**PROGRAM CODE:**

#include<iostream.h>

#include<conio.h>

#include<string.h>

#include<stdio.h>

#include<iomanip.h>

#include<fstream.h>

#include<process.h>

int l=0;

int proid[10],stk[10];

class product

{char adname[20];

char pass[20];

int quant,price,pid;

char pname[20],category[20];

public:

void getinput()

{

cout<<"\nenter category(Food/clothes/Accessories)";

cin>>category;

cout<<"\nenter product id";

cin>>pid;

cout<<"\nenter product name";

cin>>pname;

cout<<"\nenter quntity in (Min 20)";

cin>>quant;

cout<<"\nenter price";

cin>>price;

}

void view()

{

cout<<"\nproduct name:"<<pname<<"\nquantity"<<quant<<"\nprice"<<price<<"\nproduct id"<<pid<<endl;

}

int retquant()

{return quant;}

void dispidname()

{cout<<pid<<"\t"<<pname<<endl;

}

char \*retcategory()

{return category;

}

char \*retpname()

{return pname;

}

int retid()

{return pid; }

void upprod(int x)

{quant-=x;}

void disppriname()

{cout<<pname<<"\t"<<price;}

int retprice()

{return price;

}

void upprice(int nprice)

{price=nprice;}

void password()

{char a;

int d;

gama:

cout<<"\nwelecome admin";

cout<<"\nenter name";

cin>>adname;

cout<<"\nenter password:(6 characters only)" ;

for(int i=0;;)

{tama:

a=getch();

if((a>='a'&&a<='z')||(a>='A'&&a<='Z')||(a>='0'&&a<='9'))

{pass[i]=a;

cout<<"\*";

++i;

}

if(a=='\b')

{cout<<'\b';

--i;}

if(a=='\r')

{pass[i]='\0';

break;

}

}

if(strcmp(pass,"admin")==0)

cout<<"\npassword correct \naccess granted";

else

{cout<<"\nInvalid password\naccess denied";

cout<<"\ndo u want to re-enter password or exit(press 1 to re-enter admin name and password)";

cin>>d;

if(d==1)

{clrscr();

goto gama;

}

if(d!=1)

exit(0);

}}

void dispidprice()

{

cout<<"\n"<<pid<<setw(5)<<"\t"<<pname<<setw(5)<<"\t"<<price<<setw(5);

}

}p;

class customer:public product

{

char custname[10];

long pno;

char chcat[20];

public:

void dispin()

{

cout<<"\nname:"<<custname;

cout<<"\nphone number: "<<pno;

}

void getcust()

{

cout<<"\nEnter name:";

cin>>custname;

cout<<"\nEnter phone number:";

cin>>pno;

}

void billing( int a[10],int b[10],int n)

{clrscr();

float gst,dis;

float sum=0,total,h;

char pna[10];

cout<<"\t\t SUPER MARKET";

dispin();

cout<<"\n\nID\tNAME\tPRICE\tQTY\tTOTAL";

for( int i=0;i<n;i++)

{

ifstream fin("product.dat",ios::binary);

while(!fin.eof())

{

fin.read((char\*)&p,sizeof(p));

if(a[i]==p.retid())

{

strcpy(pna,p.retpname());

h=p.retprice();

total=h\*b[i];

}

}

sum+=total;

cout<<"\n"<<a[i]<<" \t"<<pna<<"\t"<<h<<setw(5)<<"\t"<<b[i]<<setw(5)<<"\t"<<total<<setw(5);

fin.close();

}

cout<<"\n\nGRAND TOTAL:Rs."<<sum;

gst=sum\*0.05;

dis=sum\*0.2;

cout<<"\nGST:Rs."<<gst<<"\nDiscount:Rs."<<dis;

sum=sum+gst-dis;

cout<<"\nyou have to pay:Rs."<<sum<<" only";

}

void updatestk(int a[10],int b[10],int n)

{

for(int i=0;i<n;i++)

{

fstream f("product.dat",ios::in|ios::out|ios::binary);

while(!f.eof())

