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Medical Billing System - Project Report

Abstract

The Medical Billing System is designed to streamline operations related to purchasing medicines, viewing stock details, tracking daily earnings, restocking inventory, and generating detailed reports. It demonstrates robust programming techniques and showcases the capabilities of assembly language for handling complex tasks.

Introduction

This project aims to develop an efficient system for managing medicine inventory and sales. The program is built to handle real-time data input, provide insightful reports, and maintain accurate stock records. It is implemented in assembly language, leveraging the Irvine32 library for various functionalities.

Features and Objectives

1. User authentication with username and password.
2. Purchasing medicines with automatic stock updates.
3. Viewing details of available stock and prices.
4. Tracking daily earnings from medicine sales.
5. Restocking inventory with validation for stock limits.
6. Generating detailed sales reports, including total earnings.

System Overview

The system comprises several modules that work together to provide a seamless experience. Key components include:

1. **Authentication:** Ensures secure access.
2. **Medicine Data Handling:** Manages stock, pricing, and purchase details.
3. **Reporting:** Generates summaries of sales and earnings.

Each module interacts through shared data arrays for prices, quantities, and sales records.

Implementation Details

The implementation leverages assembly language constructs and the Irvine32 library. Key aspects include:

- **Login System:** Uses a username-password check loop with retry limits.
- **Medicine Purchasing:** Reads user input, checks stock availability, calculates cost, and updates data arrays.
- **Report Generation:** Iterates through sold items to compile a sales summary.
- **Restocking:** Updates inventory levels while validating maximum stock limits.

Results and Outputs

```
C:\Users\H.H ENTERPRISES\source\repos\COAL\Debug\COAL.exe
Enter Username: admin
Enter Password: password123
1. Purchase Medicines
2. View Medicine Data
3. Display Today's Earnings
4. Restock Medicine
5. Generate Report
6. Exit
Enter your choice:
```

```
C:\Users\H.H ENTERPRISES\source\repos\COAL\Debug\COAL.exe
Enter Password: password123
1. Purchase Medicines
2. View Medicine Data
3. Display Today's Earnings
4. Restock Medicine
5. Generate Report
6. Exit
Enter your choice: 1
Welcome To Purchasing Menu! Press 1 to purchase a medicine and any ohter number to exit to main menu
1
You selected Purchase Medicines.

Enter medicine name you want to purchase
Aspirin
Price of Medicine is: 100
Enter quantity of medicine you want to buy
56
Total price of medicine is: 5600
Welcome To Purchasing Menu! Press 1 to purchase a medicine and any ohter number to exit to main menu
1
You selected Purchase Medicines.

Enter medicine name you want to purchase
Paracetamol
Price of Medicine is: 200
Enter quantity of medicine you want to buy
5
Total price of medicine is: 1000
Welcome To Purchasing Menu! Press 1 to purchase a medicine and any ohter number to exit to main menu
```

```
Aspirin
Price of Medicine is: 100
Enter quantity of medicine you want to buy
89
Total price of medicine is: 8900
Welcome To Purchasing Menu! Press 1 to purchase a medicine and any ohter number to exit to main menu
4
Summary if your bill is given below:
Aspirin
Price: $100
Quantity: 89
-----
Paracetamol
Price: $200
Quantity: 5
-----
Furosemide
Price: $140
Quantity: 78
-----

Total Bill is: 20820

1. Purchase Medicines
2. View Medicine Data
3. Display Today's Earnings
4. Restock Medicine
5. Generate Report
6. Exit
Enter your choice:
```

```
Fluoxetine
Price: $260
Quantity: 1000
-----
Venlafaxine
Price: $280
Quantity: 1000
-----
Mirtazapine
Price: $310
Quantity: 1000
-----

1. Purchase Medicines
2. View Medicine Data
3. Display Today's Earnings
4. Restock Medicine
5. Generate Report
6. Exit
Enter your choice: 3
Today's Earning: 38340
1. Purchase Medicines
2. View Medicine Data
3. Display Today's Earnings
4. Restock Medicine
5. Generate Report
6. Exit
Enter your choice:
```

```
6. Exit
Enter your choice: 2
You selected View Medicine Data.
```

```
Aspirin
Price: $100
Quantity: 855
-----
Paracetamol
Price: $200
Quantity: 995
-----
Ibuprofen
Price: $150
Quantity: 1000
-----
Amoxicillin
Price: $250
Quantity: 1000
-----
Ciprofloxacin
Price: $180
Quantity: 1000
-----
Doxycycline
Price: $220
Quantity: 1000
-----
Loratadine
Price: $120
```

```
Enter quantity of medicine you want to add:
39
```

```
Stock has been successfully restocked!
```

```
1. Purchase Medicines
2. View Medicine Data
3. Display Today's Earnings
4. Restock Medicine
5. Generate Report
6. Exit
```

```
Enter your choice: 3
Today's Earning: 38340
```

```
1. Purchase Medicines
2. View Medicine Data
3. Display Today's Earnings
4. Restock Medicine
5. Generate Report
6. Exit
```

```
Enter your choice: 2
You selected View Medicine Data.
```

```
Aspirin
Price: $100
Quantity: 894
-----
Paracetamol
Price: $200
Quantity: 995
-----
Ibuprofen
Price: $150
```

```
C:\Users\ADMIN\OneDrive\source\repos\CS1\Debug\CS1.exe
2. View Medicine Data
3. Display Today's Earnings
4. Restock Medicine
5. Generate Report
6. Exit
Enter your choice: 5
Sales Report:

Aspirin
Units Sold: 145
Total Earned Through This Medicine: 14500

Paracetamol
Units Sold: 5
Total Earned Through This Medicine: 1000

Furosemide
Units Sold: 78
Total Earned Through This Medicine: 10920
-----
Total Earnings: $38340
1. Purchase Medicines
2. View Medicine Data
3. Display Today's Earnings
4. Restock Medicine
5. Generate Report
6. Exit
Enter your choice:
```

Conclusion

The Medicine Management System demonstrates the potential of assembly language for developing real-world applications. It provides a reliable and efficient solution for managing inventory and sales operations.