenue are to be generated
    - <INDEX > : The index of the food item concerned in the food list.
    - <FOOD_NAME > : The name of the food item concerned
    - <FOOD_TYPE > : The food type of the food items concerned.

ℹ️	The start time of the time frame has to be a date earlier than the end time of the time frame. If you wish to view the profits and revenue of a single day, please enter the concerned day as the start time, and the day after the concerned day as the end time.
ℹ️	Note that although in general the order of parameters in Cube does not matter, this promotion command is an exception. The labels "-t1", "-t2" and "-all"/"-i"/"-n"/"-t" has to be entered in the order described above. Shifting the order is disallowed.
ℹ️	Please note that all date parameters have to be in the format of DD/MM/YYYY.

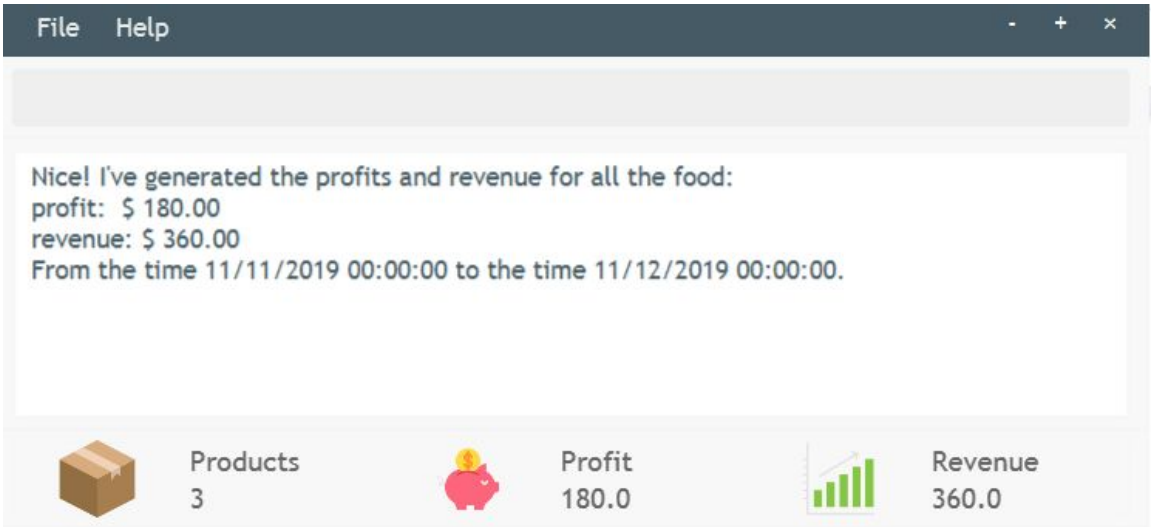
4.8.2 Example usage

Suppose you have just ended a promotion campaign on 11 Nov 2019 and now you want to see how much money you have earned from all your products in the campaign.

1. Type `profit -t1 11/11/2019 -t2 12/11/2019 -all` in the command box in Cube and press `Enter` to view your profit and revenue. Note that if you wish to view the profits and revenue of a single day, you need to enter the day as start time, and the day after it as the end time.



2. You should now see the profit and revenue generated from all your products on 11 Nov 2019 in Cube.



4.9 Getting a reminder: `reminder`

This feature informs the user when a particular food item is running low on stock or is nearing its expiry date. The default parameters are 7 days from the expiry date and stock with quantity less than 5. This feature has a customization component that allows the user to change the values of these parameters based on their needs.

