PROJECT OVERVIEW

HEADER FILES USED

- 1. conio.h
- 2. stdio.h
- 3. process.h
- 4. fstream.h
- 5. string.h

FUNCTIONS: USER DEFINED

void main()

Function to display welcome screen of Vegetable Super Market.

void write_product()
 Function to write product(vegetable) details to data file.

void display_sp(int n)
 Function to display the details of the specified product(vegetable).

void modify_product()
 Function to modify details of a the product(vegetable).

void modify_stock()
 Function to modify existing stock of the product(vegetable).

void delete_product()
 Function to delete an existing product(vegetable).

void menu()

Function to display details of all the products(vegetables).

void place_order()

Function for taking order from user and create and display invoice.

void admin_menu()

Function to display the menu for administrator.

void cust_menu()Function to display the menu for user.

void intro()

Function to display main menu of vegetable super market.

FUNCTIONS: INBUILT

- CLRSCR() [CONIO.H]: Clears the current text window and places the cursor in the upper left-hand corner at position (1,1).
- GETCH() [CONIO.H]: Reads a single character directly from the keyboard.
- EXIT() [PROCESS.H] : Terminates the program.
- BREAK() [IOSTREAM.H]: Causes the enclosing for, while, dowhile loop or switch statement to terminate. Used when it is otherwise awkward to terminate the loop using the condition expression and conditional statements.
- GOTO(X,Y) [CONIO.H]: Takes the cursor to the desired position(X is the column number and Y is the row number).
- STRCMP(a,b) [STRING.H]: Compares the two strings a and b.(Returns o if strings are same else 1)
- GETS() [STDIO.H]: Gets a string from the user(the string may include spaces) and stores it in specified character array.
- PUTS() [STDIO.H]: Displays a string on the screen, from the specified character array.

FUNCTIONS USED WITH FSTREAM

- open() and close() funtion to open or close a file.
- read() and write() functions to read or write data to and from a file respectively.
- seekp() to return the position of cursor in a file.
- seekg() to take the cursor to a specified position in a file.
- delete() to delete an existing file from hard disk.
- rename() to rename the file on hard disk.

STATEMENTS USED:

- SWITCH-CASE: Used to select from different options in all the menu based functions.
- IF-ELSE: It test and expression and depending upon the defined condition executes one of the two sets-of-action.
- FOR-LOOP: Its main function is to repeat statement while condition remains true. In addition, the for loop provides specific locations to contain an initialization statement and a modifying statement. So this loop is specially designed to perform a repetitive action with a counter which is initialized and modified on each iteration.
- WHILE LOOP: Its functionality is simply to repeat statement while the condition set in expression is true.
- DO -WHILE LOOP: Its functionality is exactly the same as the while loop, except that condition in the do-while loop is evaluated after the execution of statement instead of before, granting at least one execution of statement even if condition is never fulfilled.

