```
/*
E-Bill Generation Program.
Made By: Team Rogue
Please Note that the program made below is INCOMPATIBLE with Dev C++
and can only be compiled in Turbo C/C++
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While using the program for the first time, enter 4623 to enter developer menu
and add products to item list.
*/


#include<fstream.h>
#include<iostream.h>
#include<stdlib.h>
#include<conio.h>
#include<stdio.h>
#include<dos.h>

struct product    //Product is a structure that facilitates storage of real time product variables
{
int code;
float price;
char name[30];
```

```
};
```

//Struct is used instead of a class to avoid redundancy of required display and store functions to make modifications to class objects.

//This has been done in lieu of the different placement of object data on the output screen using the gotoxy() function.

```
void interface0();          //The first UI shown on program start.

void interface1();          //The UI shown for choosing items

void generatebill();    //The menu that shows the final bill

void developerinterface0();       //Developer menu, to use type 4623 on the main page

void developerinterface1();     //For adding an item to the list

void developerinterface2();     //For removing an item from the list

void animation1(int);     //The infinity symbol animation between menus

void animation2(int);   //The generate e bill animation before Bill generation


void main()

{

clrscr(); //clear the output screen

animation1(1);  //the infinity symbol animation to be looped only once, therefore the 1 in the argument section

remove("cart.dat");       //cart.dat is used to store the items choosen by the user for generating bill. This file is removed before program execution begins to avoid errors caused by older instances of the file.

interface0();      //the first UI shown after the loop animation

}

/*

Throughout the program you may find usage of functions like gotoxy() and delay().

gotoxy(): The output screen of c++ is like a cartesian coordinate system.

go to x,y will send the cursor to a specific position on the screen.


delay():This function is used to create a delay. This function takes time in

milliseconds as an argument. for e.g: delay(10); will create a delay of 10
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milliseconds before the next statement is executed.
*/

void interface0()
{
int choice;
        do
        {
        clrscr();
        gotoxy(31,1);
        cout<<"E-Billing Menu\n";

                        for(int i=0;i<80;i++)
                        {
                        cout<<"_";
                        }
        gotoxy(30,5);
        cout<<"Generate New Bill(1)";
        gotoxy(30,6);
                for(i=0;i<20;i++)
                {
                cout<<"_";
                }
        gotoxy(36,8);
        cout<<"Exit(2)";
        gotoxy(36,9);
                for(i=0;i<7;i++)
                {
                cout<<"_";
```

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                }
        gotoxy(1,20);
        cin>>choice;
                switch(choice)
                {
                case 1: clrscr();
                        animation1(1);
                        clrscr();
                        interface1();
                        break;
                case 2: clrscr();
                        cout<<"Thank you, the program will end shortly.";
                        delay(1000);
                        exit(0);
                        break;
                case 4623:      developerinterface0();      //The developer menu will appear if 4623 is typed on the main interface. it is hidden by default
                                        break;
                default:clrscr();
                        cout<<"Wrong Choice, Exiting Program!!";
                        delay(1000);
                        exit(0);
                }
        clrscr();
        }while(choice!=2);
