



Department of Electrical & Computer Engineering

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Linux Laboratory

Python Project – Sales Management Software

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Goal of project

We are required to build management software to manage the product items in the warehouse and the distribution of these product items to the supermarkets.

According to the company, the management software should have the following option:

1. Add product items to the warehouse;
2. Add a new supermarket to the management system;
3. List of items in the warehouse based on expiry date;
4. Clear an item from the warehouse;
5. Distribute products from the warehouse to a supermarket;
6. Generate a report about the sales status of the warehouse;
7. Exit.

We used Python to program this project

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```

-----
1. Add product items to the warehouse
2. Add a new supermarket to the management system
3. List of items in the warehouse based on expiry date
4. Clear an item from the warehouse
5. Distribute products from the warehouse to a supermarket
6. Generate a report about the sales status of the warehouse
7. Exit
-----

```

Fig1.1 When we run the program, this menu appears

The specifications of each option are set by the company as follows:

1. Add a product item to the warehouse

To a product item to the warehouse, the user must insert the following information using the standard

input

- Item Code
- Item Name
- Item Expiry Date
- Item Wholesale Unit Cost:
- Item Sales Unit Cost:
- Item Quantity:

```

-----
Please Select Choice: 1
Adding Product Item to the Ware House
-----
Item Code: coffee
Please Enter Correct item Code
Item Code: 10
Item Name: coffee
Expiry Date
Enter Exp year: 2022
Enter Exp month: 3
Enter Exp day: 1
Wholesale Unit Cost: 800
Sales Unit Cost: 13
Quantity: 30
-----

```

fig 1.2 run of 1

```
-----
Please Select Choice: 1
Adding Product Item to the Ware House
-----
Item Code: 39
Item Name: soap
Expiry Date
Enter Exp year: 2021
Enter Exp month: 2
Enter Exp day: 3
Wholesale Unit Cost: 387
Sales Unit Cost: 4
Quantity: 60
```

fig 1.3 run of 1

```
Item Code: 3
Item Name: oil
Expiry Date
Enter Exp year: 2022
Enter Exp month: 23
Enter Exp day: 2
Wrong Date Input, Please Enter a Correct Date Again
Enter Exp year: 2022
Enter Exp month: 2
Enter Exp day: 2
Wholesale Unit Cost: 223
Sales Unit Cost: 23
Quantity: 33
```

If you entered the wrong month

fig 1.4 If you entered the wrong month

Etc...

All items in the warehouse must be saved in a text file (“warehouse_items.txt”)

```
main.py x WareHouse.py x warehouse_items.txt x SuperMarket.py x
1 10;coffee;1/3/2022;500;13;30
2 29;milk carton ;30/4/2022;200;20;10
3 39;soap;3/2/2021;387;4;60
4 11;cake;22/7/2021;500;23;45
5 45;cheese;4/5/2022;13;2;50
6 20;sugar;30/8/2019;400;12;50
7 50;pasta;5/3/2020;400;23;44
8 7;juice;20/8/2022;300;5;30
9 22;icecream;6/7/2022;398;15;30
10
```

Fig1.5 the file warehouse_items.txt

Another example

```
main.py x SuperMarket.py x WareHouse.py x warehouse_items.txt x
1 1;banana;15/7/2023;20;25;900
2 2apple;13/5/2023;29;35;24
3
```

Fig2.0 file warehouse_items.txt

Look the amount of banana 900 ! because we added twice

```
-----
Please Select Choice: 1
Adding Product Item to the Ware House
-----
Item Code: 1
Item Name: banana
Expiry Date
Enter Exp year: 2023
Enter Exp month: 7
Enter Exp day: 15
Wholesale Unit Cost: 20
Sales Unit Cost: 25
Quantity: 900
-----
```

fig 2.1

```
-----
Please Select Choice: 1
Adding Product Item to the Ware House
-----
Item Code: 1
Item Name: banana
Expiry Date
Enter Exp year: 2023
Enter Exp month: 7
Enter Exp day: 15
Wholesale Unit Cost: 20
Sales Unit Cost: 25
Quantity: 400
Item Already Exists!
Want to Update Quantity?(Y/any button to close): Y
Update Quantity.....
-----
```

fig 2.2 if we add the same item in fig 2.1

if we add the same item in