PROJECT CODE

```
//*****************
        HEADER FILES USED IN THE PROJECT
//********************************
#include<conio.h>
#include<stdio.h>
#include<process.h>
#include<fstream.h>
#include<string.h>
//****************
   CLASS USED IN THE PROJECT
//****************
class product
   int pno;
   char name[50];
   float price, qty, stock, dis;
   public:
   void create_product()
        cout<<"\n\tEnter the Batch No.: ";
        cin>>pno;
        cout<<"\tEnter Name of the vegetable: ";
        gets(name);
        cout<<"\tEnter Price of the vegatble(Rs./Kg): ";
        cin>>price;
        cout<<"\tEnter Vegetable in stock(in Kg) :";</pre>
        cin>>stock;
        cout<<"\tEnter the Discount (%): ";</pre>
        cin>>dis;
```

```
void create_product2()
           cout<<"\tEnter Name of the vegetable: ";
           gets(name);
           cout<<"\tEnter Price of the vegatble(Rs./Kg): ";</pre>
           cin>>price;
           cout<<"\tEnter Vegetable in stock(in Kg) :";</pre>
           cin>>stock;
           cout<<"\tEnter the Discount (%): ";</pre>
           cin>>dis;
     void show_product()
           cout<<"\n\tBatch No.: "<<pno;
           cout<<"\n\tName of the Vegetable: ";
           puts(name);
           cout<<"\tPrice of the Vegetable : Rs."<<pre>cout<<"\text{Price}</pre>;
           cout<<"\n\tVegetable in stock : "<<stock<<" kg";
           cout<<"\n\tDiscount: "<<dis<<" %";
     int retpno()
         return pno; }
     float retprice()
         return price;
     char* retname()
         return name; }
     float retdis()
         return dis;
     float retstock()
         return stock; }
     void modify_stock(float a)
          stock+=a;
};
      //class ends here
```

```
//*****************
//GLOBAL DECLARATION FOR STREAM OBJECT, CLASS OBJECT
//******************************
fstream fp;
product pr;
//*****************
  FUNCTION TO WRITE IN FILE
//****************
void write product()
  gotoxy(1,1);
  gotoxy(29,2);
  cout<<"VEGETABLE SUPER MARKET";
  gotoxy(1,3);
  cout<<"\tNEW VEGETABLE\n";</pre>
  fp.open("Shop.dat",ios::out|ios::app);
  pr.create product();
  fp.write((char*)&pr,sizeof(product));
  fp.close();
  cout<<"\n\tThe Vegetable has been added.";
  getch();
```

```
//****************
   FUNCTION TO READ SPECIFIC RECORD FROM FILE
//****************
void display sp(int n)
   int flag=0;
   fp.open("Shop.dat",ios::in);
   while(fp.read((char*)&pr,sizeof(product)))
       if(pr.retpno()==n)
           clrscr();
           gotoxy(1,1);
           *****************
           gotoxy(29,2);
           cout<<"VEGETABLE SUPER MARKET";
           gotoxy(1,3);
           cout<<" **********************
           *****************************
           \n";
           cout<<endl;
           pr.show_product();
           flag=1;
   fp.close();
   if(flag==0)
       cout<<"\n\n\\tIncorrect Batch no.";</pre>
   getch();
```

```
//*****************
   FUNCTION TO MODIFY RECORD OF FILE
//*****************
void modify product()
   int no,found=0;
   clrscr();
   gotoxy(1,1);
   gotoxy(29,2);
   cout<<"VEGETABLE SUPER MARKET";
   gotoxy(1,3);
   cout<<"\n\tModify Vegetable Details";
   cout<<"\n\n\tEnter The Product No.: ";
   cin>>no;
   fp.open("Shop.dat",ios::in|ios::out);
   while(fp.read((char*)&pr,sizeof(product)) && found==0)
