

**UNIVERSITY OF SCIENCE AND
TECHNOLOGY OF HANOI
ADVANCED PROGRAMMING WITH
PYTHON
PROJECT REPORT**

Furniture Store Management System

Group 13

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1 Introduction

This is group 13's project report which makes up 50% of our final results of the "Advanced programming with Python" course. This course, including the most fundamental parts that we should know about Python language namely: OOP, Modules and Packages. . . , was led by the enthusiasm of Dr. Tran Giang Son.

In this report, we will explain and present our "Furniture Store Management System" program in more detail. What your program does ? Why we need to use your program ? How we created it ? Database schema, Python modules, classes, input, output, UI structure

2 The importance of the store system and what we wish to improve

Furniture is the soul of a house; it gives a sense of fulfilling of needs. Types of furniture are of many designs and categories. It can be as small as a mouse to as gigantic as an elephant. The proper fitting at the right place is also a matter of concern while choosing the furniture. It should be taken care that size of the room and the size of furniture align with each other. Sometimes furniture is available prepared one can go and buy and order. On the other hand, sometimes we want some furniture which we want to customize according to a choice.

Further, he will be provided dates of completion of the order. Now admin analyzes the order and takes the according to that assigned amount of wood to it and no. He will decide the tools that need to be used in this system and provided to the staff.

Of staffs to that order and description is forwarded to them such that they can start with the preparation of the furniture. As the order completes it is given to the user, and he can take that to his home.

3 What is the goal of the program?

This program is the result of our team's work. With the knowledge we have learned through the "Advanced programming with Python", we hope that:

Our program helps users easily manage the store system. At the same time, it also helps users to control the store (store owner).

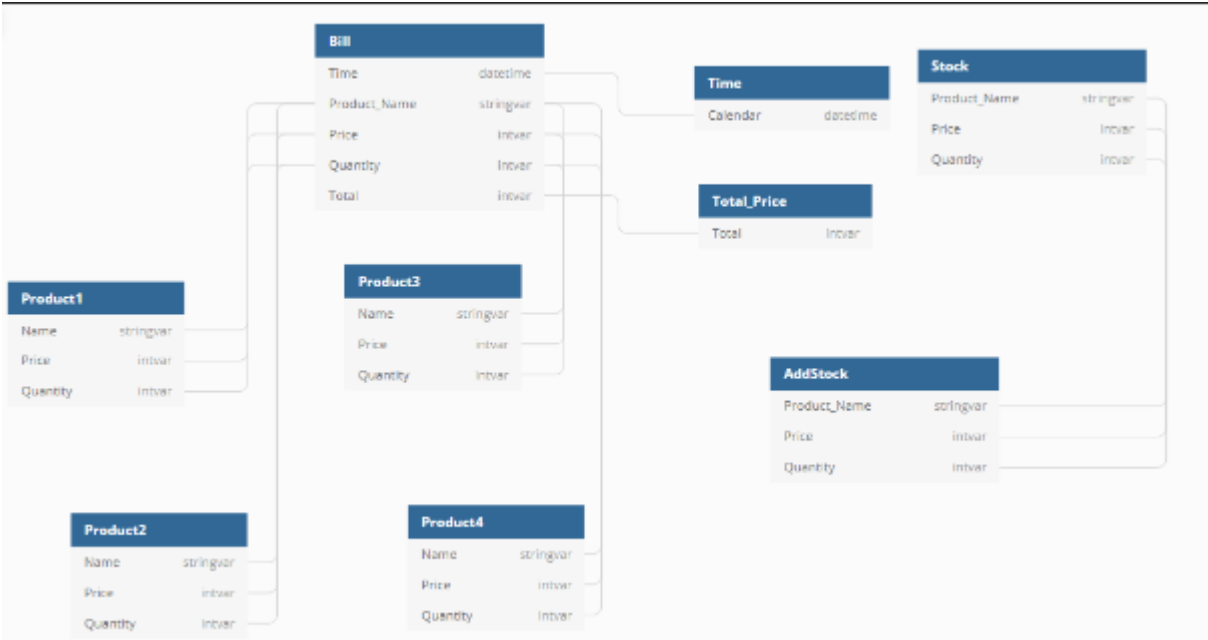
The program has a simple interface, we are confident it will make it easier for users to do business.

Besides, it shows the use of python in creating managed programs and Python's simple approach to programming institutes.

4 The Program

4.1 Database schema

The database below is our database system. It describes in detail the relationship between the components in the system and the characteristics of each element in the system.



4.1.1 Relationship between tables

- Bill: it is shown on the user structure
- Stock: it is shown on the user structure
- Time: it connects to the Bill table
- AddStock: it's only linked to the Stock table
- Product: it links to Bill and Stock tables

4.1.2 Tables' functions

- Bill: it includes: Time, Product Name, Price, Quantity, Total Bill of customers.
- Stock: it includes all information of new product.
- Time: it provides information in the form of "dates" for the Bill and Stock tables.
- AddStock: it is used to enter information of new products as they are entered into the store.
- Product: It includes information of that product such as: price, quantity, name.

