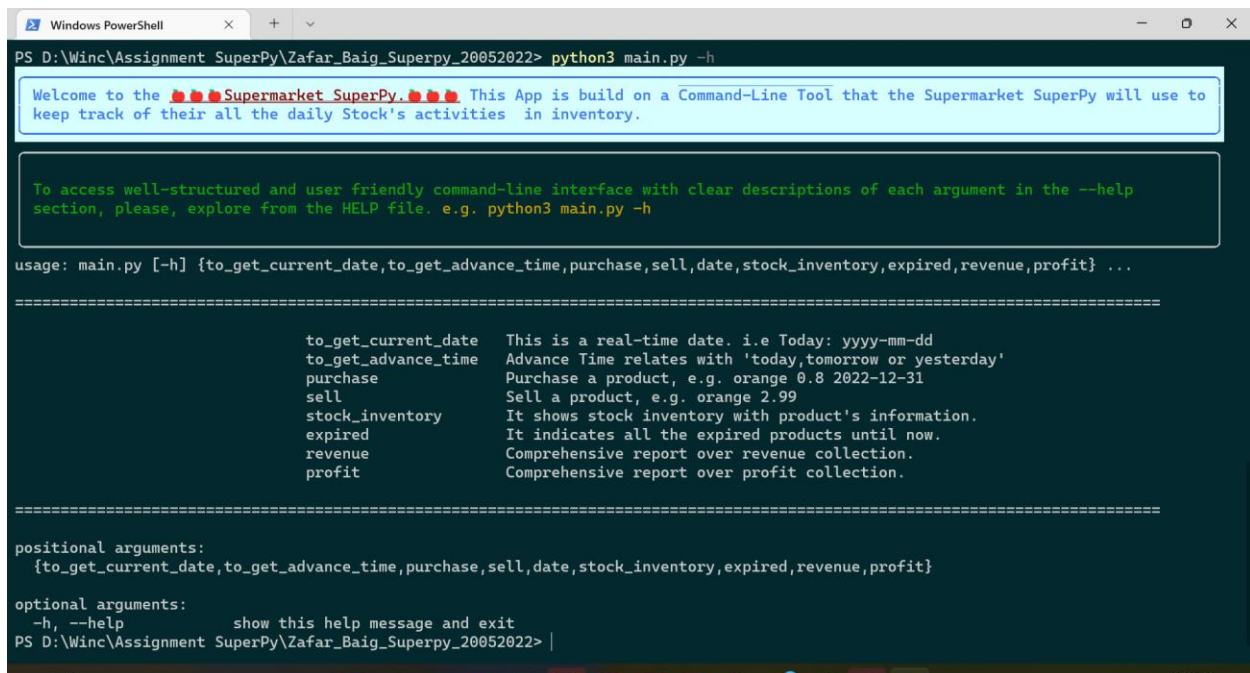**User's Manual Superpy**

Command Line Interfaces (CLI) are programmatic scripts and libraries that are executed with a unique purpose; mostly these are utilized or operate with the help of command line or from a Windows Power Shell and are control in most of the operating system.

There are so many Python libraries and modules that help to build a command line app from parsing arguments and options to flagging to full blown CLI "frameworks" which do things like colorized output, tabular data, progress bars, sending an email and so on.