4.9.1 Command syntax

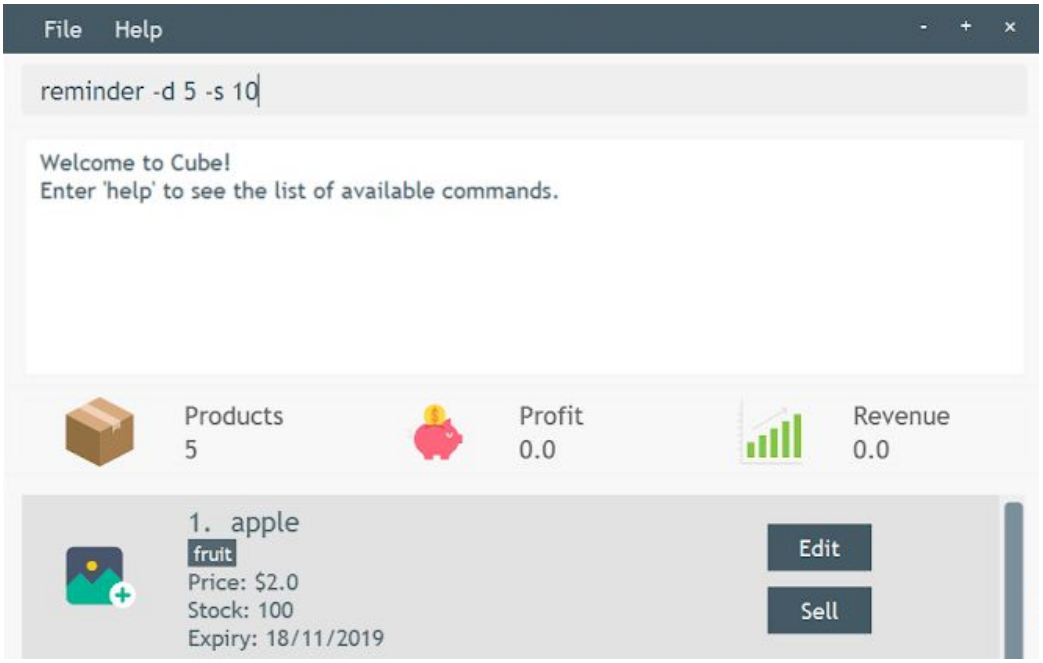
`reminder [-d DAYS_TO_EXPIRY][-s STOCK]`

- Adds a reminder with the following parameters.
  - `[-d DAYS_TO_EXPIRY]` : Number of days to the expiry date
  - `[-s STOCK]` : Low stock quantity

