MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR

(A Govt. Aided UGC Autonomous & NAAC Accredited Institute Affiliated to RGPV, Bhopal)

Skill Based Project Report

on

Supermarket Billing System

Submitted to:

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MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR

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CERTIFICATE

This is certified that **Ashu Shukla** 0901CA211016 has submitted the project report titled **Supermarket Billing System** under the mentorship of **Dr. Anshu Chaturvedi** (Professor) as the requirement of skill based mini project.

Dr. Anshu Chaturvedi

(professor)

Computer Science and Engineering

MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR

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DECLARATION

I hereby declare that the work being presented in this project report, for the partial fulfilment of requirement for the award of the degree of Master of Computer Application in Computer Science and Engineering at Madhav Institute of Technology and Science, Gwalior is an authenticated and original record of my work under the mentorship of **Dr. Anshu Chaturvedi (Professor).**

I declare that I have submitted the matter embodied in this report for the award of any degree or diploma anywhere else.

Ashu Shukla

0901CA211016

2021-2023

MASTER OF COMPUTER APPLICATION,

COMPUTER SCIENCE AND ENGINEERING

MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR

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MASTER OF COMPUTER APPLICATION,

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ABSTRACT

A Supermarket is a large form of the traditional grocery store, it is a self-service shop offering a wide variety of food and household products. It is larger in size an has a wider selection than a traditional grocery, but is smaller and more limited in the range of merchandise than a hypermarket or big-box market.

This project is a traditional supermarket billing system with some added functionality. This system is built for fast data processing and bill generation for supermarket customers.

The billing database is a vast collection of product name, price and other product specific data. A product when billed is searched from the database and its price is added to the bill based upon the product quantity. The system also contains discounted price while billing.

The supermarket billing system is built to help supermarkets calculate and display bills and serve the customer in a faster and efficient manner.

CONTENTS

1. Introduction

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. "Supermarket Billing System" aims at developing in to software that can be used at places like Shopping malls, Supermarkets to easily operates the daily tasks of taking the order, calculating the bill etc.

The main advantage of this project is that it converts all the manual work is time consuming and error prone to fully automated system which helps in eliminating all the paper work, saves time, improves customer services. It also speeds up various processes such as addition of new items to the menu, deletion of items from the menu, modification of details of items and calculation of bills thus providing convenience to the workers as well as customers. In the development of the project, selection of an appropriate programming language and a platform is of primary importance.

This project is developed to manage the bill submission process in big organization. Using this system user can submit their bill online and check the status of their bill. This is the administrator who will decide the discounts on the products and can see the report of any report.

In this project C++ language is used to maintain all the data. It provides many features like file handling data can be easily maintained and many features that are required while doing a project. The system will display all the items with prices and discount. Finally, a separate bill will be generated for each customer.

Any periodic records can be viewed at any time. Eventually, users will consume less time in the calculation and the sales activity will be completed within a fraction of seconds whereas a manual system will make the user write it down which is a long procedure and so paperwork will be reduced and the user can spend more time on the monitoring the supermarket.

2. Objective

"To make software fast in processing, with good user interface so that user can change it and it should be used for a long time without error and maintenance."

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.