In the following Supermarket SuperPy app, a number of different modules are imported to run to solve the problems that are described in the assignment. First of all to run this program we must to execute it with main file; D: python3 main.py –h (Table.1).
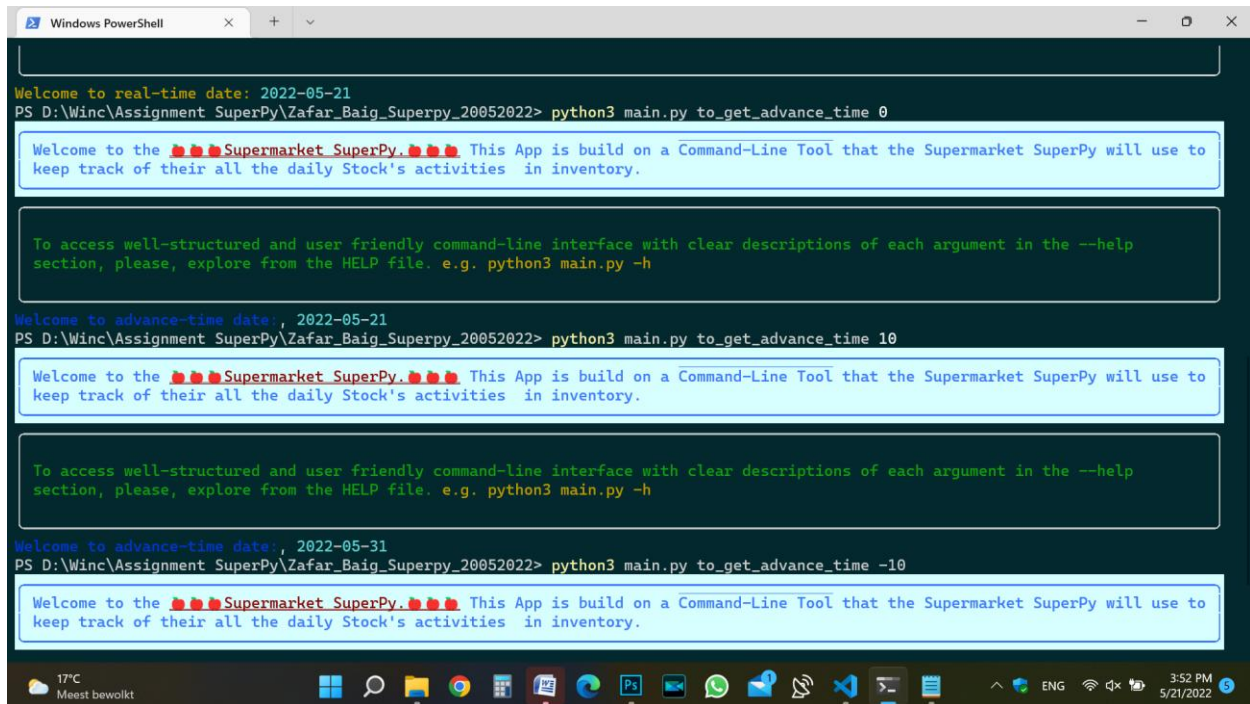

Table 1 Main Execution Program with help.

Main Execution of Program

There are 8 different commands (to_get_current_date, to_get_advance_time, purchase, sell, stock_inventory, expired, revenue and profit) used to acquire proper result of the problems described in the assignment. These CLI explained and simplified as an easy way of conducting program for the users. To get help for the said program python3 main.py –help (Table.1) is use to follow instruction given to user.

1. to_get_current_date: You can set the 'system date' to the real-time today with: python3 main.py (Table 2)

2. to_get_advance_time: During the program you can check what the date of 'today' is: python main.py advance_time 0. You can also reset 'today' to real-time today after using advance time: python main.py set_date_now (Table. 2)

Table 2 Execution of real time and advance time dates.

3. purchase:

To buy a product for the Supermarket a process of item registration is introduced. It will use to keep track of their all the daily activities stock in inventory.

Moreover it makes sure the right product is going to be entering manually, with relevant attributes e.g. Product Name, Buying Date, Price, Expiration Date etc .etc. In this way a command line tool helps to store all the attributes of a product that is going to be purchased by Superpy Supermarket.

Table 3 Buy a product for Supermarket.

After launching the program command line script (python3 main.py purchase apple 1.99 2028-03-12) is contacted to produce a product for inventory; (Table 3). Similarly if a number of items with same product name is going to purchase for Supermarket. Then he command line script is;