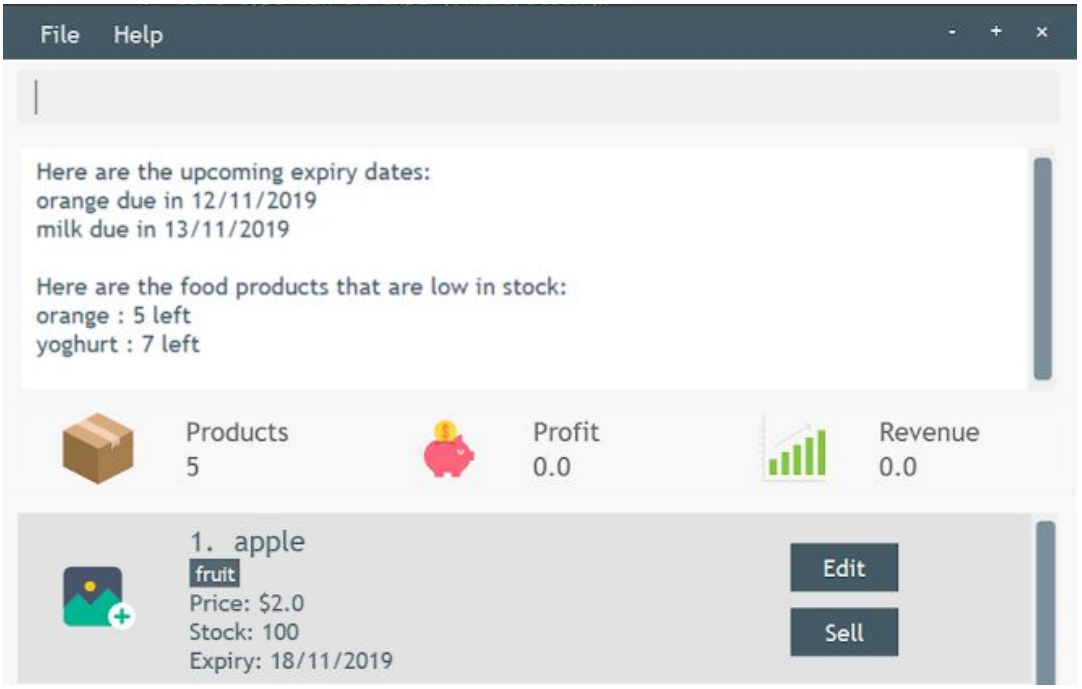
4.9.2 Example usage

You have a list of products and would like to know if any of the products are either nearing its expiry date or are running low on stock.

1. Type `reminder -d 5 -s 10` in the command box and press `Enter`.



2. You will see all the products that have its expiry date in the next 5 days and/or have a stock quantity of less than 10.



4.10 Importing or exporting data file : batch

This command allows you to batch export or import your product list as a comma-separated values (CSV) file. This allows easy addition of multiple products at once, or to allow exporting of data stored in Cube for use in other programs like Microsoft Excel.

4.10.1 Command syntax

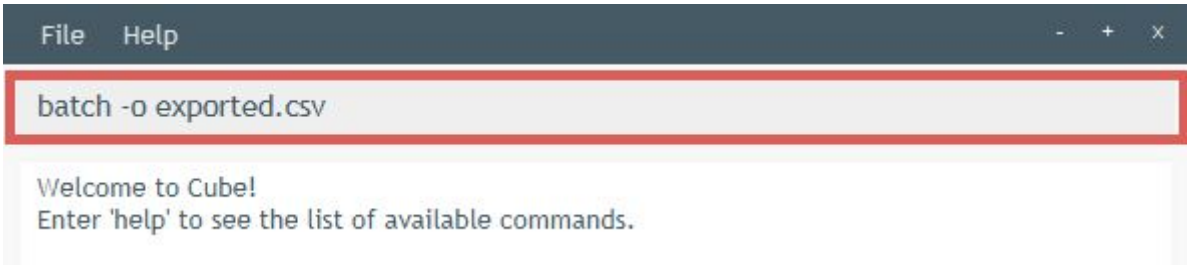
```
batch -o <FILENAME>
batch -i <FILENAME>
batch -e <FILENAME>
```

- Batch exports or imports all your products by either listing the -i or -o parameter.
  - -o <FILENAME> : Indicates a batch export command by specifying the output file name.
  - -i <FILENAME> : Indicates a batch import command by specifying the output file name.
  - -e <FILENAME> : Generates an empty CSV template to be used with batch importing.

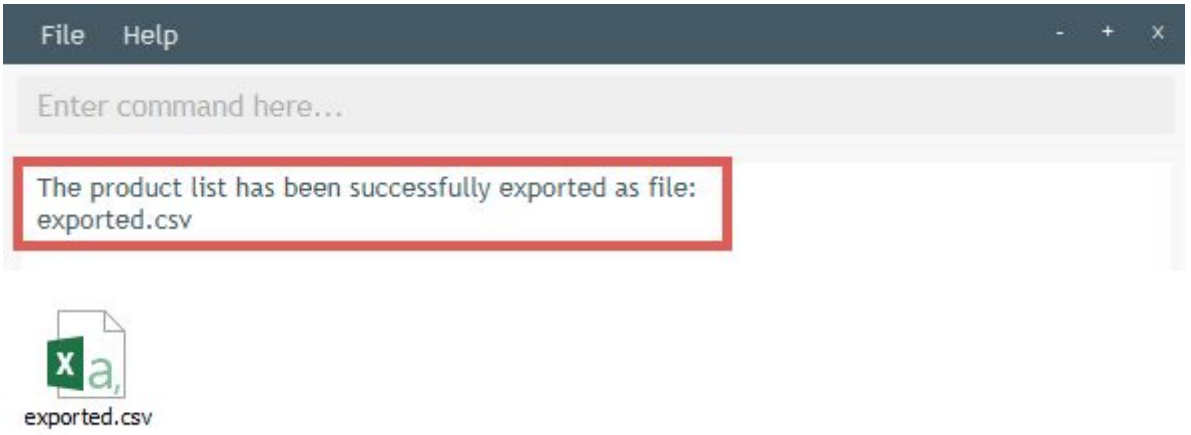
4.10.2 Example usage

You would like to export the list of your products stored in Cube for usage with Microsoft Excel to draft charts.