2. Code

```
#include<iostream>
#include<windows.h>
#include<conio.h>
#include<fstream>
#include<cstring>
#include<cstdio>
#include<cstdlib>
#include<iomanip>
using namespace std;
//global variable declaration
int k=7,r=0,flag=0;
COORD coord = {0, 0};

void gotoxy(int x, int y)
{
   COORD coord;
   coord.X = x;
   coord.Y = y;
   SetConsoleCursorPosition(GetStdHandle(STD_OUTPUT_HANDLE), coord);
}
struct date
{
   int mm,dd,yy;
};

ofstream fout;
ifstream fin;

class item
{
   int itemno;
   char name[25];
   date d;
public:
   void add()
   {
      cout<<"\n\n\tItem No: ";
      cin>>itemno;
      cout<<"\n\n\tName of the item: ";
      cin>>name;
//gets(name);
```

```
        cout<<"\n\n\tManufacturing Date(dd-mm-yy): ";
        cin>>d.mm>>d.dd>>d.yy;
    }
    void show()
    {
        cout<<"\n\tItem No: ";
        cout<<itemno;
        cout<<"\n\n\tName of the item: ";
        cout<<name;
        cout<<"\n\n\tDate : ";
        cout<<d.mm<<"-"<<d.dd<<"-"<<d.yy;
    }
    void report()
    {
        gotoxy(3,k);
        cout<<itemno;
        gotoxy(13,k);
        puts(name);
    }
    int retno()
    {
        return(itemno);

    }

};

class amount: public item
{
    float price,qty,tax,gross,dis,netamt;
public:
    void add();
    void show();
    void report();
    void calculate();
    void pay();
    float retnetamt()
    {
        return(netamt);
    }
} amt;

void amount::add()
{
    item::add();
    cout<<"\n\n\tPrice: ";
    cin>>price;
    cout<<"\n\n\tQuantity: ";
```

```
    cin>>qty;
    cout<<"\n\n\tTax percent: ";
    cin>>tax;
    cout<<"\n\n\tDiscount percent: ";
    cin>>dis;
    calculate();
    fout.write((char *)&amt,sizeof(amt));
    fout.close();
}
void amount::calculate()
{
    gross=price+(price*(tax/100));
    netamt=qty*(gross-(gross*(dis/100)));
}
void amount::show()
{
    fin.open("itemstore.dat",ios::binary);
    fin.read((char*)&amt,sizeof(amt));
    item::show();
    cout<<"\n\n\tNet amount: ";
    cout<<netamt;
    fin.close();
}

void amount::report()
{
    item::report();
    gotoxy(23,k);
    cout<<price;
    gotoxy(33,k);
    cout<<qty;
    gotoxy(44,k);
    cout<<tax;
    gotoxy(52,k);
    cout<<dis;
    gotoxy(64,k);
    cout<<netamt;
    k=k+1;
    if(k==50)
    {
        gotoxy(25,50);
        cout<<"PRESS ANY KEY TO CONTINUE...";
        getch();
        k=7;
        system("cls");
        gotoxy(30,3);
        cout<<" ITEM DETAILS ";
        gotoxy(3,5);
```

```
        cout<<"NUMBER";
        gotoxy(13,5);
        cout<<"NAME";
        gotoxy(23,5);
        cout<<"PRICE";
        gotoxy(33,5);
        cout<<"QUANTITY";
        gotoxy(44,5);
        cout<<"TAX";
        gotoxy(52,5);
        cout<<"DEDUCTION";
        gotoxy(64,5);
        cout<<"NET AMOUNT";
    }
}

void amount::pay()
{
    show();
    cout<<"\n\n\n\t\t**************************************************";
    cout<<"\n\t\t              DETAILS                ";
    cout<<"\n\t\t**************************************************";
    cout<<"\n\n\t\tPRICE                  :"<<price;
    cout<<"\n\n\t\tQUANTITY               :"<<qty;
    cout<<"\n\t\tTAX PERCENTAGE         :"<<tax;
    cout<<"\n\t\tDISCOUNT PERCENTAGE    :"<<dis;
    cout<<"\n\n\n\t\tNET AMOUNT         :Rs."<<netamt;
    cout<<"\n\t\t**************************************************";
}

int main()
{
    cout.setf(ios::fixed);
    cout.setf(ios::showpoint);
    cout<<setprecision(2);
    fstream tmp("temp.dat",ios::binary|ios::out);
menu:
    system("cls");
    gotoxy(25,2);
    cout<<"Super Market Billing ";
    gotoxy(25,3);
    cout<<"==========================\n\n";
    cout<<"\n\t\t1.Bill Report\n\n";
    cout<<"\t\t2.Add/Remove/Edit Item\n\n";
    cout<<"\t\t3.Show Item Details\n\n";
    cout<<"\t\t4.Exit\n\n";
    cout<<"\t\tPlease Enter Required Option: ";
    int ch,ff;
```

```
    float gtotal;
    cin>>ch;
    switch(ch)
    {
    case 1:
ss:
        system("cls");
        gotoxy(25,2);
        cout<<"Bill Details";
        gotoxy(25,3);
        cout<<"================\n\n";
        cout<<"\n\t\t1.All Items\n\n";
        cout<<"\t\t2.Back to Main menu\n\n";
        cout<<"\t\tPlease Enter Required Option: ";
        int cho;
        cin>>cho;
        if(cho==1)
        {
           system("cls");
           gotoxy(30,3);
           cout<<" BILL DETAILS ";
           gotoxy(3,5);
           cout<<"ITEM NO";
           gotoxy(13,5);
           cout<<"NAME";
           gotoxy(23,5);
           cout<<"PRICE";
           gotoxy(33,5);
           cout<<"QUANTITY";
           gotoxy(44,5);
           cout<<"TAX %";
           gotoxy(52,5);
           cout<<"DISCOUNT %";
           gotoxy(64,5);
           cout<<"NET AMOUNT";
           fin.open("itemstore.dat",ios::binary);
           if(!fin)
           {
              cout<<"\n\nFile Not Found...";
              goto menu;
           }
           fin.seekg(0);
           gtotal=0;
           while(!fin.eof())
           {
              fin.read((char*)&amt,sizeof(amt));
              if(!fin.eof())
              {
```