```
-----
Please Select Choice: 1
Adding Product Item to the Ware House
-----
Item Code: 2
Item Name: apple
Expiry Date
Enter Exp year: 2023
Enter Exp month: 5
Enter Exp day: 13
Wholesale Unit Cost: 29
Sales Unit Cost: 35
Quantity: 24
-----
```

fig 2.3

2. Add a new supermarket to the system

To add a new supermarket to the system, the user must enter the following information using the standard input

- Supermarket Name;
- Supermarket Code;
- Supermarket Address;
- Added Date:

```
-----  
Please Select Choice: 2  
Adding New Super Market  
-----  
Super Market Name: delly  
Super Market Code: 2018  
Super Market Address: masiun  
Date Added Automatically  
-----
```

fig 3.0 the result when choice 2

```
-----  
Please Select Choice: 2  
Adding New Super Market  
-----  
Super Market Name: khini  
Super Market Code: 120  
Super Market Address: ramallah  
Date Added Automatically  
-----
```

fig 3.1

3. List of items in the warehouse based on expiry date

In this option, the software should ask the user to input a specific date (DD/MM/YYYY) and print on the screen

- A list of product items in the warehouse that have an expiry date before the input date;
- The total wholesale cost of these items;
- The total sales cost of these items

screenshot for result

```
-----
Please Select Choice: 3
Enter Expiry Date
Enter Exp year: 2023
Enter Exp month: 6
Enter Exp day: 1
1/6/2023
Code: 2 | Name: apple | Expiry Date: 13/5/2023 | Wholesale Unit Cost: 29 | Sales Unit Cost: 35 | Quantity: 24
Total WholeSale Cost: 29
Total Sales Cost: 35
-----
```

Fig 4.1 the data for fig 2.1

```
-----
Please Select Choice: 3
Enter Expiry Date
Enter Exp year: 2022
Enter Exp month: 5
Enter Exp day: 1
1/5/2022
Code: 10 | Name: coffee | Expiry Date: 1/3/2022 | Wholesale Unit Cost: 500 | Sales Unit Cost: 13 | Quantity: 30
Code: 29 | Name: milk carton | Expiry Date: 30/4/2022 | Wholesale Unit Cost: 200 | Sales Unit Cost: 20 | Quantity: 10
Code: 39 | Name: soap | Expiry Date: 3/2/2021 | Wholesale Unit Cost: 387 | Sales Unit Cost: 4 | Quantity: 60
Code: 11 | Name: cake | Expiry Date: 22/7/2021 | Wholesale Unit Cost: 500 | Sales Unit Cost: 23 | Quantity: 45
Code: 20 | Name: sugar | Expiry Date: 30/8/2019 | Wholesale Unit Cost: 400 | Sales Unit Cost: 12 | Quantity: 50
Code: 50 | Name: pasta | Expiry Date: 5/3/2020 | Wholesale Unit Cost: 400 | Sales Unit Cost: 23 | Quantity: 44
Total WholeSale Cost: 2387
Total Sales Cost: 95
-----
```

Fig 4.2 the data for fig1.2

```
-----
Please Select Choice: 3
Enter Expiry Date
Enter Exp year: 2021
Enter Exp month: 3
Enter Exp day: 3
3/3/2021
Code: 39 | Name: soap | Expiry Date: 3/2/2021 | Wholesale Unit Cost: 387 | Sales Unit Cost: 4 | Quantity: 60
Code: 20 | Name: sugar | Expiry Date: 30/8/2019 | Wholesale Unit Cost: 400 | Sales Unit Cost: 12 | Quantity: 50
Code: 50 | Name: pasta | Expiry Date: 5/3/2020 | Wholesale Unit Cost: 400 | Sales Unit Cost: 23 | Quantity: 44
Total WholeSale Cost: 1187
Total Sales Cost: 39
-----
```

Fig 4.3 the data for fig1.2

4. Clear an item from the warehouse

To execute this option, the following procedure should be implemented:

1. The software should ask the user to input the code of an item;
2. if the item exists in the warehouse, the software then will print on the screen the information about the item. Then it will ask the user to input the quantity that needs to be cleared. Then the software will clear the item and print a confirmation message.

