**Code:**

**#include**<fstream>

**#include**<string.h>

**#include**<iomanip>

**#include**<iostream>

**using** std::ofstream;

**using** **namespace** std;

**class** product

{

**int** product\_number;

**char** product\_name[50];

**float** product\_price,product\_quantity,tax,product\_discount;

**public**:

**void** **create\_product**()

{

cout<<**endl**<<"Please Enter The Product Number: ";

cin>>product\_number;

cout<<**endl**<<"Please Enter The Name of The Product: ";

cin.ignore();

cin.getline(product\_name ,50);

cout<<**endl**<<"Please Enter The Price of The Product: ";

cin>>product\_price;

cout<<**endl**<<"Please Enter The Discount (%): ";

cin>>product\_discount;

}

**void** **show\_product**()

{

cout<<**endl**<<"Product Number: "<<product\_number;

cout<<**endl**<<"Product Name: "<<product\_name;

cout<<**endl**<<"Product Price: "<<product\_price;

cout<<**endl**<<"Discount : "<<product\_discount;

}

**int** **getProduct**()

{

**return** product\_number;

}

**float** **getPrice**()

{

**return** product\_price;

}

**char**\* **getName**()

{

**return** product\_name;

}

**float** **getDiscount**()

{

**return** product\_discount;

}

};

fstream fp;

product produc;

**void** **save\_product**()

{

ofstream fp;

fp.open("database.dat",ios::*binary*|ios::*app*);

produc.create\_product();

fp.write((**char**\*)&produc,**sizeof**(produc));

fp.close();

cout<<**endl**<<**endl**<<"The Product Has Been Successfully Created..."<<**endl**;

**getchar**();

}

**void** **show\_all\_product**()

{

ifstream fp;

cout<<**endl**<<"\t\t/\*\*\*/";

cout<<**endl**<<"\t\t RECORDS";

cout<<**endl**<<"\t\t/\*\*\*/\n";

fp.open("database.dat",ios::*binary*);

**while**(fp.read((**char**\*)&produc,**sizeof**(produc)))

{

produc.show\_product();

cout<<**endl**<<"\*\*\*\*\n"<<**endl**;

//getchar();

}

fp.close();

}

**void** **display\_record**(**int** num)

{

ifstream fp;

**bool** found=**false**;

fp.open("database.dat",ios::*binary*);

**while**(fp.read((**char**\*)&produc,**sizeof**(produc)))

{

**if**(produc.getProduct()==num)

{

produc.show\_product();

found=**true**;

}

}

fp.close();

**if**(found == **false**)

cout<<"\n\nNo record found";

**getchar**();

}

**void** **edit\_product**()

{

**int** num;

**bool** found=**false**;

cout<<**endl**<<**endl**<<"\tPlease Enter The Product Number: ";

cin>>num;

fp.open("database.dat",ios::*in*|ios::*out*);

**while**(fp.read((**char**\*)&produc,**sizeof**(product)) && found==**false**)

{

**if**(produc.getProduct()==num)

{

produc.show\_product();

cout<<"\nPlease Enter The New Details of Product: "<<**endl**;

produc.create\_product();

**long** **long** **unsigned** **int** pos= -1 \* **sizeof**(produc);

fp.seekp(pos,ios::*cur*);

fp.write((**char**\*)&produc,**sizeof**(produc));

cout<<**endl**<<**endl**<<"\t Record Successfully Updated...";

found=**true**;

}

}

fp.close();

**if**(found==**false**)

cout<<**endl**<<**endl**<<"Record Not Found...";

**getchar**();

}

**void** **delete\_product**()

{

ifstream fp;

**int** num;

cout<<**endl**<<**endl**<<"Please Enter The Product Number: ";

cin>>num;

fp.open("database.dat",ios::*binary*);

ofstream fp2;

fp2.open("Temp.dat",ios::*out*|ios::*binary*);

//fp.seekg(0,ios::beg);

**while**(fp.read((**char**\*)&produc,**sizeof**(produc)))

{

**if**(produc.getProduct()!=num)

{

fp2.write((**char**\*)&produc,**sizeof**(produc));

}

}

fp2.close();

fp.close();

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

**rename**("Temp.dat","database.dat");

cout<<**endl**<<**endl**<<"\tRecord Deleted...";

**getchar**();

}

**void** **product\_menu**()

{

fp.open("database.dat",ios::*in*);

cout<<**endl**<<**endl**<<"\t\tPRODUCT MENU\n\n";

cout<<"\*\*\*\*\*\*"<<**endl**;

cout<<"P.NO.\t\tNAME\t\tPRICE"<<**endl**;

