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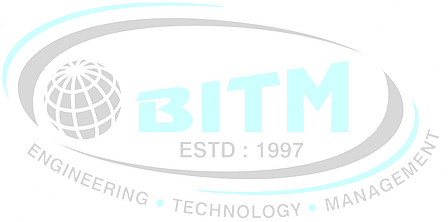


2021-2022

**C PROJECT LAB-2021-22**

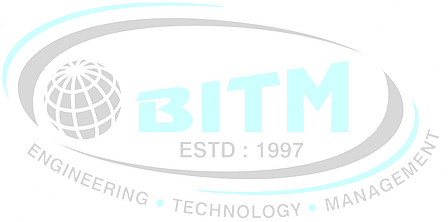
**A Mini-Project Report On**

**“SUPER MARKET BILLING SYSTEM”**

**A project work designed and developed as a part of C PROJECT LAB for the Academic Year 2021-22.**

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# ABSTRACT

Supermarket billing system deals with the automation of supermarket. This software will help salespersons in managing the various types of records pertaining to customer. The product will help the user to work in a highly effective and efficient environment.

The new system will cater to the need of the sales persons of any supermarket so that salesperson can manage the system efficiently. Supermarket billing system is developed with the objective of making the system reliable, easier, fast, and more informative.

# INTRODUCTION

Supermarket billing system is the system to automate the process of ordering and billing of a supermarket store. Supermarket is the place where customers come to purchase their daily using products and pay for that. So there is a need to calculate how many products are sold and to generate the bill for the customer.

This system is built for fast data processing and bill generation for supermarket customers. It also allows the customer to purchase and pay for the items purchased. The users will consume less time in calculation and the sales activity will be completed within a fraction of seconds whereas in a manual system will make the user to write it down which is a long procedure and it also consumes a lot of time.

# OBJECTIVES:

• To reduce the time for organisation.

• To increase efficiency and accuracy of the system.

• To reduce pressure on the labour and relieving man power from repetitive and dull job. • To make the retrieval of information faster.

• To make the system more feasible

• To reduce large amount of paper work.

• To make the system more reliable and to avoid any ambiguity.

• To reduce the cost factor of the system.

• To make the system more flexible.

• It provides a convenient solution of billing pattern.

• It maintains new entered category or products.

# EXISTING SYSTEM:

Many Supermarkets use this type of billing system for a decade. It is also improved many times according to requirements of sellers and customers. It does the same work that is calculating the bill, gives it to the customer and maintain proper database. They are accurate in calculation and printing, they also generate records.

Bottlenecks of the Existing System :

Every system has pros and cons so existing system also have many advantages and disadvantages.

1. User Interface: User Interface is not so much good that operators feel some problems in working.
2. Graphical User Interface: GUI is not good so the operators get bored by watching screen.
3. Processing speed: Processing speed of the software is not so much good to operate fast.
4. Flexible: Existing system is not so much flexible that can be changed according to the operators and customers.
5. Workload: Sometimes the system hangs when workload is more.
6. Automatic generation of the Reports: Not able to automatically generate the reports and documents.
7. Error Free: Sometimes the system gives error in the calculation in making the bill and in the information of the products due to workload.
8. Man Power: Existing system uses so many people to operate the system.
9. Resources: System does not use the resources properly

# PROPOSED SYSTEM:

The proposed system is intended to provide the facility of automating the billing system for the supermarket. To reduce the bottlenecks of the existing system there is a need to develop a new system.

The new system should concern the requirements of the customer and the sellers.

This project is designed with a goal to making the existing system more informative, reliable, fast and easier.

Advantages of the proposed system:

* Converts the manual work which is time consuming and error prone to fully automated system.
* Helps in eliminating the paper work ,saves time and improves customer services.
* Makes the addition of items in the bill, deletion of items and modification of items in the bill easier and faster
* C++ has supported to implement object oriented concepts.
* Bills can be calculated more easily and with more accuracy.
* Reduces pressure on the labor
* Makes the system more feasible and flexible and thus retrieval of information becomes convenient

# PROBLEM STATEMENT

In today’s fast paced society, it’s very hard to be competitive without using cutting-edge technology available in market. After years of business, the data has grown much. It is becoming a challenge for person to manage that data in an effective way.