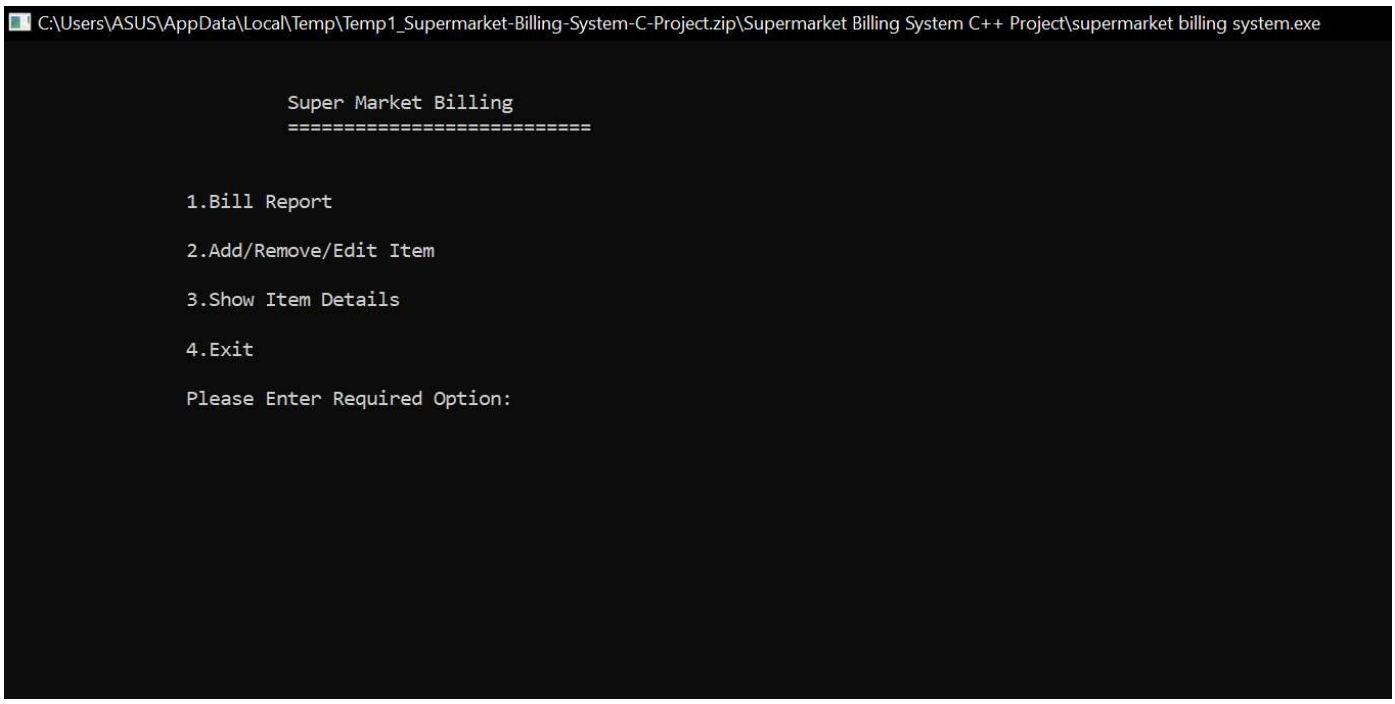
```
                amt.report();
                gtotal+=amt.retnetamt();
                ff=0;
              }
              if(ff!=0) gtotal=0;
            }
            gotoxy(17,k);
            cout<<"\n\n\n\t\t\tGrand Total="<<gtotal;
            getch();
            fin.close();
        }
        if(cho==2)
        {
            goto menu;
        }
        goto ss;
    case 2:
db:
        system("cls");
        gotoxy(25,2);
        cout<<"Bill Editor";
        gotoxy(25,3);
        cout<<"================\n\n";
        cout<<"\n\t\t1.Add Item Details\n\n";
        cout<<"\t\t2.Edit Item Details\n\n";
        cout<<"\t\t3.Delete Item Details\n\n";
        cout<<"\t\t4.Back to Main Menu ";
        int apc;
        cin>>apc;
        switch(apc)
        {
        case 1:
            fout.open("itemstore.dat",ios::binary|ios::app);
            amt.add();
            cout<<"\n\t\tItem Added Successfully!";
            getch();
            goto db;

        case 2:
            int ino;
            flag=0;
            cout<<"\n\n\tEnter Item Number to be Edited :";
            cin>>ino;
            fin.open("itemstore.dat",ios::binary);
            fout.open("itemstore.dat",ios::binary|ios::app);
            if(!fin)
            {
                cout<<"\n\nFile Not Found...";
```