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

**while**(fp.read((**char**\*)&produc,**sizeof**(produc)))

{

cout<<produc.getProduct()<<"\t\t"<<produc.getName()<<"\t\t"<<produc.getPrice()<<**endl**;

}

fp.close();

}

**void** **place\_order**()

{

**int** order\_arr[50],quan[50],c=0;

**float** amt,damt,total=0;

**char** ch;

product\_menu();

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

cout<<"\n PLACE YOUR ORDER";

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

**do**{

cout<<"\n\nEnter The Product Number: ";

cin>>order\_arr[c];

cout<<"\nQuantity: ";

cin>>quan[c];

c++;

cout<<"\nDo You Want To Order Another Product ? (y/n)";

cin>>ch;

}**while**(ch=='y' ||ch=='Y');

cout<<**endl**;

cout<<"\nThank You...";

cout<<"\n\n\*\*\*\*INVOICE\*\*\*\*\n";

cout<<"\nPr No.\tPr Name\tQuantity \tPrice \tAmount \tAmount after discount"<<**endl**;

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

{

fp.open("database.dat",ios::*in*);

fp.read((**char**\*)&produc,**sizeof**(produc));

**while**(!fp.eof())

{

**if**(produc.getProduct()==order\_arr[x])

{

amt=produc.getPrice()\*quan[x];

damt=amt-(amt\*produc.getDiscount()/100);

cout<<"\n"<<order\_arr[x]<<"\t"<<produc.getName()<<"\t"<<quan[x]<<"\t\t"<<produc.getPrice()<<"\t"<<amt<<"\t\t"<<damt;

total+=damt;

}

fp.read((**char**\*)&produc,**sizeof**(produc));

}

fp.close();

}

cout<<"\n\n\t\t\t\t\tTOTAL = "<<total;

**getchar**();

}

**void** **intro**()

{

cout<<**endl**<<**endl**<<" "<<"/\*\*\*\*\*/";

cout<<**endl**<<" "<<" MIT-WPU ";

cout<<**endl**<<"\*\*\*\*\*\*\*\*\*\*\*\*";

cout <<**endl**<<**endl** <<"\tSUPERMARKET BILLING SYSTEM"<<**endl**<<**endl**;

cout<<"\t\t"<<"PROJECT BY :- "<<**endl**<<**endl**;

cout<<"\t"<<"YASH MUNDADA (PA31)"<<**endl**;

cout<<"\t"<<"PIYUSH PAMNANI (PA35)"<<**endl**;

cout<<"\t"<<"RUCHIN SHROFF (PA36)"<<**endl**;

cout<<**endl**<<" "<<"/\*\*\*\*\*/";

}

**void** **admin\_menu**()

{

**int** option;

cout<<"\t";

cout<<" "<<"ADMIN MENU"<<**endl**;

cout<<"\n\tPress 1 to CREATE PRODUCT";

cout<<"\n\tPress 2 to DISPLAY ALL PRODUCTS";

cout<<"\n\tPress 3 to VIEW PRODUCT";

cout<<"\n\tPress 4 to MODIFY PRODUCT";

cout<<"\n\tPress 5 to DELETE PRODUCT";

cout<<"\t"<<**endl**;

cout<<"\n\n\tOption: ";

cin>>option;

**switch**(option)

{

**case** 1: save\_product();

**break**;

**case** 2: show\_all\_product();

**break**;

**case** 3:

**int** num;

cout<<"\n\n\tPlease Enter The Product Number: ";

cin>>num;

display\_record(num);

**break**;

**case** 4: edit\_product();

**break**;

**case** 5: delete\_product();

**break**;

**default**:admin\_menu();

}

}

**int** **main**()

{

**int** option;

intro();

**do**

{

cout<<**endl**;

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

cout<<"\n\t"<<" "<<"MAIN MENU";

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

cout<<"\n\t"<<" ";

cout<<"\n\t"<<" "<<"1.CUSTOMER";

cout<<"\n\t"<<" "<<"2.ADMINISTRATOR";

cout<<"\n\t"<<" "<<"3.EXIT";

cout<<"\n\t";

cout<<"\n\tOPTION: ";

cin>>option;

**switch**(option)

{

**case** 1: place\_order();

**break**;

**case** 2: admin\_menu();

**break**;

**case** 3: cout<<"\n\t\*\*\*\*\*\*\*";

cout<<"\n\t THANK YOU FOR VISITING!";