1. Type batch -o exported.csv in the command box in Cube and press Enter to export your product list with the filename exported.csv.



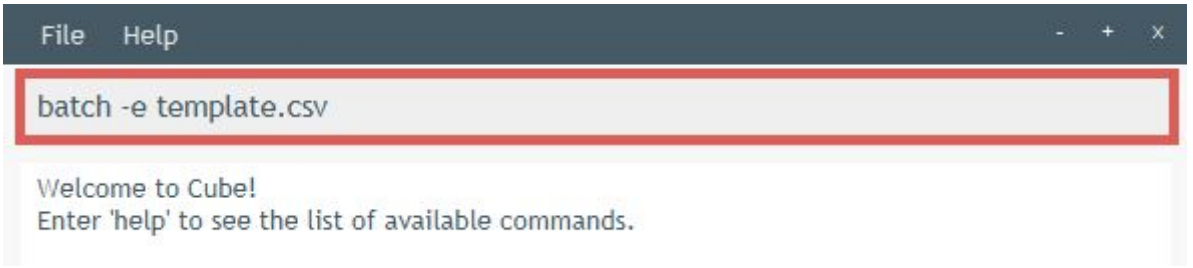
2. You should see the file being exported to the data directory where you launch Cube.



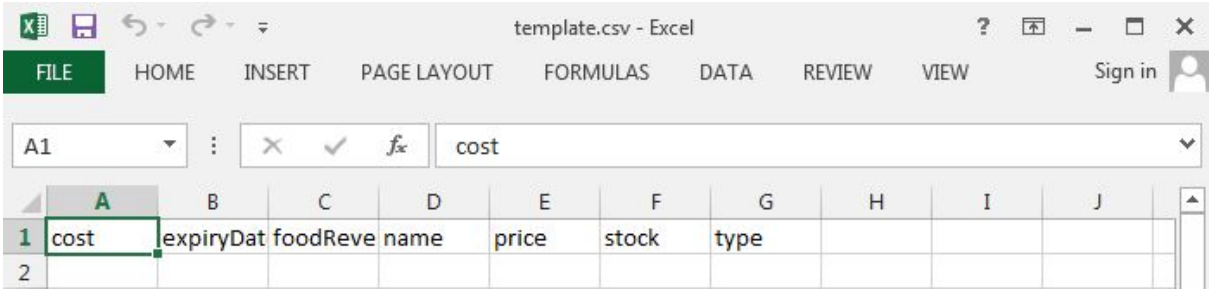
4.10.3 Another example usage

You have a ton of product to add into Cube and do not wish to key them individually.

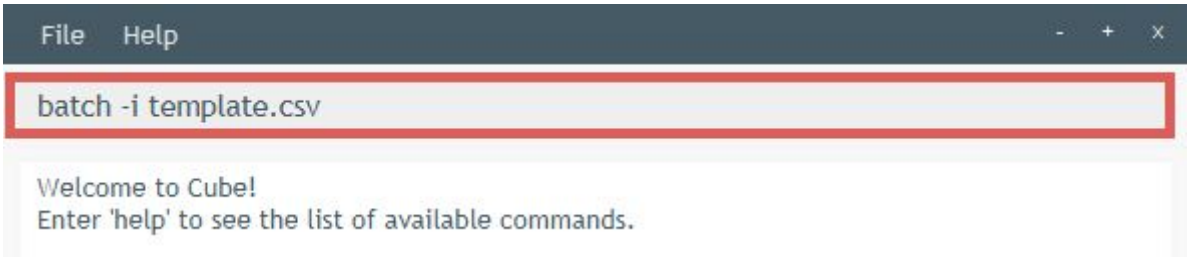
1. Type batch -e template.csv in the command box in Cube to generate an empty CSV template with the filename template.csv. This will give you an existing template to work with when exporting the products.