clrscr();
exit(0);
}
```

```
void interface1()
{
int x=0,flag,quantity=0;
clrscr();
                    for(int i=0;i<80;i++)
                    {
                    cout<<"_";
                    }
gotoxy(1,2);
cout<<"Product Code";
gotoxy(20,2);
cout<<"Product Name";
gotoxy(60,2);
cout<<"Price";
gotoxy(1,3);
                    for(i=0;i<80;i++)
                    {
                    cout<<"~";
                    }
ifstream fin;
product a;
fin.open("product.txt",ios::in||ios::binary);
i=4;
          while(fin.read((char*)&a,sizeof(product)))
          {
          gotoxy(1,i);
          cout<<a.code;
          gotoxy(20,i);
          cout<<a.name;
```

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        gotoxy(60,i);
        cout<<a.price;
        i++;
        }
fin.close();
gotoxy(1,14);
cout<<"Choose an item by item code(Choose 0 to exit selection menu):\n"<<flush;
        do
        {
        gotoxy(1,15);
        cin>>x;
                if(x==0)
                break;
        flag=0;
        fin.open("product.txt",ios::in||ios::binary);
        fin.seekg(0);
                while(!fin.eof())
                {
                fin.read((char*)&a,sizeof(product));
                        if(x==a.code)
                        {
                        gotoxy(1,15);
                        cout<<a.code;
                        gotoxy(20,15);
                        cout<<a.name;
                        gotoxy(60,15);
                        cout<<a.price;
                        flag=1;
                        gotoxy(1,16);
```

```
                cout<<"Enter Quantity (Enter 0 to cancel adding item):\t";
                cin>>quantity;
                gotoxy(1,15);
                        for(int j=0;j<320;j++)
                        cout<<" ";
                break;
                }
        }
        if(flag==0)
        {
        gotoxy(1,15);
        cout<<"Item Not Found";
        delay(750);
        gotoxy(1,15);
                for(int j=0;j<320;j++)
                cout<<" ";
        continue;
        }
fin.close();
ofstream fout("cart.txt",ios::app||ios::binary);
fout.seekp(0,ios::end);
        for(;quantity>0;quantity--)
        {
        fout<<flush;
        fout.write((char*)&a,sizeof(product));
        fout<<flush;
        }
fout.close();
        for(int k=15;k<19;k++)
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```
                {
                gotoxy(1,k);
                        for(int j=0;j<80;j++)
                        cout<<" ";
                }
        gotoxy(1,15);
        }while(x!=0);
animation2(1);
generatebill();
}

void generatebill()
{
float subtotal=0,total=0;
ifstream fin("cart.txt",ios::in||ios::binary);
gotoxy(33,1);
cout<<"E-Bill Invoice\n";
        for(int i=0;i<80;i++)
        {
        cout<<"_";
        }
gotoxy(1,3);
cout<<"Product Code";
gotoxy(20,3);
cout<<"Product Name";
gotoxy(60,3);
cout<<"Price";
gotoxy(1,4);
         for(i=0;i<80;i++)
```

```
            {
            cout<<"~";
            }
product a;
i=5;
            while(fin.read((char*)&a,sizeof(product)))
            {
            gotoxy(1,i);
            cout<<a.code;
            gotoxy(20,i);
            cout<<a.name;
            gotoxy(60,i);
            cout<<a.price;
            subtotal+=a.price;
            i++;
            delay(20);
            }
total=subtotal+0.18*subtotal;
gotoxy(1,i);
            for(int j=0;j<80;j++)
            {
            cout<<"_";
            }
gotoxy(20,i+1);
cout<<"Sub-total";
gotoxy(60,i+1);
cout<<subtotal;
gotoxy(20,i+2);
cout<<"Total(GST 18%)";
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gotoxy(60,i+2);
cout<<total;
gotoxy(1,i+3);
            for(i=0;i<80;i++)
            {
            cout<<"_";
            }
gotoxy(1,i+5);
cout<<"Press any key to go back to main menu";
getch();
clrscr();
}

void developerinterface0()
{
int choice=0;
gotoxy(1,20);
cout<<"Switching to Developer Menu...";