To be more productive in order processing, he needs a solution which can facilitate their current processes with use of technology and software. With increased amount of orders, it is becoming difficult for salesperson to manage orders in effective and efficient manner.

It is very hard to go through all paper work and backtracking orders. If there is any complain or review of any order, it takes large amount of effort and time to backtrack and fix the problem. This results in loss of resources, increased time, and low output.

# SCOPE OF THE PROJECT:

Scope of this project is to investigate and design a software solution which can facilitate both customer and salesperson in performing their daily tasks, improving efficiency, and helping them to be more productive.

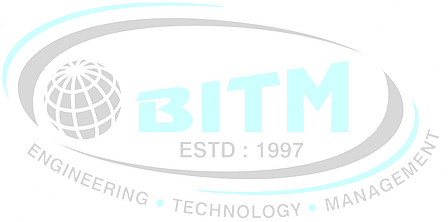
This project will provide a solution through which salesperson can easily manage, handle and generate all required information in their respective format when needed. It provides quick way of operation by capturing the manual process and automating them.

It will help them to manage the bill details, financial data, and historical data and also in producing documents of different formats for different customers. This solution will help salesperson in reducing effort spend on managing many bills.

# METHODOLOGY

Here, you can perform functions such as add items, modify items, delete record of items , view record of items, buy the items and more.

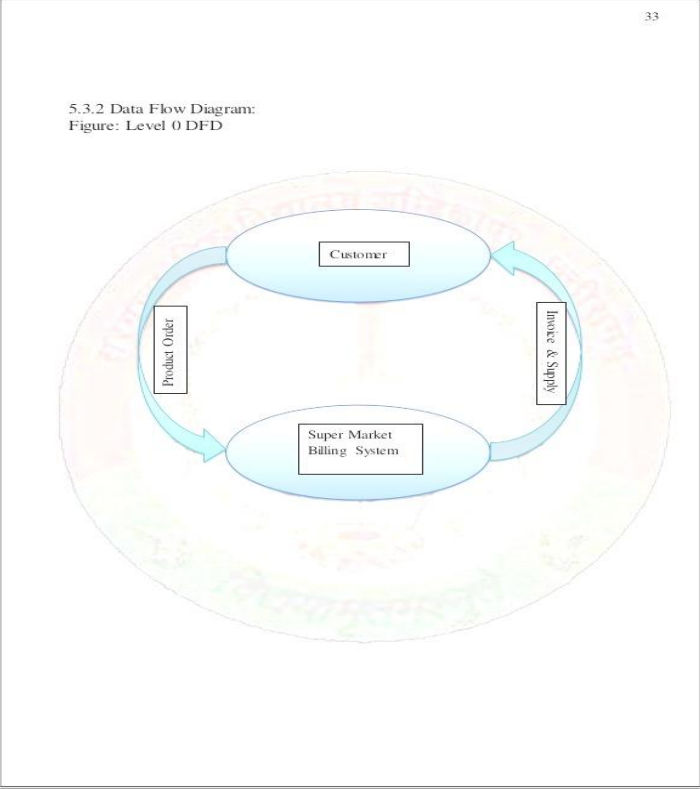
File handling has been extensively used in this project for almost all functions.