{

f.read((char\*)&p,sizeof(p));

if(a[i]==p.retid())

{

if(b[i]<p.retquant())

{

p.upprod(b[i]);

f.seekg(f.tellg()-sizeof(p));

f.write((char\*)&p,sizeof(p));

}

if(p.retquant()<20)

cout<<endl<<p.retpname()<<" is out of stock";

}

}

f.close();

}

}

void dispcat()

{

cout<<"\n1.food\n2.clothes\n3.accessories\n";

}

void buypro()

{

int k=1;

cout<<"\nenter category to buy products";

cin>>chcat;

if(strcmpi(chcat,"food")==0)

{ifstream fin("product.dat",ios::binary);

cout<<"Items in the Food category"<<endl;

cout<<"\nproductid\tproductname\tproductprice\n";

while(!fin.eof())

{

fin.read((char\*)&p,sizeof(p));

if(fin.eof())break;

if(strcmpi(p.retcategory(),chcat)==0)

cout<<endl<<p.retid()<<"\t\t"<<p.retpname()<<setw(5)<<"\t\t"<<p.retprice();

}

fin.close();

}

else if(strcmpi(chcat,"clothes")==0)

{

ifstream f1("product.dat",ios::binary);

cout<<"Items in the Clothes category"<<endl;

cout<<"\nproductid\tproductname\tproductprice\n";

while(!f1.eof())

{

f1.read((char\*)&p,sizeof(p));

if(f1.eof())break;

if(strcmpi(p.retcategory(),chcat)==0)

cout<<endl<<p.retid()<<"\t\t"<<p.retpname()<<"\t\t"<<p.retprice();

}

f1.close();

}

else if(strcmpi(chcat,"accessories")==0)

{

ifstream f2("product.dat",ios::binary);

cout<<"\nItems in the Accessories category"<<endl;

cout<<"\nproductid\tproductname\tproductprice\n";

while(!f2.eof())

{

f2.read((char\*)&p,sizeof(p));

if(f2.eof())break;

if(strcmpi(p.retcategory(),chcat)==0)

cout<<endl<<p.retid()<<"\t\t"<<p.retpname()<<"\t\t"<<p.retprice();

}

f2.close();

}

else

{

k=0;

cout<<"\ninvalid category";

}

if(k)

choosepro();

}

void choosepro()

{

int t=0;

char ar,rag;

do{

cout<<"\nenter product id to be bought\n";

cin>>proid[l];

ifstream fin("product.dat",ios::binary);

while(!fin.eof())

{fin.read((char\*)&p,sizeof(p));

if(proid[l]==p.retid())

t=1;

}

if(t==0)

{

cout<<"\ninvalid product id";

}

if(t==1)

{

cout<<"enter quantity\n";

cin>>stk[l];}

l++;

cout<<"do u want to buy more products";

cin>>ar;

}

while(ar=='y');

if(ar!='y')

{

cout<<"\ndo you want to buy from another category";

cin>>rag;

if(rag=='y')

{dispcat();

buypro();

}

}while(ar=='y');

billing(proid,stk,l);

updatestk(proid,stk,l);

}

};

void main()

{customer c;

clrscr();

product p;

ifstream fin;

int x,y;

char dhe;

char opt;

char ans;

cout<<"\n\t WELCOME TO THE STOCK ZONE LARGEST SUPER MARKET ISSO 9001:2003";

do{

cout<<"\n1.admin\n2.customer\n3.Quit";

cout<<"\nenter choice: ";

cin>>y;

clrscr();

if(y==1)

{p.password();

do

{

cout<<"\n1.add product \n2.delete product \n3.update product price \n4.view products in stock\n";

cout<<"\nenter choice";

cin>>x;

clrscr();

switch(x)

{case 1:

ofstream ffout("product.dat",ios::binary|ios::app);

cout<<"\nenter the product details\n";

do

{

p.getinput();

ffout.write((char\*)&p,sizeof(p));

cout<<"do you want to add some more products(press y to add products)";

cin>>ans;