main.py purchase apple 1.99 2028-03-12 –amount 2
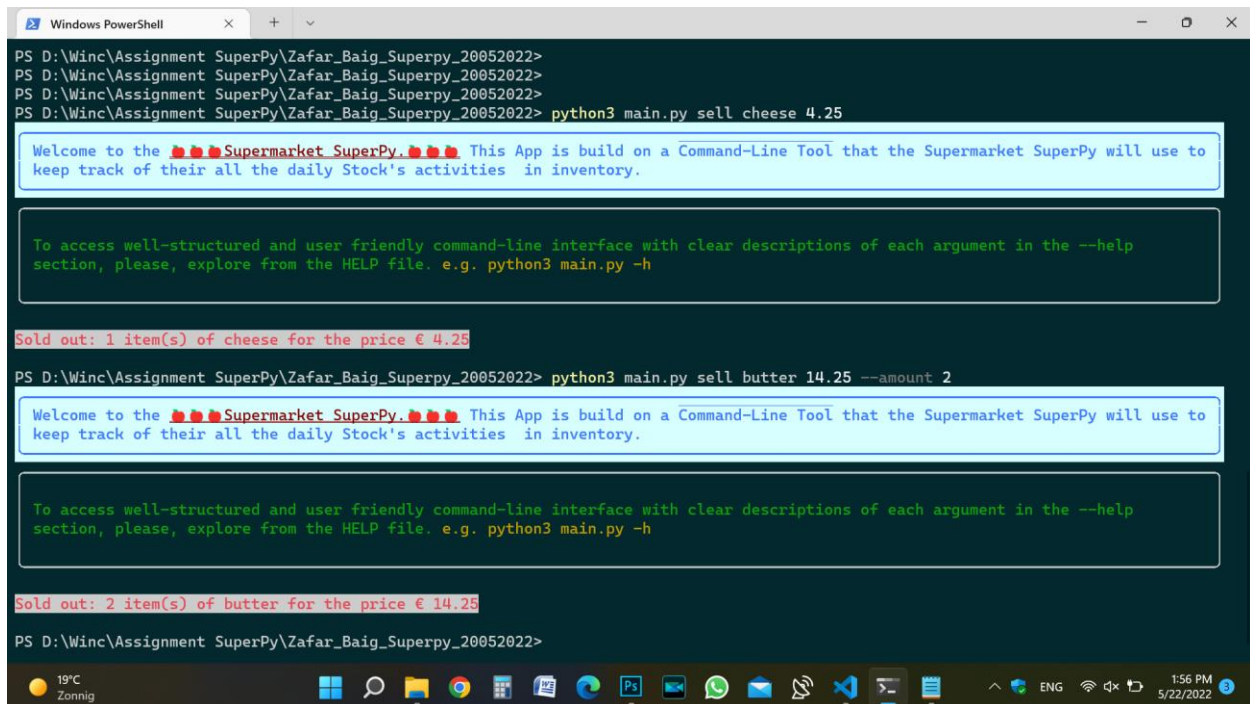
- Product Name: apple

- Date of Buying: 2022-01-27

- Product Amount: 2

- Buying Price: 1.99

- Expiration Date: 2028-03-12

After completion of data entries, supermarket database is updated with all the values that are stored in inventory with their unique product-id. (Table 4) The unique ID numbering of a product plays a vital role in the database. This will help to avoid duplication of the same product's name with different Product ID numbers.

4. Sell Product:

One of the purposes of introducing this app is, to hold the data of selling product stored in inventory. When certain product is going to sell another command line "sell" is used with this script. e.g. python3 main.py –sell apple 3.70(Table 4). In product specification, when a product is sold out it will clearly show the product ID, date of sold and sold price.

Besides, sell command line can also compute a summary of sold products with total price of sold item. If a product is not in the inventory it also shows the product does not exist, the product is expired or sold out.

Table 4 Sold product

5.Expire Product

This set out a comparison of different schedules in stipulated dates with the expiration of products stored in database. The query is simply performed by entering "expired" command.

(e.g. python3 main.py expired) which print-out inventory report of the past days. (Tables 5)

To access well-structured and user friendly command-line interface with clear descriptions of each argument in the --help section, please, explore from the HELP file. e.g. python3 main.py -h

EXPIRED ITEMS UNTIL 2022-05-21

Product ID	Product Name	Expiration Date
1	apple	2021-12-31
2	apple	2021-12-31
3	apple	2021-12-31
4	banana	2022-02-21
5	banana	2022-02-21
6	banana	2022-02-21
7	shampoo	2022-02-21
8	egg	2022-04-21
9	egg	2022-04-21
10	egg	2022-04-21
11	egg	2022-04-21

PS D:\Winc\Assignment SuperPy\Zafar_Baig_Superpy_20052022>

Table 5 Expired products information.