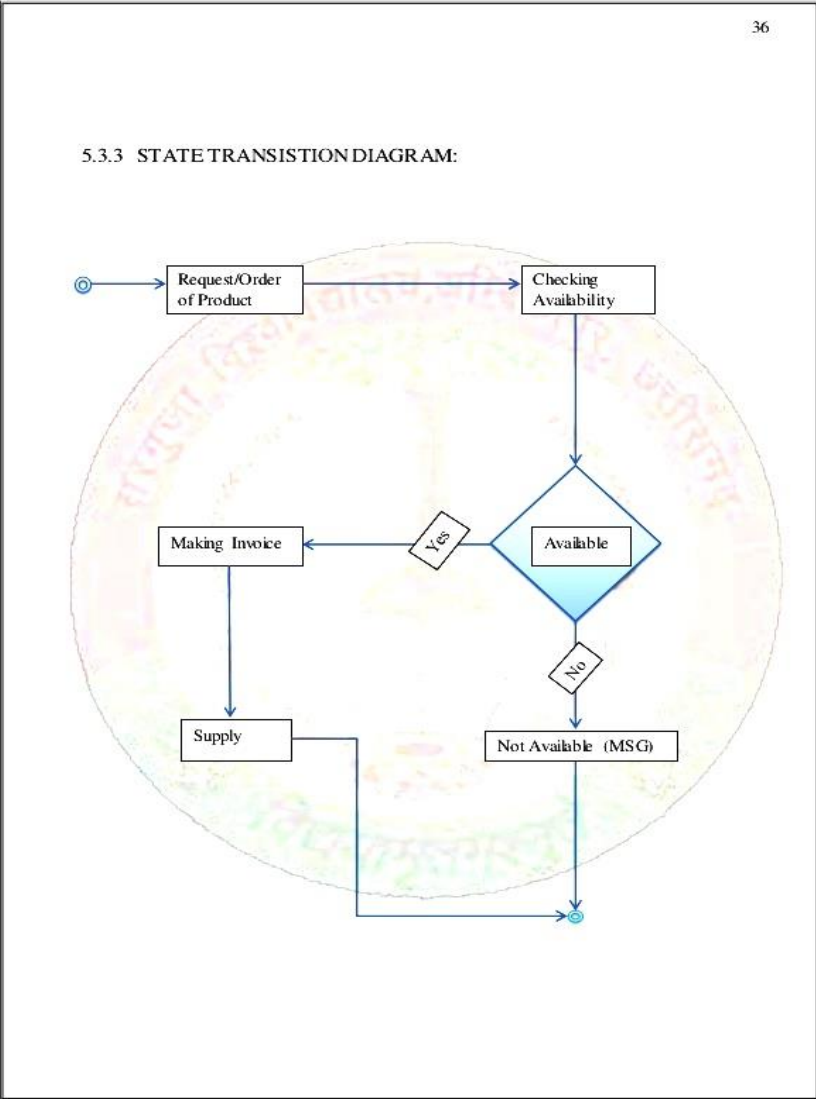


# MODULES USED IN THE PROJECT

* 1. **menu();**
  2. **administrator();**
  3. **buyer();**
  4. **add();**
  5. **edit();**
  6. **remove();**
  7. **list();**
  8. **receipt();**