delay(750);
clrscr();
animation1(1);
            do
            {
            clrscr();
            gotoxy(31,1);
            cout<<"Developer Menu\n";

                              for(int i=0;i<80;i++)
                              {
```

```
                cout<<"_";
                }
gotoxy(24,5);
cout<<"Add new item to product list(1)";
gotoxy(24,6);
        for(i=0;i<31;i++)
        {
        cout<<"_";
        }
gotoxy(23,8);
cout<<"Remove items from product list(2)";
gotoxy(23,9);
        for(i=0;i<33;i++)
        {
        cout<<"_";
        }
gotoxy(36,11);
cout<<"Exit(3)";
gotoxy(36,12);
        for(i=0;i<7;i++)
        {
        cout<<"_";
        }
gotoxy(1,20);
cin>>choice;
        switch(choice)
        {
        case 1: clrscr();
                animation1(1);
```

```
                clrscr();
                developerinterface1();
                break;
        case 2: clrscr();
                animation1(1);
                clrscr();
                developerinterface2();
                break;
        case 3: clrscr();
                cout<<"Returning to Main Menu...";
                delay(1000);
                break;
        default:clrscr();
                cout<<"Wrong Choice, Exiting Program!!";
                delay(1000);
                exit(0);
        }
    clrscr();
    }while(choice!=3);
clrscr();
}

void developerinterface1()
{
product a;
gotoxy(32,1);
cout<<"Addition Menu\n";
    for(int i=0;i<80;i++)
    {
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```
            cout<<"_";
            }
cout<<"Product Code";
gotoxy(20,3);
cout<<"Product Name";
gotoxy(60,3);
cout<<"Price";
gotoxy(1,4);
             for(i=0;i<80;i++)
             {
             cout<<"~";
             }
gotoxy(1,5);
cin>>a.code;
gotoxy(20,5);
gets(a.name);
gotoxy(60,5);
cin>>a.price;
gotoxy(1,6);
cout<<"Confirm Addition?(1/0)" ;
gotoxy(1,20);
int choice;
cin>>choice;
            if(choice==1)
            {
            ofstream fout("product.txt",ios::app||ios::binary);
            fout.seekp(0,ios::end);
            fout.write((char*)&a,sizeof(product));
            fout.close();
```

```
            clrscr();
            cout<<"Product Added...";
            delay(750);
            }
clrscr();
cout<<"Exiting to Developer Menu...";
delay(750);
}

void developerinterface2()
{
int flag=0,n,choice=0;
product a;
gotoxy(32,1);
cout<<"Deletion Menu\n";
            for(int i=0;i<80;i++)
            {
            cout<<"_";
            }
gotoxy(1,3);
cout<<"Enter Product Code:\t";
cin>>n;
gotoxy(1,3);
            for(i=0;i<80;i++)
            {
            cout<<" ";
            }
ifstream inFile("product.txt",ios::in||ios::binary);
ofstream outFile("temp.txt",ios::out||ios::binary);
```

```
inFile.seekg(0);
        while(inFile.read((char *)&a,sizeof(product)))
        {
                if(a.code!=n)
                {
                outFile.write((char *)&a, sizeof(product));
                }
                else
                {
                gotoxy(1,3);
                cout<<"Product Code";
                gotoxy(20,3);
                cout<<"Product Name";
                gotoxy(60,3);
                cout<<"Price";
                gotoxy(1,4);
                        for(i=0;i<80;i++)
                        {
                        cout<<"~";
                        }

                gotoxy(1,5);
                cout<<a.code;
                gotoxy(20,5);
                cout<<a.name;
                gotoxy(60,5);
                cout<<a.price;
                gotoxy(1,6);
                cout<<"Confirm Deletion?(1/0)" ;
```

```
                gotoxy(1,20);
                int choice;
                cin>>choice;
                        if(choice==1)
                        flag=1;
                        else
                        {
                        inFile.close();
                        outFile.close();