      if(pr.retpno()==no)
         pr.show_product();
         cout<<"\n\n\tEnter The New Details of the vegetable"
         <<endl;
         pr.create_product2();
         int pos=-1*sizeof(pr);
         fp.seekp(pos,ios::cur);
         fp.write((char*)&pr,sizeof(product));
         cout<<"\n\tVegetable details modified.";</pre>
         found=1:
   }
```

```
fp.close();
   if(found==0)
      cout<<"\n\n\tBatch no. not found.";
      cout<<"\n\tTry again.";
      getch();
   getch();
}
//*****************
   FUNCTION TO UPDATE STOCK
//****************
void modify_stock()
   int no,found=0;
   float a;
   clrscr();
   gotoxy(1,1);
   gotoxy(29,2);
   cout<<"VEGETABLE SUPER MARKET";
   gotoxy(1,3);
   cout<<"\n\tModify Vegetable Stock";</pre>
   cout<<"\n\n\tEnter the Batch No.: ";
   cin>>no;
   fp.open("Shop.dat",ios::in|ios::out);
   while(fp.read((char*)&pr,sizeof(product)) && found==0)
      if(pr.retpno()==no)
```

```
pr.show product();
          cout<<"\n\n\tEnter the volume of new stock to be
          added:":
          cin>>a;
          pr.modify_stock(a);
          int pos=-1*sizeof(pr);
          fp.seekp(pos,ios::cur);
          fp.write((char*)&pr,sizeof(product));
          cout<<"\n\tNew stock has been added.";
          found=1:
   fp.close();
   if(found==0)
       cout<<"\n\n\tIncorrect Batch no. .";</pre>
       cout<<"\n\tTry Again..";
       getch();
   getch();
}
//******************************
   FUNCTION TO DELETE RECORD OF FILE
delete_product()
   int no,found=0;
   clrscr();
   gotoxy(1,1);
   gotoxy(29,2);
   cout<<"VEGETABLE SUPER MARKET";
```

```
gotoxy(1,3);
    cout<<"\n\tRemove Vegetable";</pre>
    cout<<"\n\n\tEnter the Batch No. of the vegetable you want to
    remove: ";
    cin>>no;
    fp.open("Shop.dat",ios::in|ios::out);
    fstream fp2;
    fp2.open("Temp.dat",ios::out);
    fp.seekg(0,ios::beg);
    while(fp.read((char*)&pr,sizeof(product)))
        if(pr.retpno()!=no)
            fp2.write((char*)&pr,sizeof(product));
        if(pr.retpno()==no)
            found=1;
    fp2.close();
    fp.close();
    remove("Shop.dat");
    rename("Temp.dat","Shop.dat");
    if(found==1)
        cout<<"\n\tVegetable removed.";</pre>
    else
        cout<<"Vegetable not found..!!";</pre>
        getch();
    getch();
}
```

```
//*****************
  FUNCTION TO DISPLAY ALL PRODUCTS PRICE LIST
//****************
void menu()
  clrscr();
  gotoxy(1,1);
  gotoxy(29,2);
  cout<<"VEGETABLE SUPER MARKET";
  gotoxy(1,3);
  fp.open("Shop.dat",ios::in);
  if(!fp)
     cout<<"ERROR!!! FILE COULD NOT BE OPENED\n\n\n Go To
     Administrator Menu to create File";
     cout<<"\n\n\n Program is closing ....";
     getch();
     exit(0);
  cout<<"\t\t\tLIST OF VEGETABLES\n";
  gotoxy(5,7);
  cout<<"B.NO.";
  gotoxy(15,7);
  cout<<"NAME";
  gotoxy(30,7);
  cout<<"PRICE(Rs/Kg)";
  gotoxy(49,7);
  cout<<"STOCK(Kg)";
```

```
gotoxy(65,7);
    cout<<"Discount(%)";</pre>
    gotoxy(1,8);
    int i=9;
    while(fp.read((char*)&pr,sizeof(product)))
        gotoxy(5,i);
        cout<<pre><<pre>pr.retpno();
        gotoxy(14,i);
        cout<<pr.retname();
        gotoxy(33,i);
        cout<<pr.retprice();
        gotoxy(52,i);
        cout<<pr.retstock();
        gotoxy(68,i);
        cout<<pr.retdis();
        ++i;
    fp.close();
    getch();