```
-----  
Please Select Choice: 4  
Input The Code of an item: 10  
Code: 10 | Name: coffee | Expiry Date: 1/3/2022 | Wholesale Unit Cost: 500 | Sales Unit Cost: 13 | Quantity: 30  
Enter The Quantity That Needs to be Cleared: 20  
Code: 10 | Name: coffee | Expiry Date: 1/3/2022 | Wholesale Unit Cost: 500 | Sales Unit Cost: 13 | Quantity: 10  
-----
```

Fig 5.1 If we clear some of quantity

```
-----  
Please Select Choice: 4  
Input The Code of an item: 22  
Code: 22 | Name: icecream | Expiry Date: 6/7/2022 | Wholesale Unit Cost: 398 | Sales Unit Cost: 15 | Quantity: 30  
Enter The Quantity That Needs to be Cleared: 30  
Code: 22 | Name: icecream | Expiry Date: 6/7/2022 | Wholesale Unit Cost: 398 | Sales Unit Cost: 15 | Quantity: 0  
-----
```

Fig5.2 If we clear all amount

3. if the item does not exist, the software should print an error message on the screen

```
-----  
Please Select Choice: 4  
Input The Code of an item: 444  
Item Not In The Ware House!  
-----
```

Fig 5.3 if the item does not exist

5. Distribute products from the warehouse to a supermarket

To execute this option, the following procedure should be implemented:

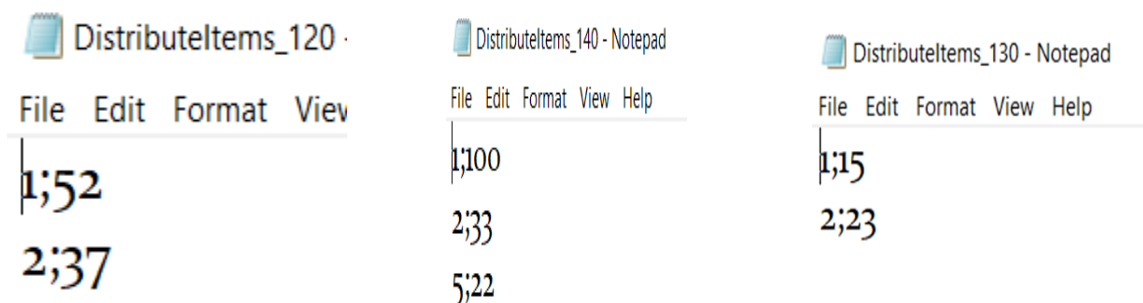
```
Please Select Choice: 5
Enter The Code Of The SuperMarket: 120
50 Offered Successfully!
banana 's Remaining in WareHouse = 750
Only offered 24 From 60
apple 's Remaining in WareHouse = 0
item: 3 with requested amount of: 12 not in the ware house!
-----
```

Fig 6.1 data for fig 2.0 There is no third element If an item is not available at the warehouse

```
-----
Please Select Choice: 5
Enter The Code Of The SuperMarket: 120
no remaining items of this product, code: 1 of quantity: 50 in the ware house!
Only offered 22 From 60
chips 's Remaining in WareHouse = 0
12 Offered Successfully!
oil 's Remaining in WareHouse = 21
-----
```

Fig 6.1 data for fig 2.0 data from another ex

at least three “DistributelItems .txt” files.



6. Generate a report about the sales status of the warehouse The execution of this option will generate a report that includes the following:

1. Number of items in the warehouse;
2. Total wholesale cost of all items in the warehouse;
3. Total sales cost of all items in the warehouse;
4. Expected profit after selling all items in the warehouse.

```
-----  
Please Select Choice: 6  
Number of items in the warehouse: 750  
Total wholesale cost of all items in the warehouse: 15000  
Total sales cost of all items in the warehouse: 18750  
Expected profit after selling all items in the warehouse: 3750  
-----
```

Fig 7.1 the data for fig 2.0

7. Exit The execution of this command will terminate the software.

```
C:\Users\user\PycharmProjects\pythonProject1\venv\Scripts\python.exe 0  
1. Add product items to the warehouse  
2. Add a new supermarket to the management system  
3. List of items in the warehouse based on expiry date  
4. Clear an item from the warehouse  
5. Distribute products from the warehouse to a supermarket  
6. Generate a report about the sales status of the warehouse  
7. Exit  
-----  
Please Select Choice: 7  
Bye Bye  
  
Process finished with exit code 0
```

Conclusion

It was a fun program. We learned the Python language deeply, , and the program was performed as required .

we use OOP concepts (classes, inheritance ...). And organize our project in modules. I. e. have each class and the main function in separate modules (python scripts).