8.DATA FLOW DIAGRAM





**#include<iostream>**

**#include<fstream>**

**using namespace std;**

**class shopping**

**{**

**private:**

**int pcode;**

**float price;**

**float dis;**

**string pname;**

**public:**

**void menu();**

**void administrator();**

**void buyer();**

**void add();**

**void edit();**

**void rem();**

**void list();**

**void receipt();**

**};**

**void shopping :: menu()**

**{**

**m:**

**int choice;**

**string email;**

**string password;**

**cout<<"\n\n\t\t\t\t########################################\n";**

**cout<<"\t\t\t\t\t\t# # \n";**

**cout<<"\t\t\t\t\t\t# BILLING SOFTWARE #\n";**

**cout<<"\t\t\t\t\t\t# #\n";**

**cout<<"\t\t\t\t\t\t########################################\n";**

**cout<<"\t\t\t\t\t\t | 1) Administrator | \n";**

**cout<<"\t\t\t\t\t\t |\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_| \n";**

**cout<<"\t\t\t\t\t\t | 2) Buyer | \n";**

**cout<<"\t\t\t\t\t\t |\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_| \n";**

**cout<<"\t\t\t\t\t\t | 3) Exit | \n";**

**cout<<"\t\t\t\t\t\t |\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_| \n";**

**cout<<"\t\t\t\t\t\t PLEASE SELECT :- \n";**

**cout<<"\n\t\t\t\t\t\t---------> "; cin>>choice;**

**switch(choice)**

**{**

**case 1:**

**cout<<"\t\t\t\t\t\t\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \n";**

**cout<<"\t\t\t\t\t\t Please Login \n";**

**cout<<"\t\t\t\t\t\t\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \n";**

**cout<<"\n\t\t\t\t\t\t\*\*\*\*\* Enter Email \*\*\*\*\* \n";**

**cout<<"\n\t\t\t\t\t\t----> ";cin>>email;**

**cout<<"\n\t\t\t\t\t\t\*\*\*\*\* Password \*\*\*\*\*\*\* \n";**

**cout<<"\n\t\t\t\t\t\t----> ";cin>>password;**

**if(email=="tarun@email.com" && password=="tarun123")**

**{**

**administrator();**

**}**

**else{**

**cout<<"\n\t\t\t\t\t\t!!!!!INVALID EMAIL/PASSWORD!!!!!";**

**}**

**break;**

**case 2:**

**{**

**buyer();**

**}**

**case 3:**

**{**

**exit(0);**

**}**

**default:**

**{**

**cout<<"\n\t\t\t\t\t\t!!!!!PLEASE SELECT FROM THE GIVEN OPTIONS!!!!!";**

**}**

**}**

**goto m;**

**}**

**void shopping :: administrator()**

**{**

**m:**

**int choice;**

**cout<<"\n\t\t\t\t\t\t>>>>> ADMINISTATOR MENU <<<<<";**

**cout<<"\n\t\t\t\t\t\t |\_\_\_\_1) Add the Product\_\_\_|";**

**cout<<"\n\t\t\t\t\t\t |\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_|";**

**cout<<"\n\t\t\t\t\t\t |\_\_\_\_2) Modify the Product\_|";**

**cout<<"\n\t\t\t\t\t\t |\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |";**

**cout<<"\n\t\t\t\t\t\t |\_\_\_\_3) Delete the Product\_|";**

**cout<<"\n\t\t\t\t\t\t |\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |";**

**cout<<"\n\t\t\t\t\t\t |\_\_\_\_4) Back to Main Menu\_|";**

**cout<<"\n\t\t\t\t\t\t PLEASE ENTER YOUR CHOICE :- ";**

**cout<<"\n\t\t\t\t\t\t---------> ";cin>>choice;**

**switch(choice)**

**{**

**case 1:**

**add();**

**break;**

**case 2:**

**edit();**

**break;**

**case 3:**

**rem();**

**break;**

**case 4:**

**menu();**

**break;**

**default:**

**cout<<"!!!!!INVALID CHOICE!!!!";**

**}**

**goto m;**

**}**

**void shopping :: buyer()**

**{**

**m:**

**int choice;**

**cout<<"\n\t\t\t\t\t\t>>>>> BUYER MENU <<<<<";**

**cout<<"\n\t\t\t\t\t\t|\_\_\_\_1) Buy the Product\_\_\_\_|";**

**cout<<"\n\t\t\t\t\t\t|\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |";**

**cout<<"\n\t\t\t\t\t\t|\_\_\_\_2) Go Back\_\_\_\_\_\_\_\_\_\_|";**

**cout<<"\n\t\t\t\t PLEASE ENTER YOUR CHOICE :- ";**

**cout<<"\n\t\t\t\t\t\t-------> ";cin>>choice;**

**switch(choice)**

**{**

**case 1:**

**receipt();**

**break;**

**case 2:**

**menu();**

**break;**

**default:**

**cout<<"\n\t\t\t\t\t\t!!!!!INVALID CHOICE!!!!!";**

**}**

**goto m;**

**}**

**void shopping :: add()**

**{**

**m:**

**fstream data;**

**int c;**

**int token = 0;**

**float p;**

**float d;**

**string n;**

**cout<<"\n\n\t\t\t\t >>>>> Add new Product <<<<<";**

**cout<<"\n\n\t\t\t\t Enter Product code ";**

**cout<<"\n\t\t\t\t\t\t-----> ";cin>>pcode;**

**cout<<"\n\n\t\t\t\t Enter Poduct Name ";**

**cout<<"\n\t\t\t\t\t\t-----> ";cin>>pname;**

**cout<<"\n\n\t\t\t\t Enter Product Price ";**

**cout<<"\n\t\t\t\t\t\t-----> ";cin>>price;**

**cout<<"\n\n\t\t\t\t Enter Product Discount ";**

**cout<<"\n\t\t\t\t\t\t-----> ";cin>>dis;**

**data.open("database.txt",ios::in); //ios out for writing mode**

**if(!data)**

**{**

**data.open("database.txt",ios::app|ios::out);**

**data<<" "<<pcode<<" "<<pname<<" "<<price<<" "<<dis<<"\n";**

**data.close();**

**}**

**else**

**{**

**data>>c>>n>>p>>d;**

**while(!data.eof())**

**{**

**if(c==pcode)**

**{**

**token++;**

**}**

**data>>c>>n>>p>>d;**

**}**

**data.close();**

**if(token==1)**

**goto m;**

**else{**

**data.open("database.txt",ios::app|ios::out);**

**data<<" "<<pcode<<" "<<pname<<" "<<price<<" "<<dis<<"\n";**

**data.close();**

**}**

**}**

**cout<<"\n\n\t\t\t\t!!!!! RECORD INSERTED !!!!! ";**

**}**

**void shopping::edit()**

**{**

**fstream data,data1;**

**int pkey;**

**int token=0;**

**int c;**

**float p;**

**float d;**

**string n;**

**cout<<"\n\t\t\t\t\t>>>>> MODIFY THE RECORD<<<<< ";**

**cout<<"\n\t\t\t\t\t Enter the Prodcut code : ";**

**cout<<"\n\t\t\t\t\t\t-----> ";cin>>pkey;**

**data.open("database.txt",ios::in);**

**if(!data)**

**{**

**cout<<"\n\n!!!!! FILE DOESN'T EXIST !!!!! ";**

**}**

**else**

**{**