}
//*****************
    FUNCTION TO PLACE ORDER AND GENERATE BILL
//****************
void place_order()
    int order arr[50];
    int c=0,x,found=0;
    float quan[50];
    float amt,damt,total=0;
                            //damt - amount after discount
    char ch='n';
```

```
do
   menu();
   ch='n';
   found=0;
   -----":
   cout<<"\t\t\t PLACE YOUR ORDER\n";
   cout<<"\tEnter Batch No. of the Vegetable: ";
   cin>>order arr[c];
   fp.open("Shop.dat",ios::in|ios::out);
   fp.seekg(0,ios::beg);
   while((!fp.eof()) && found==0)
       long pos=fp.tellg();
       fp.read((char*)&pr,sizeof(product));
       if(pr.retpno()==order_arr[c])
           found=1;
           cout<<"\tEnter Weight of the Vegetable : ";</pre>
           cin>>quan[c];
           if(quan[c]>pr.retstock())
              cout<<"\t\tNot Enough Stock.!!Try Again";</pre>
              quan[c]=0;
               --C;
           if(quan[c]<=pr.retstock())</pre>
              float f=(-quan[c]);
               pr.modify stock(f);
              fp.seekg(pos);
```

```
fp.write((char*)&pr,sizeof(product));
         }
         C++;
         cout<<"\n\tDo You Want To Order Another
         Product ? (y/n):";
         cin>>ch;
   fp.close();
   if(found == 0)
      cout<<"\tWrong Batch No. . Please Try Again..";
      getch();
      place order();
}while(ch=='y' | |ch=='Y');
cout<<"\t.....Thank You For Placing The Order.....";
fp.open("Shop.dat",ios::in|ios::out);
found=0:
fp.close();
getch();
clrscr();
gotoxy(1,1);
gotoxy(29,2);
cout<<"VEGETABLE SUPER MARKET";
gotoxy(1,3);
cout<<"\n\t\t\t INVOICE\n";
cout<<" ==========::::
```

```
gotoxy(2,8);
cout<<"B.NO.";
gotoxy(10,8);
cout<<"NAME";
gotoxy(22,8);
cout<<"WEIGHT";
gotoxy(32,8);
cout<<"PRICE(per Kg)";
gotoxy(48,8);
cout<<"AMOUNT";
gotoxy(57,8);
cout<<"AMOUNT AFTER DISCOUNT":
gotoxy(1,9);
cout<<" ===========;
int i=10:
for(x=0;x<=c;x++)
    fp.open("Shop.dat",ios::in);
    fp.read((char*)&pr,sizeof(product));
    while(!fp.eof())
        if(pr.retpno()==order_arr[x])
             amt=pr.retprice()*quan[x];
             damt=amt-(amt*pr.retdis()/100);
             gotoxy(2,i);
             cout<<order arr[x];</pre>
             gotoxy(9,i);
             cout<<pr.retname();
             gotoxy(23,i);
             cout<<quan(x)<<"Kg";</pre>
             gotoxy(32,i);
             cout<<"Rs."<<pre>cpr.retprice();
```

```
gotoxy(49,i);
          cout<<"Rs."<<amt;
          gotoxy(59,i);
          cout<<"Rs."<<damt;
          ++i;
          total+=damt;
        fp.read((char*)&pr,sizeof(product));
     fp.close();
   getch();
   cout<<"\n\n\tThank You for buying the vegetables.\n";</pre>
   cout<<"\tDo visit again...!!";</pre>
   getch();
}
//*****************
  ADMINSTRATOR MENU FUNCTION
//****************
void intro();
void admin_menu()
  clrscr();
  gotoxy(1,1);
  gotoxy(29,2);
  cout<<"VEGETABLE SUPER MARKET";
  gotoxy(1,3);
  char ch2;
```

```
cout<<"\tADMINISTRATOR MENU";
cout<<"\n\n\t1.ENTER NEW VEGETABLE STOCK";
cout<<"\n\n\t2.UPDATE EXISTING STOCK";
cout<<"\n\n\t3.QUERY ";
cout<<"\n\n\t4.MODIFY VEGETABLE DETAILS";
cout<<"\n\n\t5.REMOVE VEGETABLE STOCK";</pre>
cout<<"\n\n\t6.VIEW ALL VEGETABLES";
cout<<"\n\n\t7.BACK TO MAIN MENU";
cout<<"\n\n\tPlease Enter Your Choice (1-7): ";
cin>>ch2;
switch(ch2)
    case '1': clrscr();