4.2 Python modules, classes and packages

Here are the Modules, classes and packages used in our program:

Modules

- `from tkcalendar import DateEntry`
- `messagebox`
- `import sqlite3 as db`

Packages

- `tkinter`
- `db.connect`

1. `"db.connection"` package: contains everything related to the database

- `"furniturestoremanagentsystem.SQL"` file: the database of the store in SQL file
- `"FurnitureStoreManagentSystem.py"`: a Python module that deals with the database. It has 3 classes:
 - `class Bill` With the bill class, it construct the component and the properties

of each component like:productname, price, date, quantity;

- **class Storage** with Stock class, it helps the user to import a new product into the storeage. Also it helps users to know what products are in storage and their data.;

- **class Connect:** connects the database to the interface. By:

```
connectObj=db.connect("FurnitureStoreManagement.db")
```

```
cur = connectObj.cursor()
```

2. **"tkinter"** package:it helps us to get the user interface as above.
3. **"tkcalendar"**: a Python module that provides information on transaction time as well as order entry on the user interface.
4. **"messagebox"**: This is a type of dialog used to display messages to the user and sometimes even to make selection requests to the user.
5. **"main.py"**: another Python module that is able to run the program

5 UI structure

5.1 Bill

Store Management System

Bill Storage

Date

5/19/21

Product

Price

Quantity

Product1

100

2

Product2

200

3

Product3

300

4

Product4

400

5

Bill

View All Sellings

Store Management System

Date	Products	Price	Qty	Total
5/19/21	Product-1	100	2	200
5/19/21	Product-2	200	3	600
5/19/21	Product-3	300	4	1200
5/19/21	Product-4	400	5	2000
Total		19	4000	

Date	Product	Price of 1	Quantity	Price
5/19/21	Product-1	100	1	100
5/19/21	Product-2	200	2	400
5/19/21	Product-3	300	1	300
5/19/21	Product-4	400	1	400
5/19/21	Product-1	100	1	100
5/19/21	Product-2	200	2	400
5/19/21	Product-3	300	1	300
5/19/21	Product-4	400	5	2000
5/19/21	Product-1	100	1	100
5/19/21	Product-2	200	2	400
5/19/21	Product-3	300	3	900
5/19/21	Product-4	400	4	1600
5/19/21	Product-1	100	1	100
5/19/21	Product-2	200	2	400
5/19/21	Product-3	300	5	1500
5/19/21	Product-4	400	2	800
5/19/21	Product-1	100	1	100
5/19/21	Product-3	300	1	300
5/19/21	Product-1	100	1	100
5/19/21	Product-1	100	1	100

In those blanks, it helps staff manage bills. When you enter information in the corresponding boxes and press the bill button, the system will show that customer's invoice in the lower left corner table. When you click the viewallselling button, the system will show the sales history.

Quantity: Users only need to enter the purchase quantity of that customer in the blank box corresponding to the product name next to it.

Bill: It shows the quantity, product name, and price of that product. What the customer bought along with the total amount to be paid and the time it took for the transaction to take place.

ViewAllSelling: The system will give the store's transaction history along with the transaction date.

5.2 Storage

Store Management System

Sell Storage

Date	5/19/21
Product	2
Price	200
Quantity	14
View Stock	Add

Date	Product	Price	Quantity
5/15/21	5	500	4
5/15/21	5	500	4
5/15/21	1	100	3
5/15/21	1	100	3
5/15/21	1	100	12

It is a user interface structure that helps users manage inventory, import and export goods.

- Add : the user enters the information of the new product in each of the same blank boxes.
- View Stock: The system will show information of the products that the user has entered.

6 Advantages and disadvantages

6.1 Advantages

If your store only sells a fixed number of products, you need an easy-to-use, low-complexity management software, then you can consider using our program. With advantages:

- + This program can run without error.
- + It's pretty simple with clear layouts.
- + It is suitable for small stores with a small amount of information.
- + It can closely monitor the store with the display of transaction.
- + Information right on the user screen as well as the history that is difficult to delete.

6.2 Disadvantages

But our program is not really ready for large enterprises with a large number of transactions, goods and customers because the operation also has limitations that are:

- + It can only manage few products.
- + It cannot manage the information of customers who have purchased the product.
- + It cannot calculate the store's profit for the day and month.
- + About the price part of each product, it's already defaulted in the code.

7 Conclusion

Above is our report on "Furniture Store Management System". Our program has many shortcomings. Looking forward to your help to complete and learn more about this course. Especially the addition of products and information of products in stock.