                        remove("temp.txt");
                        clrscr();
                        cout<<"Exiting to Developer Menu...";
                        delay(750);
                        return;
                        }
                }
        }
inFile.close();
outFile.close();
remove("product.txt");
rename("temp.txt","product.txt");
clrscr();
        if(flag==1)
        cout<<"Product Deleted ...";
        else
        cout<<"Product not found ...";
delay(750);
}
```

```
void animation1(int x)
{
clrscr();
int n=30;
cout<<"Please Wait...";
        for(int i=0;i<x;i++)
        {
        gotoxy(40,12);delay(n);cout<<"*";
        gotoxy(39,11);delay(n);cout<<"*";
        gotoxy(38,10);delay(n);cout<<"*";
        gotoxy(37,10);delay(n);cout<<"*";
        gotoxy(36,10);delay(n);cout<<"*";
        gotoxy(35,10);delay(n);cout<<"*";
        gotoxy(34,10);delay(n);cout<<"*";
        gotoxy(33,11);delay(n);cout<<"*";
        gotoxy(32,12);delay(n);cout<<"*";
        gotoxy(33,13);delay(n);cout<<"*";
        gotoxy(34,14);delay(n);cout<<"*";
        gotoxy(35,14);delay(n);cout<<"*";
        gotoxy(36,14);delay(n);cout<<"*";
        gotoxy(37,14);delay(n);cout<<"*";
        gotoxy(38,14);delay(n);cout<<"*";
        gotoxy(39,13);delay(n);cout<<"*";
        gotoxy(40,12);delay(n);cout<<"*";
        gotoxy(41,11);delay(n);cout<<"*";
        gotoxy(42,10);delay(n);cout<<"*";
        gotoxy(43,10);delay(n);cout<<"*";
        gotoxy(44,10);delay(n);cout<<"*";
        gotoxy(45,10);delay(n);cout<<"*";
```

```
gotoxy(46,10);delay(n);cout<<"*";
gotoxy(47,11);delay(n);cout<<"*";
gotoxy(48,12);delay(n);cout<<"*";
gotoxy(47,13);delay(n);cout<<"*";
gotoxy(46,14);delay(n);cout<<"*";
gotoxy(45,14);delay(n);cout<<"*";
gotoxy(44,14);delay(n);cout<<"*";
gotoxy(43,14);delay(n);cout<<"*";
gotoxy(42,14);delay(n);cout<<"*";
gotoxy(41,13);delay(n);cout<<"*";
gotoxy(40,12);delay(n);cout<<"*";
gotoxy(39,11);delay(n);cout<<" ";
gotoxy(38,10);delay(n);cout<<" ";
gotoxy(37,10);delay(n);cout<<" ";
gotoxy(36,10);delay(n);cout<<" ";
gotoxy(35,10);delay(n);cout<<" ";
gotoxy(34,10);delay(n);cout<<" ";
gotoxy(33,11);delay(n);cout<<" ";
gotoxy(32,12);delay(n);cout<<" ";
gotoxy(33,13);delay(n);cout<<" ";
gotoxy(34,14);delay(n);cout<<" ";
gotoxy(35,14);delay(n);cout<<" ";
gotoxy(36,14);delay(n);cout<<" ";
gotoxy(37,14);delay(n);cout<<" ";
gotoxy(38,14);delay(n);cout<<" ";
gotoxy(39,13);delay(n);cout<<" ";
gotoxy(40,12);delay(n);cout<<" ";
gotoxy(41,11);delay(n);cout<<" ";
gotoxy(42,10);delay(n);cout<<" ";
```

```
        gotoxy(43,10);delay(n);cout<<" ";
        gotoxy(44,10);delay(n);cout<<" ";
        gotoxy(45,10);delay(n);cout<<" ";
        gotoxy(46,10);delay(n);cout<<" ";
        gotoxy(47,11);delay(n);cout<<" ";
        gotoxy(48,12);delay(n);cout<<" ";
        gotoxy(47,13);delay(n);cout<<" ";
        gotoxy(46,14);delay(n);cout<<" ";
        gotoxy(45,14);delay(n);cout<<" ";
        gotoxy(44,14);delay(n);cout<<" ";
        gotoxy(43,14);delay(n);cout<<" ";
        gotoxy(42,14);delay(n);cout<<" ";
        gotoxy(41,13);delay(n);cout<<" ";
        gotoxy(40,12);delay(n);cout<<" ";
        }
gotoxy(1,1);
clrscr();
}

void animation2(int x)
{
        for(;x>0;x--)
        {
        clrscr();
        gotoxy(32,4);
        cout<<"Generating E-Bill";
        gotoxy(21,5);

                for(int i=0;i<40;i++)//Line below Generating E-Bill
```

```
{
cout<<"_";
}

for(i=6;i<20;i++)
{
gotoxy(30,i);
cout<<"|";
gotoxy(51,i);
cout<<"|";
        if(i!=6)
        {
                for(int j=31;j<51;j++)
                {
                gotoxy(j,i-1);
                cout<<" ";
                }

                for(j=34;j<48;j++)
                {
                gotoxy(j,i-1);
                cout<<"-";
                }
        }

        for(int j=31;j<51;j++)
        {
        gotoxy(j,i);
        cout<<"_";
```

```
                    }


                delay(150);
                }
        }
clrscr();
}
```