            write product();
            admin menu();
            break;
    case '2': modify_stock();
            admin menu();
            break;
           int num;
    case '3':
            clrscr();
            cout<<" *********************
            **************
            ****** ".
            gotoxy(29,2);
            cout<<"VEGETABLE SUPER MARKET":
            gotoxy(1,3);
            cout<<" ********************
            **************
            ****** \n":
            cout<<"\n\n\tEnter the Batch No.: ";
            cin>>num;
            display sp(num);
            admin menu();
```

```
break;
     case '4': modify_product();
          admin menu();
          break;
     case '5': delete_product();
          admin menu();
          break;
     case '6': menu();
          admin_menu();
          getch();
     case '7': intro();;
          break;
     default:
         cout<<"\t\t\tWrong Choice!";
          getch();
          admin menu();
  }
}
CUSTOMER MENU FUNCTION
//****************
void cust_menu()
  clrscr();
  gotoxy(1,1);
  gotoxy(29,2);
  cout<<"VEGETABLE SUPER MARKET";
  gotoxy(1,3);
  char ch2:
  cout<<"\tCUSTOMER MENU";
```

```
cout<<"\n\n\t1.DISPLAY ALL VEGETABLES";
   cout<<"\n\n\t2.PURCHASE VEGETABLES AND DISPLAY BILL";
   cout<<"\n\n\t3.RETURN TO MAIN MENU";
   cout<<"\n\n\tPlease Enter Your Choice (1-3): ";</pre>
   cin>>ch2;
   switch(ch2)
       case '1': menu();
               cust menu();
               break;
       case '2': place_order();
               cust_menu();
               break;
       case '3': intro();
               break;
       default:
              cout<<"\t\t\tWrong Choice!";
               getch();
               cust menu();
   }
}
//*****************
   INTRODUCTION FUNCTION
//****************
void intro()
   char ch;
   do
       clrscr();
       gotoxy(1,1);
       cout<<" **************************
       gotoxy(29,2);
```

```
cout<<"VEGETABLE SUPER MARKET";
gotoxy(1,3);
cout<<" ************************
cout<<"\n\n\tMAIN MENU";
cout<<"\n\n\t01. CUSTOMER";
cout<<"\n\n\t02. ADMINISTRATOR";
cout<<"\n\n\t03. EXIT";
cout<<"\n\n\tPlease Select Your Option (1-3): ";
cin>>ch;
switch(ch)
   case '1': clrscr();
           cust menu();
           getch();
           break;
   case '2': clrscr();
           gotoxy(1,1);
           cout<<" *****************
           ***********
           gotoxy(29,2);
           cout<<"VEGETABLE SUPER MARKET";
           gotoxy(1,3);
           cout<<" ****************
           *************
           ********** \n":
           cout<<"\n\n\tEnter password: ";</pre>
           char pass[10];
           for(int i=0;i<9;++i)
              pass[i]=getch();
              cout<<"*":
```

```
getch();
             pass[9]='\0';
             if(strcmpi(pass,"VEGETABLE")==0)
                admin menu();
             else
                cout<<"\n\n\t\tACCESS DENIED...!!!";
                getch();
                intro();
             break;
        case '3': exit(0);
        default: cout<<"\a";
  }while(ch!='3');
  getch();
}
//*****************
  THE MAIN FUNCTION OF PROGRAM
//*****************
void main()
  clrscr();
  gotoxy(1,1);
  gotoxy(29,2);
  cout<<"VEGETABLE SUPER MARKET";
  gotoxy(1,3);
  gotoxy(21,13);
  cout<<"MADE BY: AMAN CHAUHAN AND GOPAL AGARWAL":
```

