Super Market Billing System

Abstract

This project is on “Super Market Billing System”. Supermarket is the place where customers come to purchase their products and pay for that. So, there is also need to calculate how many products sold and generate the bill for the customer. On the other hand, the administrator staff needs to keep track of items in stock, keep track of remaining stock items, refilling the stock, changing the price and other functionalities like changing the discount on items.

Scope

Our project aims to solve number of tasks.

1. Calculate the Bill for customer.
2. Do the calculations for the user.
3. Store the number of products sold.
4. Show products, their prices, their quantity and discount (%) on product.
5. Maintaining stock automatically for the administrator/Store Staff.
6. Adding new products.
7. Updating the price of products.
8. Updating the discounts on products.
9. Refilling the stock.
10. Removing the product from the store.

System Interface

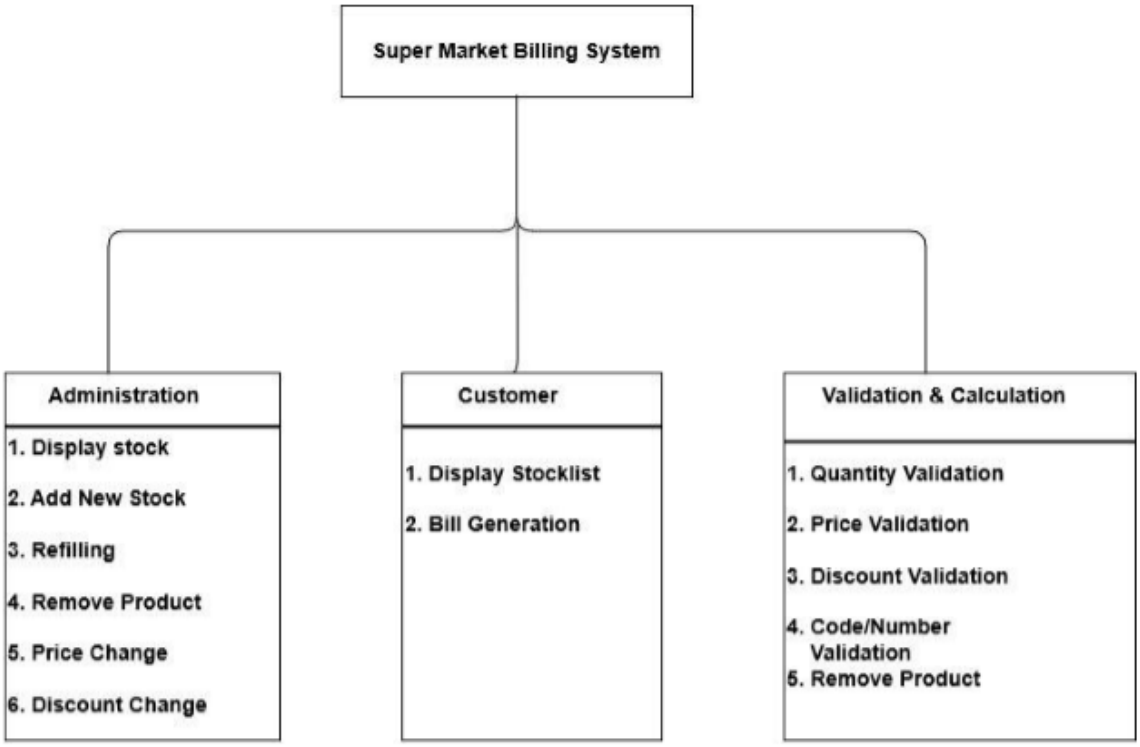
- Software Interface: Microsoft Visual Studio C++
- Human Interface: Inputs /Outputs

Work Flow

- The product will come in the store.
- Data entry operator / Authenticated user (Administrator) will enter the information (Name, Price, Discount, Quantity) of the product.
- The customer will use the software using the customer menu.
- Customer can choose the products; they want to buy and enter the quantity.

• Customer can terminate the program which is set to -1 for now, the program will automatically generate the bill.

• For the payment the customer enters the cash provided by them, the software calculates the remaining change (if any).



Functions and Methods Used

• **void stocklist()** : For now the stock list is created automatically for first 10 products and information is stored in the array of structures.

• **void Initialmenu()** : This functions is the very first menu in the program which provide two options first to use software as Store Staff and the second one allows the software to be used as customer.

• **void authentication():** If the software user chooses the first option from the initial menu i.e. to use software as administrator he/she needs to pass the authentication by entering the password. Default password is set to “saini”.

• **void administrator_menu():** If the user pass the above authentication, user will be prompted with the administrator menu which provides number of options : ▪ Display Stocklist ▪ New Stock ▪ Refill Stock ▪ Remove product ▪ Price change ▪ Discount change

• **void display_stocklist ():** This function is used by both administrator and the customer to display the existing products information available in the store.

• **void newstock():** This function is used to add new items in the stock list.

• **void refill (struct product b[],int size):** Refill function is used to refill the stock. It takes two arguments : struct array and size of array.

• **void pricechange(struct product b[], int size)**: This function is used to change the price of the existing product in inventory.

• **void discountchange(struct product b[], int size):** This function is used to change the discount on the product.

• **void Bill_Generation():** This function allows customer to generate the bill of the product by choosing the product and the quantity they want to buy.

• **Int quantiy_validation():** This functions is used to check if that the user cannot enter the quantity negative.

• **float price_validation():** This function is used to validate the price of the product entered by the administrator, this function is called in void pricechange function or void newstock() function.

• **float discount_validation():** This function is used to validate that the discount in the items cannot be negative. This function is called in void discountchange() function or void newstock() function.

• **void number_validatons():** This function is used inside the newstock() function to validate the number of new items the administrator want to add as the number of new items to be added cannot be negative.

• **int remove_number_validation(int x,int i):** This function is called inside the remove() function to validate the number of products administrator want to remove.

• **int customer_code_validation(int x, int i):** This function is used to validate the code(Sr.No.) of the product the customer want to buy and it is used inside the bill generation function.

double price_each_amount(int quantity, struct product b[], int code) : This function is used inside the bill generation function it calculate the prices of each individual product.

Header Files used

• iostream

• iomanip

Limitations

• In order to minimize the human input, this project comes with default stocklist of 10 items right now, which can be replaced and can be entered by the administrator.

• The stock list is limited to 100 items only for now as which can be later own replaced by studying the concepts of dynamic memory allocation theory in array.

• While using the software as the customer user need to enter -1 in order to terminate the program which can be replaced with some Button input while designing the GUI for the project.

Code By-:

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