Supermarket Automation Software

(SAS)

Group Number: 33

The Odd One Out

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Problem Description

- Develop a supermarket software.
- The supermarket stocks a set of items.
- Customers pick up their desired items from the in required quantities. The customers present these items to the sales-clerk.
- The sales-clerk registers the items in the software and then after adding all the quantities to the cart generates the Bill, and the transaction gets recorded.
- The manager can view the various transaction and can manage the clerks and the inventory.

Problem Specification and Users Involved

Manager:

- Edit Users
- Edit Inventory
- Add Product
- Create Report

Clerk:

- Transaction
- View Inventory

Technologies Used

- Backend: Python, Django
- Frontend: HTML, CSS, Bootstrap, Javascript (chart.js)
- Database: SQLite

Why Python and Django?

Python is a high-level programming language, which has the support for full stack development, via powerful frameworks such as Django.

Also, Python is an Object-Oriented Language, which makes the Abstraction of the Problem simpler, as we are able to relate it with real life entities.

Also, Django provides us with many built in functionalities like Login, Register User (which are already heavily tested beforehand, and thus make the software the more Robust).

Django also provides easy and robust database management, via models (which is class based and uses SQLite).

Challenging Use Cases

- Need to manually install a .DLL file for using JSONField (only for Windows).
- chart.js: The first choice to plot graphs was obviously the Matplotlib library. But after a bit of thinking, we chanced upon chart.js, which is more interactive and robust.

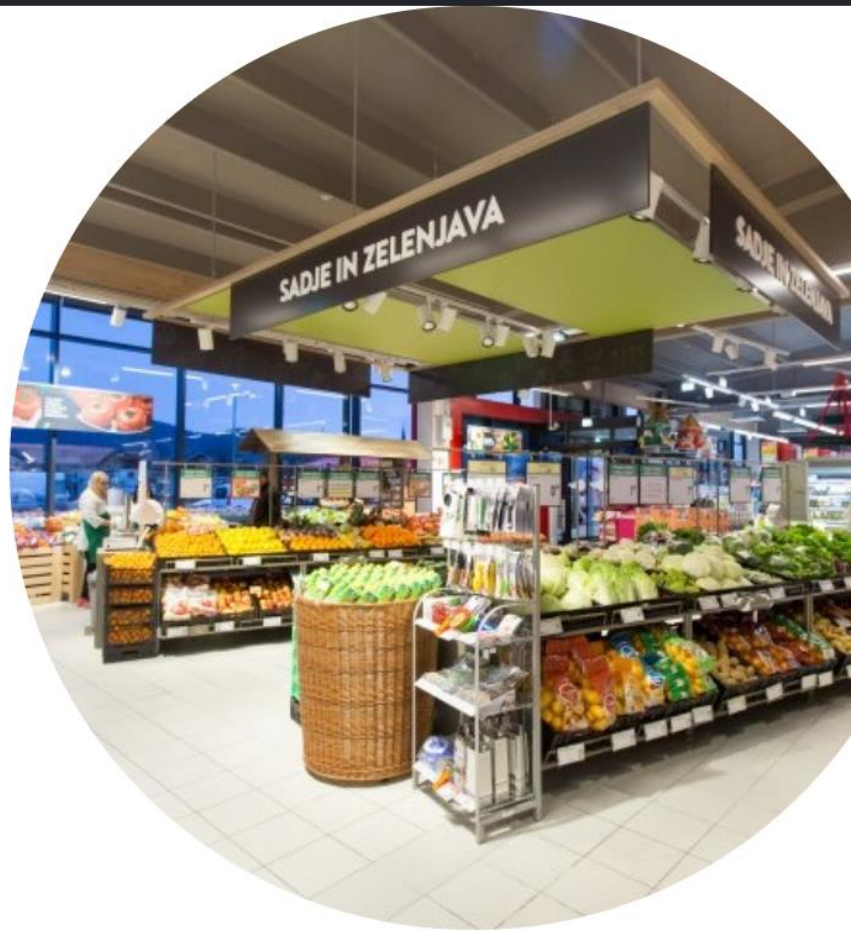
Future Improvements

- Implementation of a Payment Gateway
- Security:
  1. HTTPS instead of HTTP should be used
  2. DDOS Prevention
- Distribution through Docker
- Hosting the Database Through AWS / Azure for faster use

Super Market Automation Software Home Login Register

Super Market Automation Software

Login Register



Super Market Automation Software Home Login Register

Log In

Username*

Password*

Login

Need an account? Sign Up

Super Market Automation Software Home Login Register

Create new account

Username*

Required. 150 characters or fewer. Letters, digits and @/./+/-/_ only.

Email*

Password*

- Your password can't be too similar to your other personal information.
- Your password must contain at least 8 characters.
- Your password can't be a commonly used password.
- Your password can't be entirely numeric.

Password confirmation*

Enter the same password as before, for verification.

Sign up

Already have an account? Log in

Super Market Automation Software Home Profile Transactions View Inventory Logout

Username: clerk1
Email: clerk1@gmail.com
Position: Clerk

Transaction ID	Amount	Date of Transaction
7	650	April 8, 2021, 12:06 a.m.
6	430	April 6, 2021, 7:24 p.m.
1	1335	April 5, 2021, 4:18 p.m.

Super Market Automation Software Home Profile Transactions View Inventory Logout

Name	Quantity	Cost Price	Selling Price
Book	100	20.0	30.0
Pencil	100	7.0	10.0
Milk (1L)	85	40.0	70.0
Broom	97	200.0	500.0
Toothbrush	91	20.0	50.0
Oreo	93	20.0	35.0
Pepsi	98	15.0	50.0
Pen	100	10.0	15.0

Super Market Automation Software Home Profile Create Report Edit Inventory Edit Users Logout

Total Transactions: 7

Select clerk to view their Transactions:

Select User

Enter start and end dates to get plot:

Enter the start date: dd-mm-yyyy **Enter the end date:** dd-mm-yyyy

Enter

Go Back

Report