

IT 206 Project

SUPERMARKET BILLING SYSTEM

Made By:

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Problem Statement:

Each supermarket is in need of a system that can make seamless transitions with the least human involvement. There are various tasks at a supermarket like billing, the arrangement and search of items, the updating of stocks and deduction of available stocks after any user makes a purchase.

This usually involves a lot of paperwork and counting work.

Since the world looks at automation and Paperless transactions, all supermarkets aim at having a system installed which can carry out all the necessary processes stated above seamlessly and within no time. So the supermarket billing system does all the above-mentioned chores in minimal time and is also secure with distinction for usable scenarios for Manager and Customer.

Our solution:

We tried to make a supermarket billing system that could be set up in any supermarket be it small or large. It has all the required functions for a supermarket to rely on it completely and it also has security for the updating of valuable data that requires the credentials of the manager.

We tried to make it as user friendly as possible by making the execution of each operation that the supermarket needs, just a click away.

How we approach the code formation:

- We approached the categories of the manager and the customer on the basis of inheritance.
- We made certain functions that are exclusive to each one of them individually.
- We took the help of hashing with chaining to locate through the items list as well as the customer list and we relied on link list implementation for the storage of the data of each customer or item.
- In hashing, we focused on hash based on the id of the item as well as the customer id, so that we could easily navigate through the entire data and easily edit, increase, reduce, delete, add or append data.
- Lastly, we implemented a switch case in order to automate the functions that we have implemented.

Things we learned during this project:

- We learned a lot about the inheritance of the classes. We learnt that how the functions that have been inherited can be used.
- We implemented hashing with chaining on a large basis. Given the question of hashing in the lab assignment, we had an insight into it and were able to execute it here.
- We came to know that how we need to first list down the list of the functions and the usability procedures that we have to implement first on paper and then proceed on to make the program because otherwise, it will be a complete hassle.
- We understood that How important it is to plan the way (data structure) in which we are going to store the data from the starting.

Problems we faced:

- We faced a lot of difficulties To store the data of the items and the customers parallel to maintaining its allocation in the data storage on the basis of its id.

- Many a time we were stuck because one of the needed class would not have been inherited and thus we would have to check the code again and again.
- In the calling of the functions, we faced difficulties as the functions were defined once and were called in multiple different scenarios and thus were to be precisely linked everywhere through inheritance and called precisely using their fixed parameters.

Limitations:

- The limitations of the project would be that it is a mere c program and can be made a lot better with the help of web development or the software-based implementations
- The Project is not as intelligent, usual supermarket billing systems can even search through the name of the products and also bring up the pictures of the product as well as the related products. We cannot implement it because it would require the machine to be intelligent which is beyond our understanding.