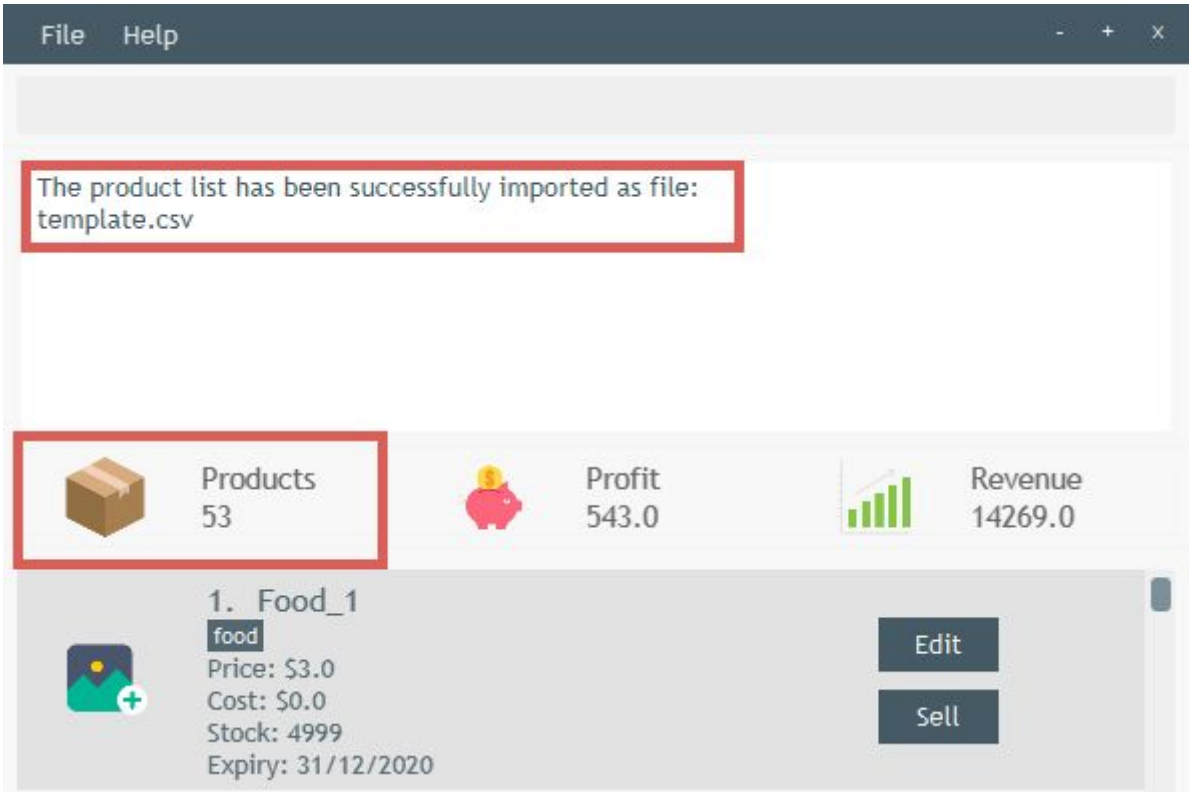
2. Open template.csv with a spreadsheet application such as Microsoft Excel or OpenOffice Calc.



3. Once you are done entering the products into template.csv, head back to Cube and type `batch -i template.csv` and press Enter to import the products.



4. You should see that the product list has been successfully imported and you can use the command list to view your newly inserted products!



4.11 Configuring user preferences : config

This command allows you to modify various user preferences that are stored in the configuration file.