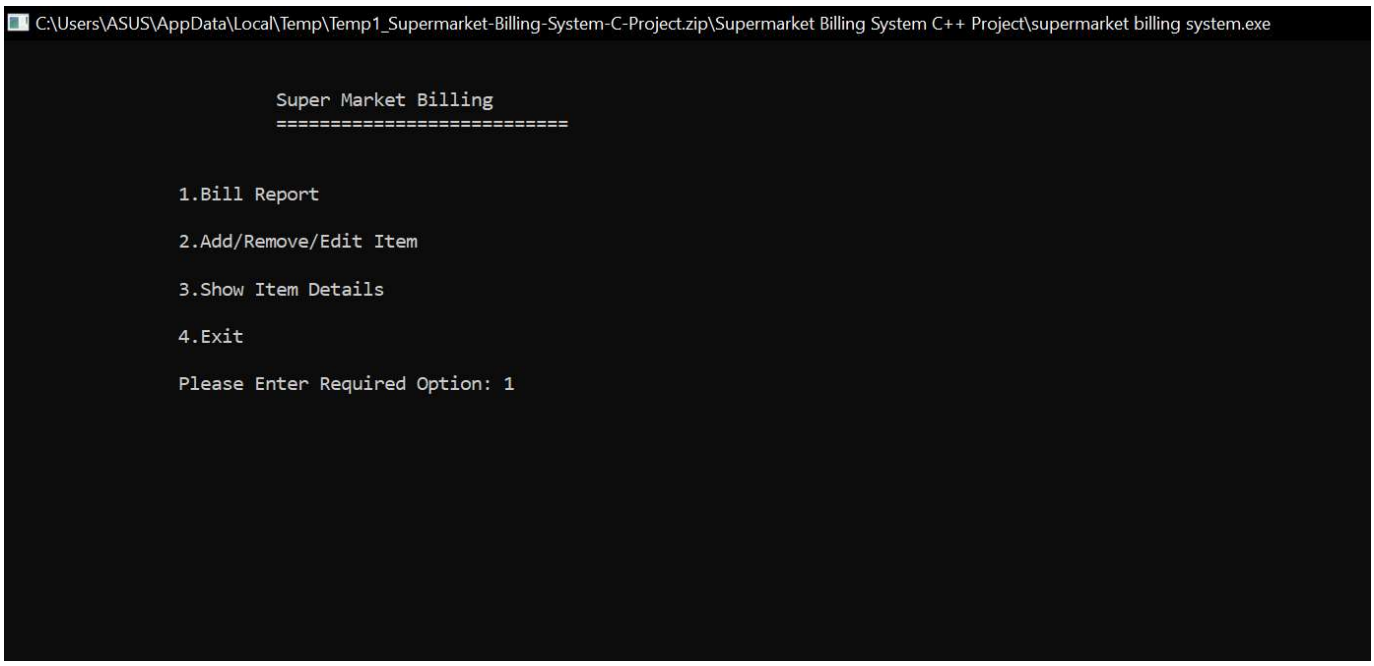
```
            goto menu;
        }
        fin.seekg(0);
        r=0;
        while(!fin.eof())
        {
            fin.read((char*)&amt,sizeof(amt));
            if(!fin.eof())
            {
                int x=amt.item::retno();
                if(x==ino)
                {
                    flag=1;
                    fout.seekp(r*sizeof(amt));
                    system("cls");
                    cout<<"\n\t\tCurrent Details are\n";
                    amt.show();
                    cout<<"\n\n\t\tEnter New Details\n";
                    amt.add();
                    cout<<"\n\t\tItem Details editted";
                }
            }
            r++;
        }
        if(flag==0)
        {
            cout<<"\n\t\tItem No does not exist...Please Retry!";
            getch();
            goto db;
        }
        fin.close();
        getch();
        goto db;

    case 3:
        flag=0;
        cout<<"\n\n\tEnter Item Number to be deleted :";
        cin>>ino;
        fin.open("itemstore.dat",ios::binary);
        if(!fin)
        {
            cout<<"\n\nFile Not Found...";
            goto menu;
        }
//fstream tmp("temp.dat",ios::binary|ios::out);
        fin.seekg(0);
        while(fin.read((char*)&amt, sizeof(amt)))
        {
```

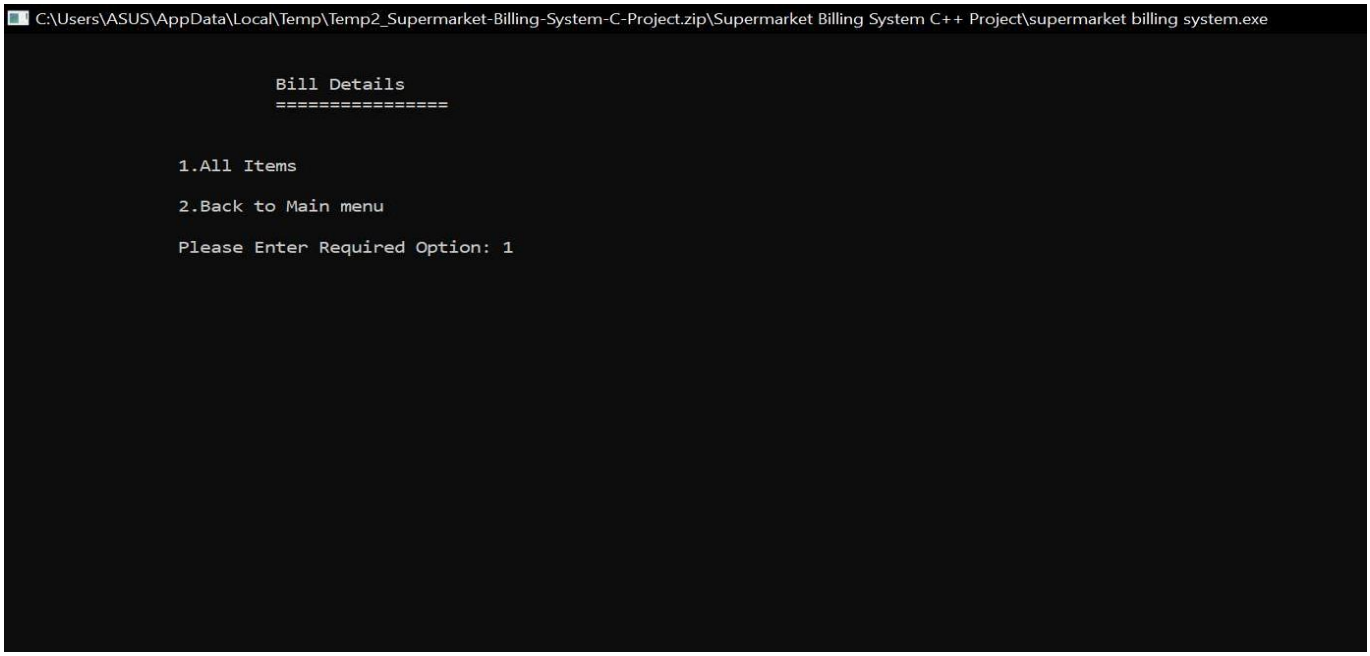
```
            int x=amt.item::retno();
            if(x!=ino)
               tmp.write((char*)&amt,sizeof(amt));
            else
            {
               flag=1;
            }
         }
         fin.close();
         tmp.close();
         fout.open("itemstore.dat",ios::trunc|ios::binary);
         fout.seekp(0);
         tmp.open("temp.dat",ios::binary|ios::in);
         if(!tmp)
         {
            cout<<"Error in File";
            goto db;
         }
         while(tmp.read((char*)&amt,sizeof(amt)))
            fout.write((char*)&amt,sizeof(amt));
         tmp.close();
         fout.close();
         if(flag==1)
            cout<<"\n\t\tItem Succesfully Deleted";
         else if (flag==0)
            cout<<"\n\t\tItem does not Exist! Please Retry";
         getch();
         goto db;
      case 4:
         goto menu;
      default:
         cout<<"\n\n\t\tWrong Choice!!! Retry";
         getch();
         goto db;
      }
   case 3:
      system("cls");
      flag=0;
      int ino;
      cout<<"\n\n\t\tEnter Item Number :";
      cin>>ino;
      fin.open("itemstore.dat",ios::binary);
      if(!fin)
      {
         cout<<"\n\nFile Not Found...\nProgram Terminated!";
         goto menu;
      }
      fin.seekg(0);
```