**data1.open("database1.txt",ios::app|ios::out);**

**data>>pcode>>pname>>price>>dis;**

**while(!data.eof())**

**{**

**if(pkey==pcode)**

**{**

**cout<<"\n\t\t\t\t\t Enter New Product Code :";**

**cout<<"\n\t\t\t\t\t\t-----> ";cin>>c;**

**cout<<"\n\t\t\t\t\t Enter New Product Name :";**

**cout<<"\n\t\t\t\t\t\t-----> ";cin>>n;**

**cout<<"\n\t\t\t\t\t Enter New Product Price :";**

**cout<<"\n\t\t\t\t\t\t-----> ";cin>>p;**

**cout<<"\n\t\t\t\t\t Enter New Product Discount :";**

**cout<<"\n\t\t\t\t\t\t-----> ";cin>>d;**

**data1<<" "<<c<<" "<<n<<" "<<p<<" "<<d<<"\n";**

**cout<<"\n\n\t\t\t\t!!!!! RECORD EDITIED !!!!! ";**

**token++;**

**}**

**else**

**{**

**data1<<" "<<pcode<<" "<<pname<<" "<<price<<" "<<dis<<"\n";**

**}**

**data>>pcode>>pname>>price>>dis;**

**}**

**data.close();**

**data1.close();**

**remove("database.txt");**

**rename("database1.txt","database.txt");**

**if(token==0)**

**{**

**cout<<"\n\t\t\t\t\t\t!!!!! RECORD NOT FOUND !!!!!";**

**}**

**}**

**}**

**void shopping::rem()**

**{**

**fstream data,data1;**

**int pkey;**

**int token=0;**

**cout<<"\n\n\t\t\t\t>>>>> DELETE PRODUCT <<<<<";**

**cout<<"\n\n\t\t\t\t Enter the Product Code :";**

**cout<<"\n\t\t\t\t\t\t-----> ";cin>>pkey;**

**data.open("database.txt",ios::in);**

**if(!data)**

**{**

**cout<<"\n\t\t\t\t\t\tFile Doesnt Exist";**

**}**

**else**

**{**

**data1.open("database1.txt",ios::app|ios::out);**

**data>>pcode>>pname>>price>>dis;**

**while(!data.eof())**

**{**

**if(pcode==pkey)**

**{**

**cout<<"\n\t\t\t\t\t\t!!!!! PRODUCT DELETED SUCCESSFULLY !!!!! ";**

**token++;**

**}**

**else**

**{**

**data1<<" "<<pcode<<" "<<pname<<" "<<price<<" "<<dis<<"\n";**

**}**

**data>>pcode>>pname>>price>>dis;**

**}**

**data.close();**

**data1.close();**

**remove("database.txt");**

**rename("database1.txt","database.txt");**

**if(token==0)**

**{**

**cout<<"\n\t\t\t\t\t\t !!!!! Record not found !!!!! ";**

**}**

**}**

**}**

**void shopping:: list()**

**{**

**fstream data;**

**data.open("database.txt",ios::in);**

**cout<<"\n\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\n";**

**cout<<"\t\tproNo\t\tName\t\tPrice\n";**

**cout<<"\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\n";**

**data>>pcode>>pname>>price>>dis;**

**while(!data.eof())**

**{**

**cout<<"\n"<<"\t\t"<<pcode<<"\t\t"<<pname<<"\t\t"<<price;**

**data>>pcode>>pname>>price>>dis;**

**}**

**data.close();**

**}**

**void shopping::receipt()**

**{**

**fstream data;**

**int arrc[100];**

**int arrq[100];**

**string choice;**

**int c=0;**

**float amount=0;**

**float dis=0;**

**float total = 0;**

**cout<<"\n\n\t\t\t>>>>> ITEMS MENU <<<<< ";**