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

**break**;

**default** :cout<<"Invalid Input...\n";

}

}**while**(option!=3);

}

Output:

/\*\*\*\*\*/

MIT-WPU

\*\*\*\*\*\*\*\*\*\*\*\*

SUPERMARKET BILLING SYSTEM

PROJECT BY :-

YASH MUNDADA (PA31)

PIYUSH PAMNANI (PA35)

RUCHIN SHROFF (PA36)

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/\*\*\*/

MAIN MENU

/\*\*\*/

1.CUSTOMER

2.ADMINISTRATOR

3.EXIT

OPTION: 2

ADMIN MENU

Press 1 to CREATE PRODUCT

Press 2 to DISPLAY ALL PRODUCTS

Press 3 to VIEW PRODUCT

Press 4 to MODIFY PRODUCT

Press 5 to DELETE PRODUCT

Option: 2

/\*\*\*/

RECORDS

/\*\*\*/

Product Number: 1

Product Name: X Y Z

Product Price: 249

Discount : 5

\*\*\*\*

Product Number: 2

Product Name: A B C

Product Price: 99

Discount : 3

\*\*\*\*

Product Number: 3

Product Name: P Q R

Product Price: 899

Discount : 10

\*\*\*\*

/\*\*\*/

MAIN MENU

/\*\*\*/

1.CUSTOMER

2.ADMINISTRATOR

3.EXIT

OPTION: 2

ADMIN MENU

Press 1 to CREATE PRODUCT

Press 2 to DISPLAY ALL PRODUCTS

Press 3 to VIEW PRODUCT

Press 4 to MODIFY PRODUCT

Press 5 to DELETE PRODUCT

Option: 3

Please Enter The Product Number: 1

Product Number: 1

Product Name: X Y Z

Product Price: 249

Discount : 5

/\*\*\*/

MAIN MENU

/\*\*\*/

1.CUSTOMER

2.ADMINISTRATOR

3.EXIT

OPTION: 2

ADMIN MENU

Press 1 to CREATE PRODUCT

Press 2 to DISPLAY ALL PRODUCTS

Press 3 to VIEW PRODUCT

Press 4 to MODIFY PRODUCT

Press 5 to DELETE PRODUCT

Option: 4

Please Enter The Product Number: 2

Product Number: 2

Product Name: A B C

Product Price: 99

Discount : 3

Please Enter The New Details of Product:

Please Enter The Product Number: 2

Please Enter The Name of The Product: A B C

Please Enter The Price of The Product: 159

Please Enter The Discount (%): 5%

Record Successfully Updated...

/\*\*\*/

MAIN MENU

/\*\*\*/

1.CUSTOMER

2.ADMINISTRATOR

3.EXIT

OPTION: 2

ADMIN MENU

Press 1 to CREATE PRODUCT

Press 2 to DISPLAY ALL PRODUCTS

Press 3 to VIEW PRODUCT

Press 4 to MODIFY PRODUCT

Press 5 to DELETE PRODUCT

Option: 2

/\*\*\*/

RECORDS

/\*\*\*/

Product Number: 1

Product Name: X Y Z

Product Price: 249

Discount : 5

\*\*\*\*

Product Number: 2

Product Name: A B C

Product Price: 159

Discount : 5

\*\*\*\*

Product Number: 3

Product Name: P Q R

Product Price: 899

Discount : 10

\*\*\*\*

/\*\*\*/

MAIN MENU

/\*\*\*/

1.CUSTOMER

2.ADMINISTRATOR

3.EXIT

OPTION: 1

PRODUCT MENU

\*\*\*\*\*\*

P.NO. NAME PRICE

\*\*\*\*\*\*

1 X Y Z 249

2 A B C 159

3 P Q R 899

\*\*\*\*\*\*\*\*

PLACE YOUR ORDER

\*\*\*\*\*\*\*\*

Enter The Product Number: 1

Quantity: 5

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

Enter The Product Number: 2

Quantity: 6

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

Enter The Product Number: 3

Quantity: 7

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

Thank You...

\*\*\*\*INVOICE\*\*\*\*

Pr No. Pr Name Quantity Price Amount Amount after discount

1 X Y Z 5 249 1245 1182.75

2 A B C 6 159 954 906.3

3 P Q R 7 899 6293 5663.7

TOTAL = 7752.75

/\*\*\*/

MAIN MENU

/\*\*\*/

1.CUSTOMER

2.ADMINISTRATOR

3.EXIT

OPTION: 3

\*\*\*\*\*\*\*

THANK YOU FOR VISITING!

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