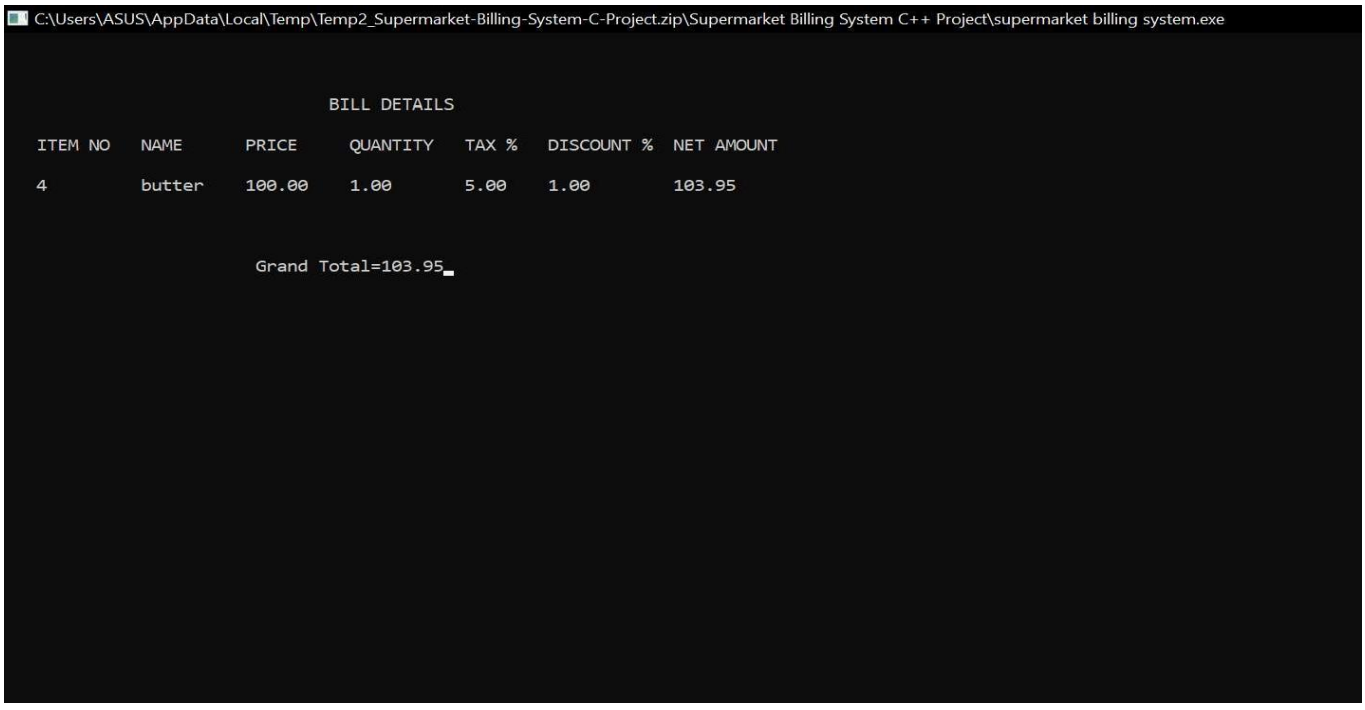
```
        while(fin.read((char*)&amt,sizeof(amt)))
        {
           int x=amt.item::retno();
           if(x==ino)
           {
              amt.pay();
              flag=1;
              break;
           }
        }
        if(flag==0)
           cout<<"\n\t\tItem does not exist....Please Retry!";
        getch();
        fin.close();
        goto menu;
     case 4:
        system("cls");
        gotoxy(20,20);
        cout<<"ARE YOU SURE, YOU WANT TO EXIT (Y/N)?";
        char yn;
        cin>>yn;
        if((yn=='Y')||(yn=='y'))
        {
           gotoxy(12,20);
           system("cls");
           cout<<"**************************THANKS
            ***************************************";
           getch();
           exit(0);
        }
        else if((yn=='N')||(yn=='n'))
           goto menu;
        else
        {
           goto menu;
        }
     default:
        cout<<"\n\n\t\tWrong Choice... Please Retry!";
        getch();
        goto menu;
     }
     return 0;
}
```