6. Report Inventory.

The command line "stock_inventory" makes a comprehensive inventory report of Purchased ID, Product Name, Purchase Price, Amount, Purchase Date and Expiration Date. (Tables 6, 7 & & 8)

 e.g. python3 main.py stock_inventory --now.

python3 main.py stock_inventory –yesterday.

python3 main.py stock_inventory --date.

keep track of their all the daily Stock's activities in inventory.

To access well-structured and user friendly command-line interface with clear descriptions of each argument in the --help section, please, explore from the HELP file. e.g. python3 main.py -h

SUPERMARKET SUPERPY INVENTORY REPORT (2022-05-21)

Product ID	Product Name	Purchase Price €	Amount	Purchase Date	Expiration Date
23	banana	2.35	1	2022-05-21	2023-04-12
57	butter	1.75	1	2022-05-21	2022-07-23
58	butter	1.75	1	2022-05-21	2022-07-23
26	cheese	1.25	1	2022-05-21	2024-02-15
27	cheese	4.25	1	2022-05-21	2024-02-15
24	egg	0.25	1	2022-05-21	2024-02-15
21	milk	0.89	1	2022-05-21	2022-06-21
23	milk	0.89	1	2022-05-21	2022-06-21
53	milk	0.89	1	2022-05-21	2022-06-21

PS D:\Winc\Assignment SuperPy\Zafar_Baig_Superpy_20052022>

Table 6 Stock Inventory Now

27	banana	0.89	1	2022-05-21	2022-08-11
28	banana	0.89	1	2022-05-21	2022-08-11
21	butter	2.3	1	2022-05-21	2022-07-01
23	egg	2.3	1	2022-05-21	2022-07-01
6	orange	1.25	1	2022-05-20	2022-08-12

PS D:\Winc\Assignment SuperPy\Zafar_Baig_Superpy_20052022> python3 main.py stock_inventory --yesterday

Welcome to the 🧱🧱🧱Supermarket SuperPy.🧱🧱🧱 This App is build on a Command-Line Tool that the Supermarket SuperPy will use to keep track of their all the daily Stock's activities in inventory.

To access well-structured and user friendly command-line interface with clear descriptions of each argument in the --help section, please, explore from the HELP file. e.g. python3 main.py -h

SUPERMARKET SUPERPY INVENTORY REPORT 2022-05-20

Product ID	Product Name	Purchase Price €	Amount	Purchase Date	Expiration Date
1	banana	1.25	1	2022-05-20	2022-08-12
6	orange	1.25	1	2022-05-20	2022-08-12

PS D:\Winc\Assignment SuperPy\Zafar_Baig_Superpy_20052022>

Table 7 Stock Inventory Yesterday

Table 8 Stock Inventory with specific dates.

9.Revenue: To publish a revenue report one can choose or select a different time schedules like;

Python3 main.py revenue –now

Python3 main.py revenue --yesterday

Python3 main.py revenue –date

Python3 main.py revenue –period for two different dates.

Please see (Tables 9 & 10.)

10. Profit:

Python3 main.py profit –now

Python3 main.py profit --yesterday

Python3 main.py profit --date

Python3 main.py profit –period for two different dates.

Please see (Tables 11 & 12)

Table 9 Revenue report for today

Table 10. Revenue report on specific dates.

Table 11. Profit report today and yesterday.

Table 12 Profit report (specific date and period of two dates).

Supermarket SuperPy Guidelines

{purchase: Buy a product with different attributes.

 Sell: Sell a product with different attributes.

expired: To inquire condition of a product in inventory with stipulated dates.

Stock_inventory: A comprehensive report of all the stock in inventory. (--now, --yesterday, --date)

revenue: A comprehensive report over revenue. (--now, --yesterday, --date, --period between two different dates.)

profit: A comprehensive report over profit. (--now, --yesterday, --date, --period between two different dates.)}