



Department of Electrical & Computer Engineering

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ENCS3130 Linux Laboratory

Shell Scripting Project – Pharmacy Management System

Read-me made by:-

Mohammad Omar	1212429
Ayham Rimawi	1220746

Instructors:

Dr.hanya radwan
Eng.ahed mafarjeh

Introduction

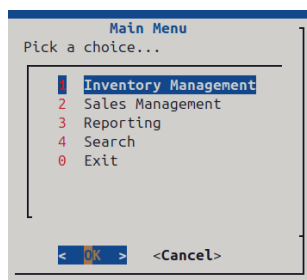
The Pharmacy Management System (PMS) is a shell scripting-based project aimed at automating the essential tasks involved in running a pharmacy. It focuses on improving efficiency, accuracy, and accessibility by managing inventory, sales transactions, and customer records. The system allows pharmacists to add, update, and monitor medicine stock, process sales while updating inventory in real-time, and generate detailed reports on sales, expired items, and low-stock alerts. It also includes search functionality to locate medicines and retrieve customer purchase histories quickly. To ensure reliability, the system performs data validation, prevents duplicate entries, and logs all errors and user activities. Designed with a user-friendly interactive menu the PMS offers a practical and accessible solution for small to mid-sized pharmacies operating within a Linux environment.

Features and code explanation and test cases

The structure of our code is depending on while loops, if statements and cases and it is divided into parts:-

First thing we need to check if the files (inventory, customers, sales, error, and logs).txt does exist, because these files are necessary for our project the file **inventory** is used to store the information of the medicine in the format (NAME|QTY|PRICE|EXP|CAT), **customers** Stores customer information in format (NAME|CONTACT), **sales** stores sales transactions in format (YYYY-MM-DD|MEDNAME|QTY|PRICE|CUSTOMER), **error** Logs errors and invalid operations, **logs** stores who logs in the program and what he did in it.

When you open the main menu it will give options to choose:-



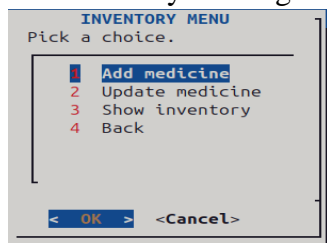
1) Choosing 1 will give you this menu

Here you can add medicine (name|qty|price|exp|cat) into inventory.txt

You can update a medicine that's already in the inventory

And print the whole inventory

And you can get back to the main menu.



1)

2)

What the medicines name?:
tritox
< OK > <Cancel>

Quantity before : 50 | the new qantity:
30
< OK > <Cancel>

Old price is : 20 | the new price:
15
< OK > <Cancel>

The old date expierd is: 2025-06-11 | enter the new date expierd:
2026-07-11
< OK > <Cancel>

the old category name : |
The new category name is:
Antibiotic
< OK > <Cancel>

3)

NAME	QTY	PRICE	EXP	CAT:
Paracetamol	100	1.50	2026-05-12	Painkiller
Amoxicillin	50	3.20	2025-11-30	Antibiotic
Cetirizine	80	0.90	2025-08-20	Antihistamine
Ibuprofen	120	2.00	2026-01-15	Anti-inflammatory
Omeprazole	60	2.50	2027-03-10	Antacid
Metformin	90	1.80	2026-09-05	Diabetes
Loratadine	70	1.10	2025-07-19	Antihistamine
Ciprofloxacin	40	4.00	2025-12-01	Antibiotic
Aspirin	150	0.75	2026-02-25	Painkiller
trofin	3	12	20019-02-22	
akamol	7	10	2027-05-22	PainKiller
Salbutamol	0	2.80	2025-06-14	Respiratory
tritox	30	15	2026-07-11	Antibiotic

< EXIT >

And there is all the debugging tools in the system and if you ente something wrong I will give you an error message

2) Choosing 2 will give this menu

SALES MENU
Pick a choice.
1 Process sale
2 Back
< OK > <Cancel>

Here we do the selling process and give us a receipt

1)

Enter the medicine name:
tritox
< OK > <Cancel>

Quantity to sell:
10
< OK > <Cancel>

Customer name:
ahed mafarjeh
< OK > <Cancel>

Customer contact:
0599123456
< OK > <Cancel>

Sale completed for ahed mafarjeh, total: 150.00
< OK >

```

----- RECEIPT -----
Date       : 2025-05-01
Customer   : ahed mafarjeh
Medicine    : tritox
Quantity   : 10
Total      : 150.00

< OK >

```

3) choosing 3 will give you this menu

```

----- REPORT MENU -----
Pick a choice...

1 Low-stock list
2 Show expired medicines
3 Sales report (date range)
4 Top-k medicines by qty sold
5 Back

< OK > <Cancel>

```

Here you can get by pressing 1 what is the medicines that's short in the stocks

Here I enter that I want to see the medicines that's

1)

```

define your quantity:
50

< OK > <Cancel>

```

```

Medicines Below Threshold
Ciprofloxacin | 40
trofin | 3
akamol | 7
Salbutamol | 0
tritox | 20

< OK >

```

2)

Pressing 2 will give you the expired medicine

```

Omeprazole|60|2.50|2019-03-10
Metformin|90|1.80|2022-09-05
Loratadine|70|1.10|2023-07-19
tritox|20|15|205-04-11

< OK >

```

3)

Pressing 3 will make you enter a date and an end date and give you how much money you got between those dates

Start date in Form :
(YYYY-MM-DD):

< OK >
<Cancel>

End date in Form :
(YYYY-MM-DD):

< OK >
<Cancel>

Sales Summary
TOTAL SALES = 337.00

< OK >

4)

Pressing 4 will make you see what the most sold k items is

Enter k (number of top
medicines to show):

< OK >
<Cancel>

30 Salbutamol
14 akamol
10 tritox

< OK >

5) Now if you chose 5 in the main menu

----- SEARCH MENU -----

Pick a choice...

1 Medicine by name

2 Medicine by category

3 Customer purchase history

4 Back

< OK >
<Cancel>

You will get this and you can search for the med using its name or category or you can get a customer purchase history

1)

Search Result
akamol|7|10|2027-05-22|PainKiller

< OK >

the name of med :

< OK >
<Cancel>

2)

Category :

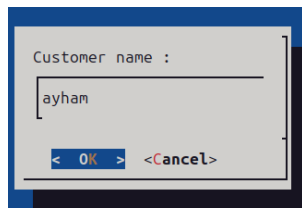
< OK >
<Cancel>

Search Result

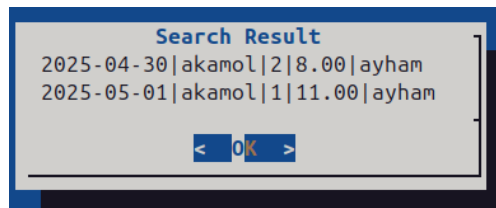
Paracetamol|100|1.50|2026-05-12|Painkiller
Aspirin|150|0.75|2026-02-25|Painkiller
akamol|7|10|2027-05-22|PainKiller

< OK >

3)



A screenshot of a software dialog box with a blue header bar. The text "Customer name :" is displayed above a text input field containing the name "ayham". At the bottom of the dialog, there are two buttons: "< OK >" and "<Cancel>".



A screenshot of a software dialog box with a blue header bar. The title "Search Result" is centered at the top. Below the title, two lines of search results are displayed: "2025-04-30|akamol|2|8.00|ayham" and "2025-05-01|akamol|1|11.00|ayham". At the bottom, there is a single button labeled "< OK >".