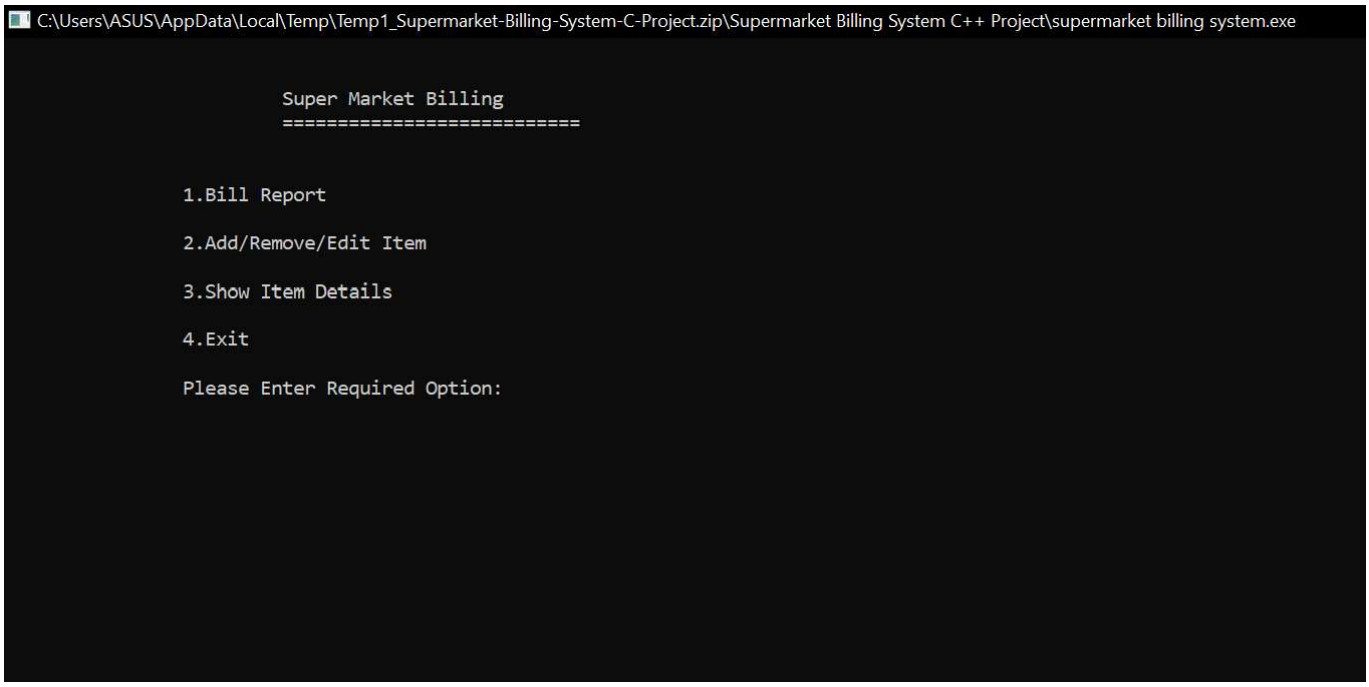
3. Output

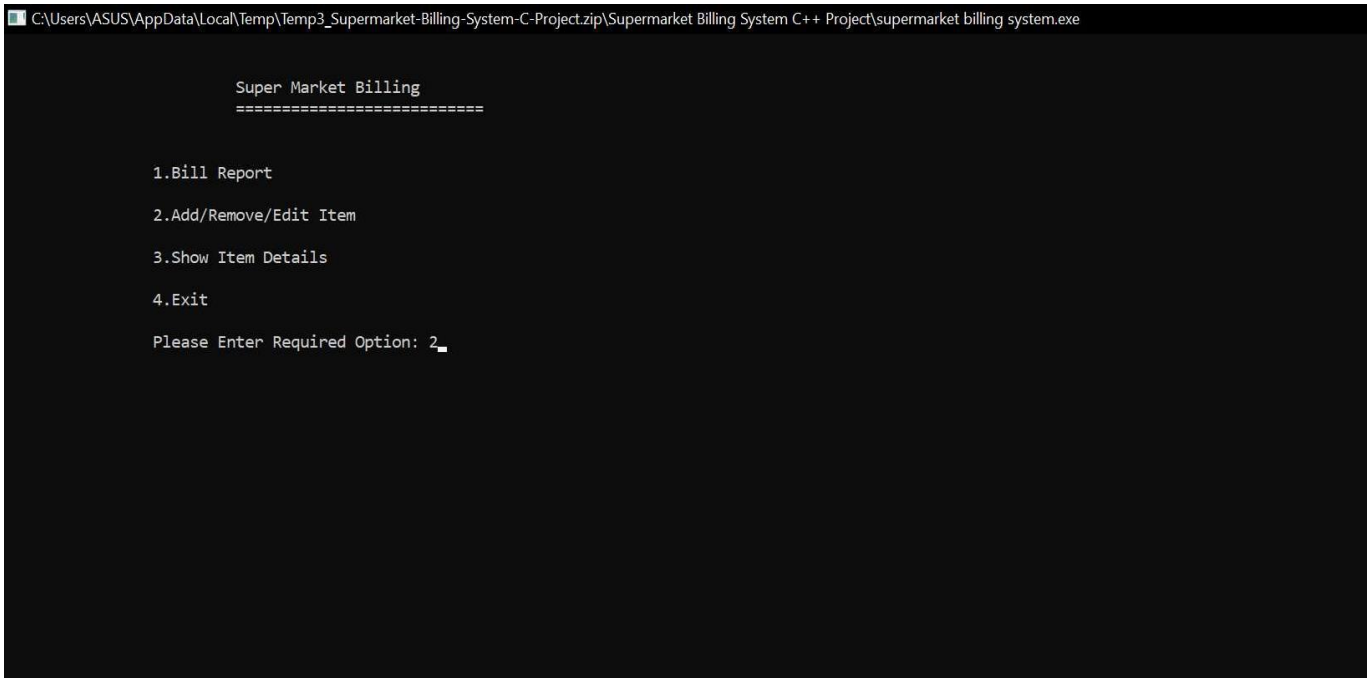

C:\Users\ASUS\AppData\Local\Temp\Temp1_Supermarket-Billing-System-C-Project.zip\Supermarket Billing System C++ Project\supermarket billing system.exe
Super Market Billing
==========
1.Bill Report
2.Add/Remove/Edit Item
3.Show Item Details
4.Exit