4.11.1 Command syntax

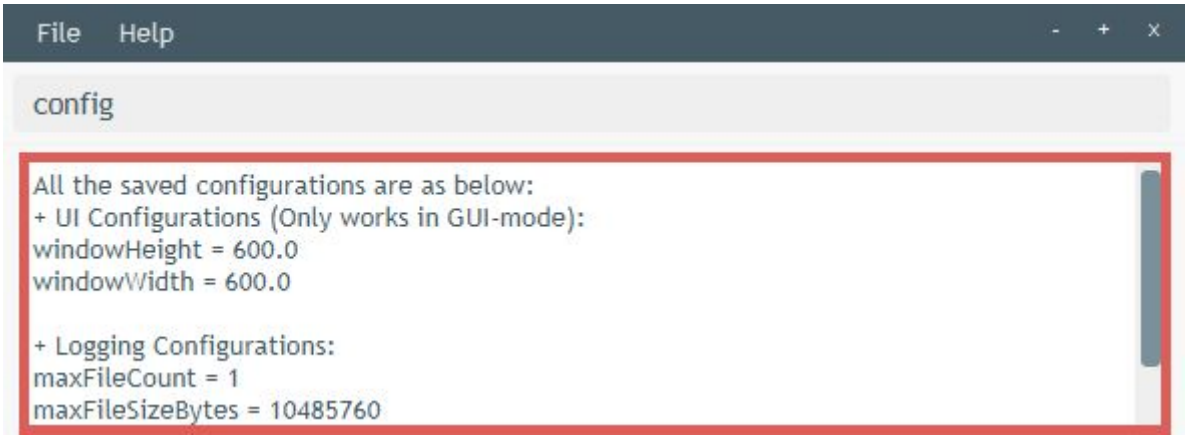
```
config [(UI | LOG)]
config UI -h <HEIGHT> -w <WIDTH>
config LOG -c <LOG_COUNT> -s <SIZE_IN_MB> -l <LOG_LEVEL>
```

- Batch exports or imports all your products by either listing the -i or -o parameter.
    - No parameters : Lists all the user preferences stored in the configuration file.
    - UI : Indicates to the config command to modify GUI related preferences.
    - <HEIGHT> : Height of the GUI window to be configured.
    - <WIDTH> : Width of the GUI window to be configured.
    - LOG : Indicates to the config command to modify logging related preferences.
    - <LOG_COUNT> : Specifies the number of log files to be created.
    - <SIZE_IN_MB> : Specifies the maximum size of a single log file in Megabytes (MB).
    - <LOG_LEVEL> : Specifies the severity of events to be logged. Currently supports levels ALL, INFO, WARNING, OFF.

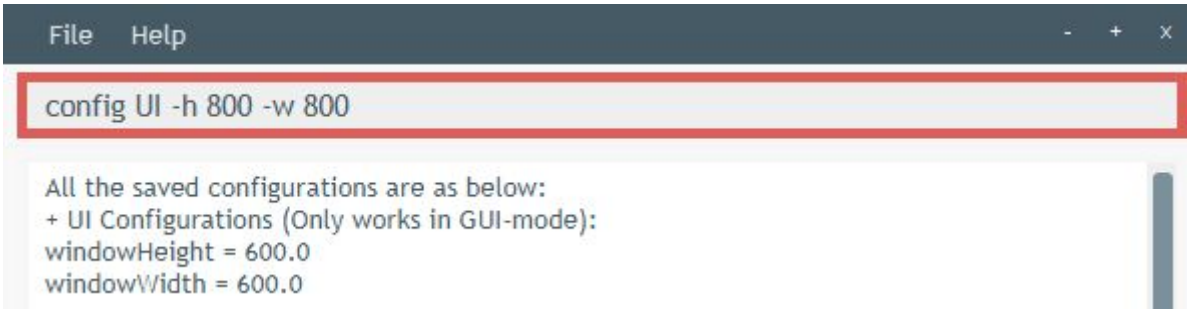
4.11.2 Example usage

You would like to configure the window size of Cube to a larger size as you may find it too small.