OUTPUTS

VEGETABLE SUPER MARKET

MADE BY : AMAN CHAUHAN AND GOPAL AGARWAL
SCHOOL : MAHARAJA AGRASEN VIDYALAYA



CUSTOMER MENU

- 1.DISPLAY ALL VEGETABLES
- 2.PURCHASE VEGETABLES AND DISPLAY BILL
- 3.RETURN TO MAIN MENU

Please Enter Your Choice (1-3):

DISPLAY ALL VEGETABLES

	xxx	. x x x)	×××	(X	*	××	(X	×	×	(X	**	×	(X	××	H	×	×	×	: X :	××	××	(X	(X)	×)	××	(X	X)	(X	×	×	(X	X)	×	ж.	××	ж.	×	(X	X)	××	*)	××	(X)	\leftrightarrow	\leftrightarrow	×	
VEGETABLE SUPER MARKET																	Т	ΚE	R	MĤ	R	Έ	SUI	5	LE	ìΒ	Τŕ	ЗE	E(Ų																	

LIST OF VEGETABLES PRICE(Rs/Kg) STOCK(Kg) Discount(%) Potato Tomato Gourd Cabbage Onion Cucumb. Spinach Ginger

PURCHASE VEGETABLES

VEGETABLE SUPER MARKET

LIST OF VEGETABLES

=======	=========		=========	
B.NO.	NAME	PRICE(Rs/Kg)	STOCK(Kg)	Discount(%)
=======	=========	==============		
101	Potato	15	197	9
102	Tomato	20	195	10
103	Gourd	26	95	10
104	Cabbage	20	198	5
105	Onion	20	1 4 5	2
106	Cucumb.	15	188	8
107	Spinach	30	143	7
108	Ginger	10	98	8

PLACE YOUR ORDER

Enter Batch No. of the Vegetable : 102

Enter Weight of the Vegetable: 3

Do You Want To Order Another Product ? (y/n):n

..... Thank You For Placing The Order.....

DISPLAY BILL

INVOICE

=====	=======	=========	=========	========	=======================================
B.NO.	NAME	WEIGHT	PRICE(per Kg)	AMOUNT	AMOUNT AFTER DISCOUNT
404			B 45	D 45	B 40 050004
101	Potato	3Kg	Rs . 15	Rs.45	Rs.40.950001
104	Cabbage	ZKg	Rs.20	Rs.40	Rs.38
107	Spinach	2Kg	Rs.30	Rs.60	Rs . 55 . 799999
102	Tomato	ЗКд	Rs.20	Rs.60	Rs . 54

TOTAL = Rs. 188.75

Thank You for buying the vegetables. Do visit again...!!_

ADMINISTRATOR MENU

Enter password: *******

ADMINISTRATOR MENU

- 1.ENTER NEW VEGETABLE STOCK
- 2.UPDATE EXISTING STOCK
- 3.QUERY
- 4.MODIFY VEGETABLE DETAILS
- 5.REMOVE VEGETABLE STOCK
- 6. UIEW ALL VEGETABLES
- 7.BACK TO MAIN MENU
- Please Enter Your Choice (1-7):

ENTER NEW VEGETABLE STOCK

NEW UEGETABLE

Enter the Batch No.: 109

Enter Name of the vegetable: Sweet Corn Enter Price of the vegatble(Rs./Kg): 25 Enter Vegetable in stock(in Kg): 250

Enter the Discount (%): 10

The Vegetable has been added._

UPDATE VEGETABLE STOCK

Modify Vegetable Stock

Enter the Batch No.: 101

Batch No.: 101

Name of the Vegetable : Potato Price of the Vegetable : Rs.15 Vegetable in stock : 197 kg

Discount: 9 %

Enter the volume of new stock to be added:13

New stock has been added._

QUERY

Batch No.: 103

Name of the Vegetable : Gourd Price of the Vegetable : Rs.26 Vegetable in stock : 95 kg

Discount : 10 %_

MODIFY VEGETABLE DETAILS

Modify Vegetable Details

Enter The Product No.: 108

Batch No.: 108

Name of the Vegetable : Ginger Price of the Vegetable : Rs.10 Vegetable in stock : 98 kg

Discount: 8 %

Enter The New Details of the vegetable Enter Name of the vegetable: Ginger Enter Price of the vegatble(Rs./Kg): 12 Enter Vegetable in stock(in Kg): 100

Enter the Discount (%): 10

Vegetable details modified.

REMOVE VEGETABLE STOCK

Remove Vegetable

Enter the Batch No. of the vegetable you want to remove : 102

Vegetable removed._

VIEW ALL VEGETABLES

VEGETABLE SUPER MARKET

LIST OF VEGETABLES

B.NO.	NAME	PRICE(Rs/Kg)	STOCK(Kg)	Discount(%)
101	Potato	15	210	 9
103	Gourd	26	95	10
104	Cabbage	20	198	5
105	Onion	20	14 5	2
106	Cucumb.	1 5	188	8
107	Spinach	30	143	7
108	Ginger	12	100	10
109	Sweet Corn	25	250	10