Please Enter Required Option:

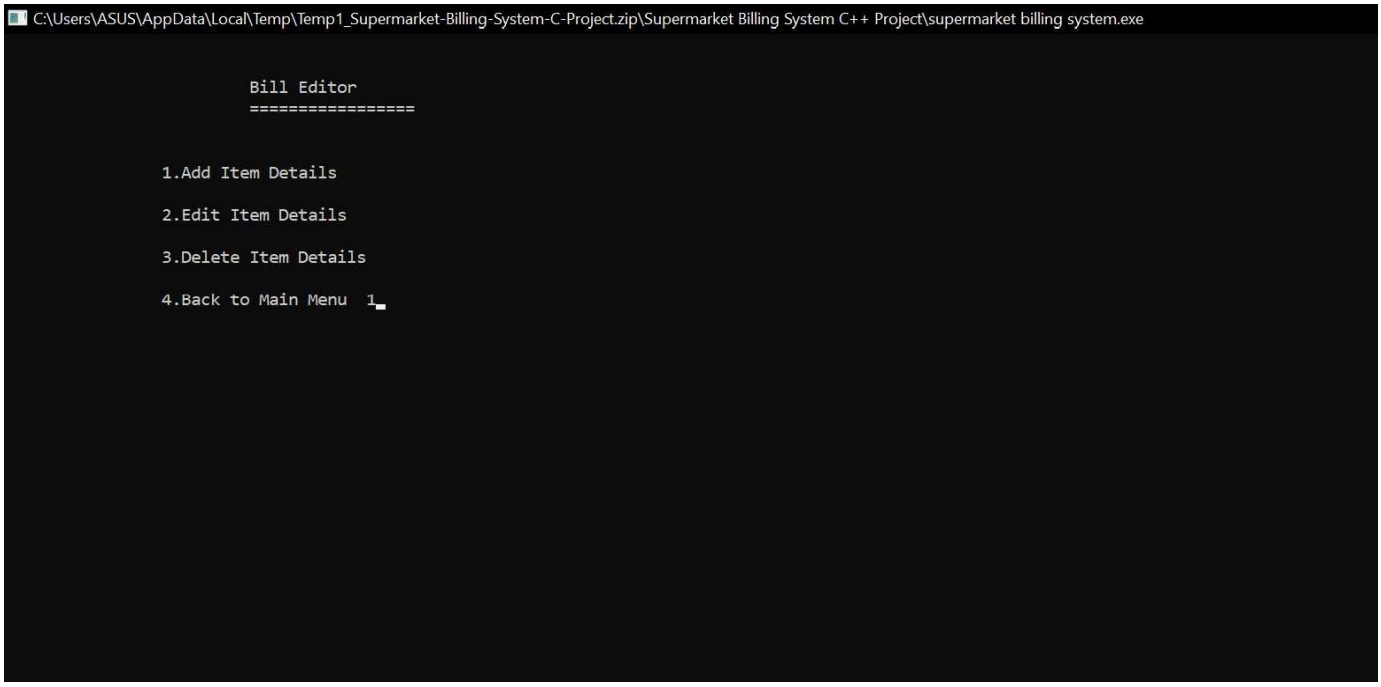

C:\Users\ASUS\AppData\Local\Temp\Temp1_Supermarket-Billing-System-C-Project.zip\Supermarket Billing System C++ Project\supermarket billing system.exe
Super Market Billing
==========
1.Bill Report
2.Add/Remove/Edit Item
3.Show Item Details
4.Exit
Please Enter Required Option: 1