1. Type config in the command box in Cube and press Enter to view all the stored configurations, such as the current window size.



2. Set the window size to a larger size, such as Height 800 and Width 800 by typing `config UI -h 800 -w 800` in the command box and press Enter.

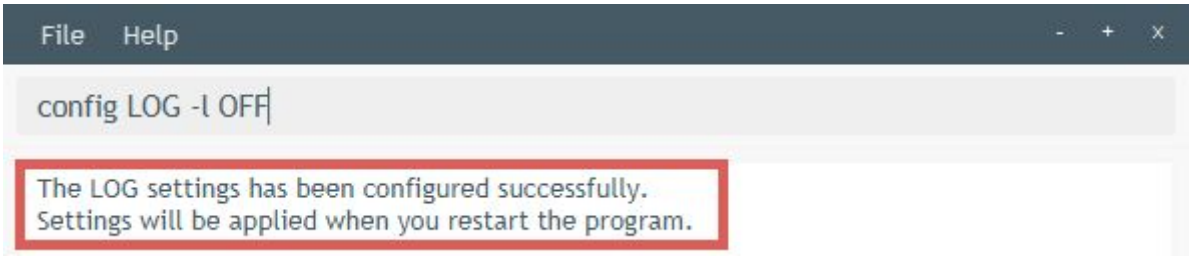


3. You should see a message that the settings has been configured successfully. The new window size will take effect immediately.

4.11.3 Another example usage

You are concerned about privacy and do not wish to have any logs generated by Cube.

1. Type `config LOG -l OFF` in the command box in Cube and press Enter to completely turn off logging functionality in Cube.



2. You should see a message that the settings has been configured successfully. Restart Cube and the new logging settings will take effect upon launch.

4.12 Getting help: help

This command allows you to know what commands are available.