**data.open("database.txt",ios::in);**

**if(!data)**

**{**

**cout<<"\n\n !!!!! EMPTY DATABASE !!!!!";**

**}**

**else**

**{**

**data.close();**

**list();**

**cout<<"\n\t\t\t\t\t\t\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\n";**

**cout<<"\n\t\t\t\t\t\t| | \n";**

**cout<<"\n\t\t\t\t\t\t| Please place the order |\n";**

**cout<<"\n\t\t\t\t\t\t| |\n";**

**cout<<"\n\t\t\t\t\t\t|\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_|\n";**

**do**

**{**

**m:**

**cout<<"\n\n\t\t\t\t Enter the Product code :";**

**cout<<"\n\t\t\t\t\t\t-----> ";cin>>arrc[c];**

**cout<<"\n\n\t\t\t\t Enter the Product quantity :";**

**cout<<"\n\t\t\t\t\t\t-----> ";cin>>arrq[c];**

**for(int i=0;i<c;i++)**

**{**

**if(arrc[c]==arrc[i])**

**{**

**cout<<"\n\n Duplicate product code. Please try again! ";**

**goto m;**

**}**

**}**

**c=c+1;**

**cout<<"\n\n Do you want to buy another product ? If Yes then Press y else No : ";**

**cin>>choice;**

**}while(choice=="y");**

**cout<<"\n\n\t\t\t\_\_\_\_\_\_\_\_\_\_\_\_RECEIPT\_\_\_\_\_\_\_\_\_\_\_\_\_\n";**

**cout<<"\nProduct NO\tProduct Name\tProduct Quantity\tprice\tAmount with discount\n";**

**for(int i=0;i<=c;i++)**

**{**

**data.open("database.txt",ios::in);**

**data>>pcode>>pname>>price>>dis;**

**while(!data.eof())**

**{**

**if(pcode==arrc[i])**

**{**

**amount=price\*arrq[i];**

**dis=amount-(amount\*dis/100);**

**total = total+dis;**

**cout<<"\n"<<pcode<<"\t\t"<<pname<<"\t\t"<<arrq[i]<<"\t\t"<<price<<"\t\t"<<amount<<"\t\t"<<dis;**

**}**

**data>>pcode>>pname>>price>>dis;**

**}**

**}**

**data.close();**

**}**

**cout<<"\n\n\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_";**

**cout<<"\n Total Amount : "<<total;**

**}**

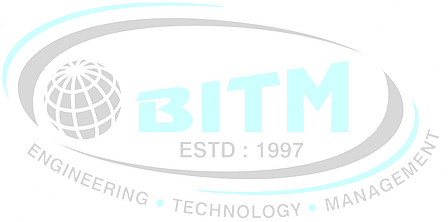
**int main()**

**{**

**shopping s;**

**s.menu();**

**}**

****

OUTPUT SCREEN SHOTS

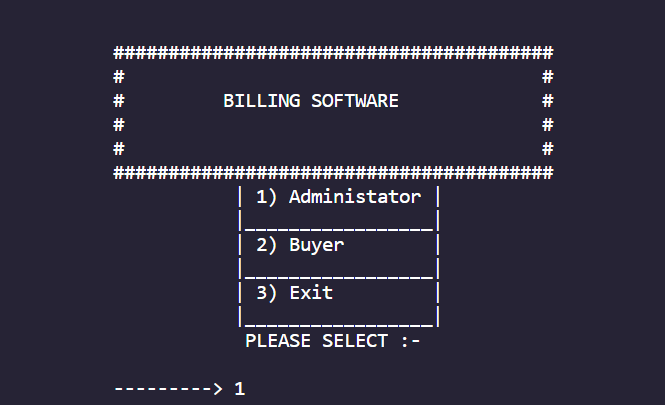
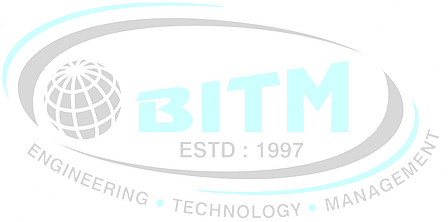


Fig:1

1)This shows the menu of a supermarket billing system.

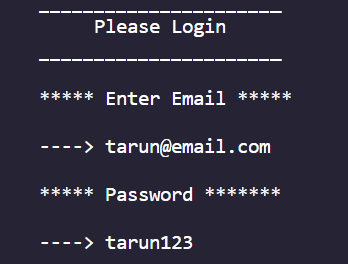


Fig:2

2) It shows the Administrator Authentication before entering administrator menu

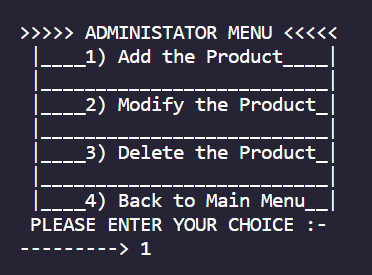
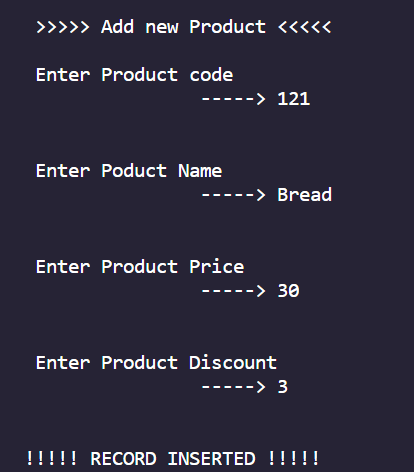
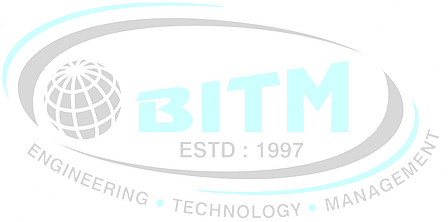


Fig:2

2)It shows that a billing system operator can add item details, edit the item details, delete the item details and go back to main menu



Fig:3

3)Here an item is added successfully by the billing operator.

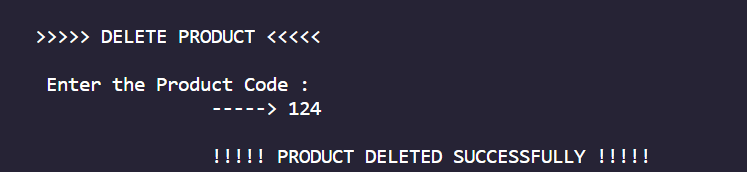


Fig:5

5) Here an item is deleted successfully by the billing operator.

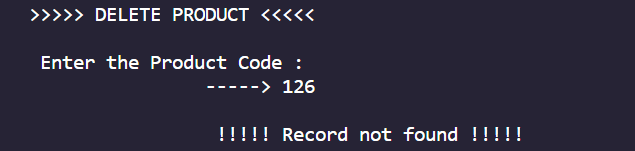


Fig:6

6)If we delete an item that does not exist in the system it shows an error.