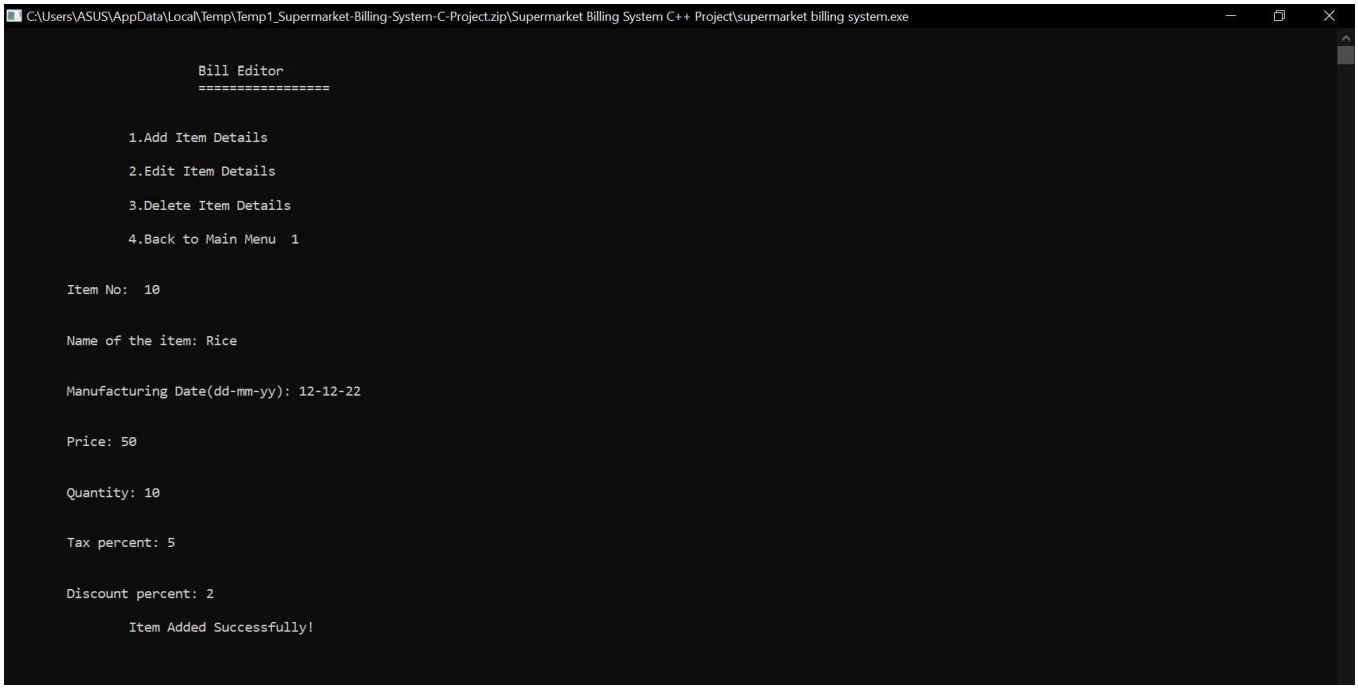

C:\Users\ASUS\AppData\Local\Temp\Temp2_Supermarket-Billing-System-C-Project.zip\Supermarket Billing System C++ Project\supermarket billing system.exe
Bill Details
1.All Items
2.Back to Main menu
Please Enter Required Option: 1


C:\Users\ASUS\AppData\Local\Temp\Temp2_Supermarket-Billing-System-C-Project.zip\Supermarket Billing System C++ Project\supermarket billing system.exe
BILL DETAILS
ITEM NO NAME PRICE QUANTITY TAX % DISCOUNT % NET AMOUNT
4 butter 100.00 1.00 5.00 1.00 103.95
Grand Total=103.95


C:\Users\ASUS\AppData\Local\Temp\Temp1_Supermarket-Billing-System-C-Project.zip\Supermarket Billing System C++ Project\supermarket billing system.exe
Super Market Billing
1.Bill Report
2.Add/Remove/Edit Item
3.Show Item Details
4.Exit
Please Enter Required Option:


C:\Users\ASUS\AppData\Local\Temp\Temp3_Supermarket-Billing-System-C-Project.zip\Supermarket Billing System C++ Project\supermarket billing system.exe
Super Market Billing
1.Bill Report
2.Add/Remove/Edit Item
3.Show Item Details
4.Exit
Please Enter Required Option: 2


C:\Users\ASUS\AppData\Local\Temp\Temp1_Supermarket-Billing-System-C-Project.zip\Supermarket Billing System C++ Project\supermarket billing system.exe
Bill Editor
1.Add Item Details
2.Edit Item Details
3.Delete Item Details
4.Back to Main Menu 1


C:\Users\ASUS\AppData\Local\Temp\Temp1_Supermarket-Billing-System-C-Project.zip\Supermarket Billing System C++ Project\supermarket billing system.exe
Bill Editor
1.Add Item Details
2.Edit Item Details
3.Delete Item Details
4.Back to Main Menu 1
Item No: 10
Name of the item: Rice
Manufacturing Date(dd-mm-yy): 12-12-22
Price: 50
Quantity: 10
Tax percent: 5
Discount percent: 2
Item Added Successfully!

4. Conclusion

After we have completed the project, we are sure the problems in the existing system world overcome. The "Supermarket Billing System" process made computerized to reduce human errors & to increase the efficiency.

The main focus of this project is to fewer human efforts. The maintenance of the records is made efficient, as all the records are stored in the access database, through which data can be retrieved easily. The navigation control is provided in all the forms to navigate through the large number of records.

If the numbers of records are very large than user has to just type in the search string & user gets the results immediately. The editing is also made simples. The user has to just type in the required field & process the modify button to update desired field. Our main aim of the project is to get the correct bills and maintain the data of the supermarket.

5. Reference

1. https://www.google.com
2. www.geeksforgeeks.org
3. www.stackoverflow.com
4. https://sites.google.com