4.12.1 Command syntax

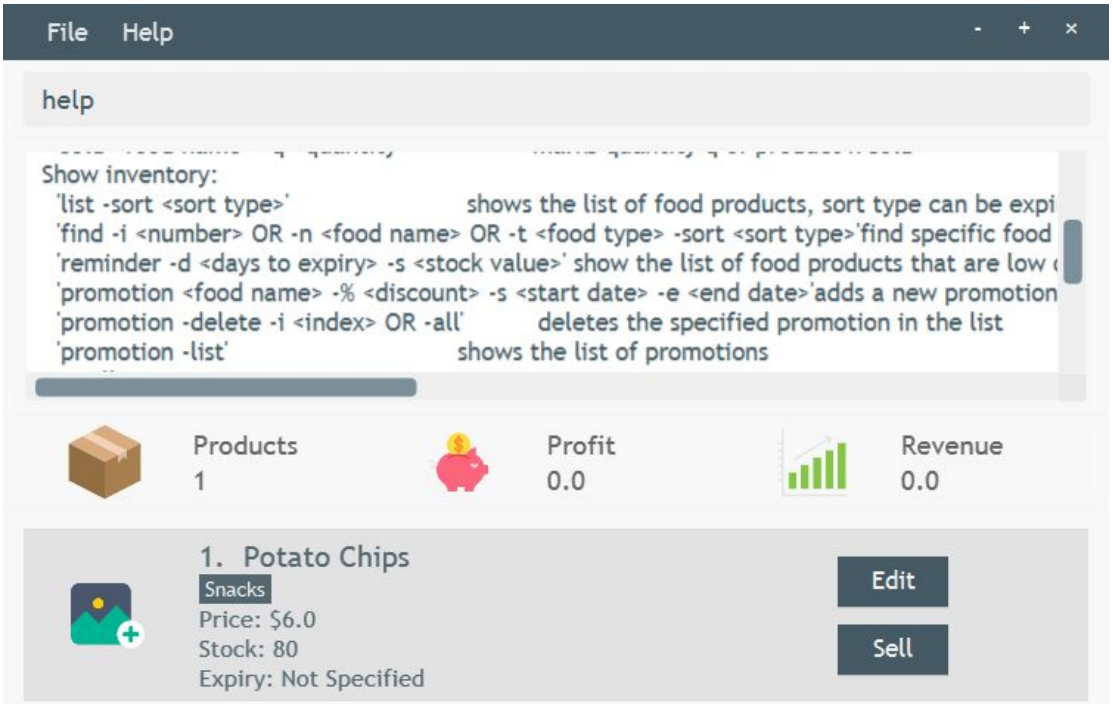
help

- Shows a list of commands and their usage syntax

4.12.2 Example usage

You want to do promotion but now sure how to use promotion command.

1. Type help in the command box in Cube and press Enter to quit Cube.
2. Now you can know how to use promotion command!



4.13 Exiting from Cube : exit | quit | bye

This command allows you to exit from Cube.

4.13.1 Command syntax

`exit | quit | bye`

- Quits Cube by entering either exit, quit, or bye:

4.13.2 Example usage

You have just finished today's inventory work. Good job! Now you want to take a rest from work and exit from Cube.

1. Type `bye` in the command box in Cube and press `Enter` to quit Cube.
2. The application will close automatically. Hope to see you again!

5. Frequently Asked Questions (FAQ)

Questions	Answers
How do I transfer my data from one system to another?	You can copy `cube.json` from the `data` folder within your application folder to the `data` folder in the new system. The existing data would then be loaded automatically when Cube is launched.
What should I do if an error happens?	Every time an error happens, Cube will display an error message telling you where the error comes from. Please read the message and check your input carefully. You can also type in `help` command or refer to this User Guide for more information.
Where can I get the latest version of the application?	You can check for new release of Cube on our Github webpage through this link at any time. Thank you very much for supporting us.
[more FAQs coming in v2.0]	[more FAQs coming in v2.0]

6. Command Summary (Alphabetical Order)

- Add :
  add <FOOD_NAME> [-t FOOD_TYPE] [-p PRICE] [-c COST] [-s STOCK]
  [-e EXPIRY_DATE]
  E.g. : add PotatoChips -t Snack -p 5.00 -s 999 -e 31/12/2022
- Batch :
  batch [-i FILE_NAME] | [-o FILE_NAME]
- Config :
  config [UI (<-h HEIGHT> <-w WIDTH>)
  | LOG (<-c LOG_COUNT> <-s SIZE_IN_MB> <-l LEVEL>)]
- Delete :
  delete [-i INDEX] | [-n FOOD_NAME] | [-t FOOD_TYPE] | -all
  E.g. : delete -i 5
- Exit :
  exit / quit / bye
- Find :
  find [-i INDEX] | [-n FOOD_NAME] | [-t FOOD_TYPE]
  [-sort (expiry | name | stock)]
  E.g. : find -n PotatoChips
- Help :
  help
- List :
  list (-sort [SORT_TYPE])
  E.g. : list -sort name
- Profit:
  profit <-t1 START_TIME> <-t2 END_TIME>
  (-all | [-i NUMBER] | [-n FOOD_NAME] | [-t FOOD_TYPE])
- Promotion:
  promotion (<FOOD_NAME> <-% DISCOUNT> [-s START_DATE]
  <-e END_DATE> | -delete (INDEX | -all) | -list)
  E.g. : promotion PotatoChips -% 50 -e 11/11/2019
- Reminder :
  reminder [-d DAYS_TO_EXPIRY] [-s STOCK]
  E.g. : reminder -d 10
- Sold :
  sold <FOOD_NAME> <-q QUANTITY> [-t DATE_OF_SALE]
  E.g. : sold PotatoChips -q 400
- Update:
  update <FOOD_NAME> ([-t FOOD_TYPE] [-p PRICE] [-c COST]
  [-s STOCK] [-e EXPIRY_DATE])

7. Glossary [coming in v2.0]