}

while(ans=='y');

ffout.close();

break;

case 2:int x;

char c[20];

int proid;

cout<<"\n\n1.food\n2.clothes\n3.accessories\n\nenter your choice:";

cin>>x;

ofstream fout("newproduct.dat",ios::binary);

if(x==1)

{

fin.open("product.dat",ios::binary);

cout<<"\nItems in the Food category"<<endl;

while(!fin.eof())

{

fin.read((char\*)&p,sizeof(p));

if(strcmpi(p.retcategory(),"food")==0)

p.dispidname();

}

fin.close();

}

else if(x==2)

{

fin.open("product.dat",ios::binary);

cout<<"\nItems in the Clothes category"<<endl;

while(!fin.eof())

{

fin.read((char\*)&p,sizeof(p));

if(strcmpi(p.retcategory(),"clothes")==0)

p.dispidname();

}

fin.close();

}

else if(x==3)

{

fin.open("product.dat",ios::binary);

cout<<"\nItems in the Accessories category"<<endl;

while(!fin.eof())

{

fin.read((char\*)&p,sizeof(p));

if(strcmpi(p.retcategory(),"accessories")==0)

p.dispidname();

}

fin.close();

}

else

cout<<"\ninvalid choice";

fin.open("product.dat",ios::binary);

if(x==1||x==2||x==3)

{cout<<"\nenter the id of product to be deleted:";

cin>>proid;

int found=0;

while(!fin.eof())

{fin.read((char\*)&p,sizeof(p));

if(fin.eof())break;

if(proid!=p.retid())

fout.write((char\*)&p,sizeof(p));

else

found++;

}

if(found)

cout<<"\nrecord deleted succesfully"<<endl;

else

cout<<"\nNo Product exist"<<endl;

fin.close();

fout.close();

remove("product.dat");

rename("newproduct.dat","product.dat");

}break;

case 3:

product p;

ifstream f("product.dat",ios::binary);

while(!f.eof())

{f.read((char\*)&p,sizeof(p));

if(f.eof())break;

p.view();

}

f.close();

char ch[20];

cout<<"\nenter the product name to change the price";

cin>>ch;

int a;

fstream f1("product.dat",ios::binary|ios::in|ios::out);

while(!f1.eof())

{f1.read((char\*)&p,sizeof(p));

if(strcmpi(ch,p.retpname())==0)

{

cout<<"\nenter the new price of the product as";

cin>>a;

p.upprice(a);

f1.seekp(f1.tellp()-sizeof(p));

f1.write((char\*)&p,sizeof(p));}

cout<<"\nItem price Updated";

p.view();

}

break;

case 4:

clrscr();

fin.open("product.dat",ios::binary);

cout<<"\nItems in the Food category"<<endl;

while(!fin.eof())

{

fin.read((char\*)&p,sizeof(p));

if(fin.eof())break;

if(strcmpi(p.retcategory(),"food")==0)

p.view();

}

fin.close();

fin.open("product.dat",ios::binary);

cout<<"\nItems in the Clothes category"<<endl;

while(!fin.eof())

{

fin.read((char\*)&p,sizeof(p));

if(fin.eof())break;

if(strcmpi(p.retcategory(),"clothes")==0)

p.view();

}

fin.close();

fin.open("product.dat",ios::binary);

cout<<"\nItems in the Accessories category"<<endl;

while(!fin.eof())

{

fin.read((char\*)&p,sizeof(p));

if(fin.eof())break;

if(strcmpi(p.retcategory(),"accessories")==0)

p.view();

}

fin.close();

break;

default:cout<<"\ninvalid choice";

}

cout<<"\ndo u want to coninue(press 'y'to continue) ";

cin>>opt;

}

while(opt=='y');

getch();

}

else if(y==2)

{

c.getcust();

c.dispcat();

c.buypro();

}

else if(y==3)

exit(0);

cout<<"\ndo u want to switch control";

cin>>dhe;

clrscr();

}while(dhe=='y');

getch();}