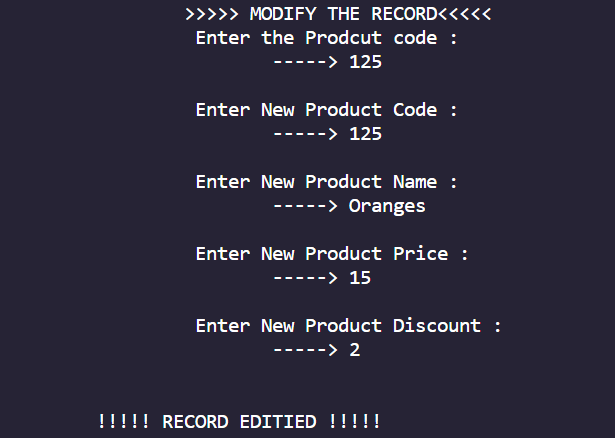


Fig:6

7) Here items are successfully modified by the billing operator

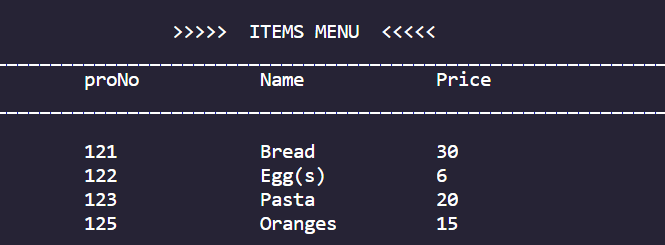
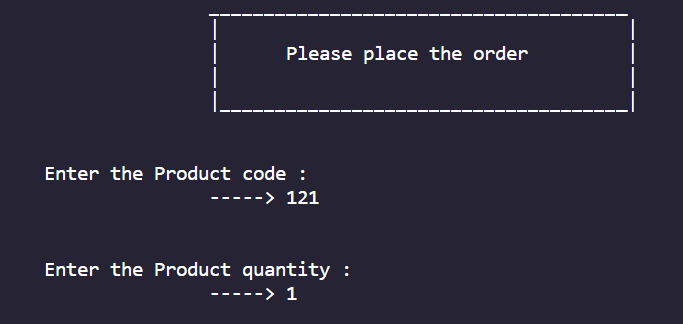


Fig:7

4)It Shows the list of items that costumer can buy .



5) It shows the customer buying the product.

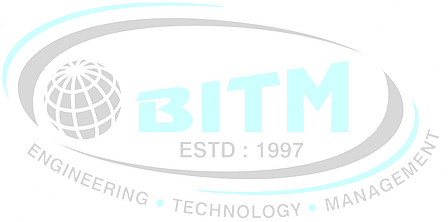
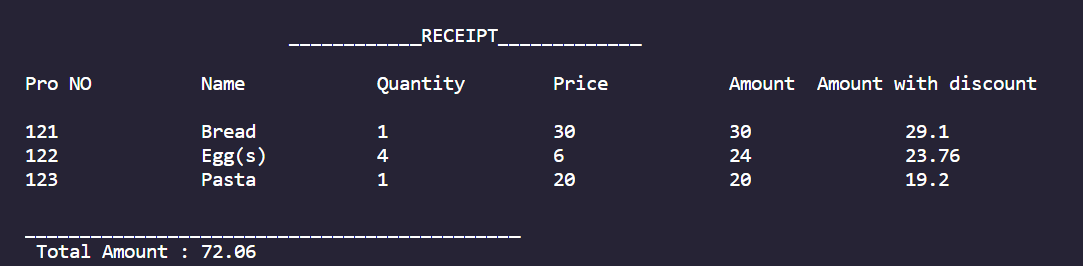


Fig:6

5)Here it generates the overall bill report of the customer.

# 10. CONCLUSION

This software has been developed designed to reduce the time taken to handle the sales activity. It is designed to replace an existing manual record system for reducing time taken for calculations and for storing data. This system has been developed with oops concepts.The system is strong to handle daily operations where the database is cleared over certain time. This system will reduce manual work, calculations and will also provide periodic reports any time

# 10.REFERENCES

1.http://www.bestprojectsidea.com/vb-6-0-synopsis/supermarket-billingsystem/.

3.http://www.memoireonline.com/07/12/5995/Online-ordering-andsupermarket-system.html.

4.http://www.scribd.com/doc/37762263/Online-Supermarket-System. 5.http://pdfebooklibrary.com/pdf/all-uml-diagrams-for-supermarket-billingsystem