import java.lang.\*;

import java.util.\*;

import java.io.\*;

class Mobile

{

protected static int itemID=0;

protected int id;

protected String brand;

protected int model;

protected double price;

protected String description;

protected int quantity;

Mobile()

{

id = 999999999;

brand = " ";

model = 0;

price = 0.0;

description = " ";

quantity = 0;

}

Mobile ( String itemBrand, int md,int qty,float p )

{

id = itemID++;

brand = itemBrand;

setPrice(p);

setModel(md);

setQuantity(qty);

}

public String getBrand()

{

return brand;

}

public void setPrice(float p){

price=p;

}

public double getPrice()

{

return price;

}

public void setModel(int m)

{

model=m;

}

public int getModel()

{

return model;

}

public void setQuantity(int q)

{

quantity+=q;

}

public void printDetails()

{

System.out.printf("%2d %7s %4d %8.2f %d\n", this.id, this.brand, this.model,this.price,this.quantity);

}

}

//deriverd class of Mobile

class FeaturedMobile extends Mobile

{

protected float display\_size,weight;

protected String sim\_dual;

protected int battery;

FeaturedMobile()

{

display\_size=0;

battery = 00;

weight =0;

sim\_dual = "no";

}

FeaturedMobile(String br,int md,int qty,float p,float d,int b, int w , String ch)

{

super(br,md,qty,p);

setDisplaySize(d);

setBattery(b);

setWeight(w);

setDualSim(ch);

}

public void setDisplaySize(float d)

{

display\_size=d;

}

public void setBattery(int b)

{

battery = b;

}

public void setWeight(float w)

{

weight = w;

}

public void setDualSim(String ch)

{

sim\_dual = ch;

}

public void displayMobile()

{

System.out.println("\nDisplay size : "+display\_size+"inch\nBattery : "+battery+"/mA\nweight : "+weight+"grams\ndual sim : "+sim\_dual);

}

}

//derived class of featured mobile

class SmartMobile extends FeaturedMobile

{

private String sensors,processor;

private int Ram,internalMemory,externalMemory;

private float fcam,rcam;

private os OS;

SmartMobile()

{

//OS = "Android";

Ram = internalMemory = externalMemory = 0;

fcam = rcam = 0;

sensors=" ";

}

SmartMobile(String br,int md,int qty,float p,float d,int b, int w , String ch,String o,String v,String k,int n,int i,int e, float r, float f)

{

super(br,md,qty, p,d,b, w ,ch);

//setOS(s);

OS = new os(o,v,k);

setRam(n);

setMemory(i, e);

setCamera(r,f);

}

//inner class of SmartMobile

class os

{

private String os,version,kernel;

os(String o,String v,String k)

{

setOs(o);

setVersion(v);

setKernel(k);

}

public void setOs(String s)

{

os = s;

}

public void setVersion(String s)

{

version= s;

}

public void setKernel(String s)

{

kernel = s;

}

public void osDisplay()

{

System.out.println("OS :" + this.os);

System.out.println("Version :" + this.version);

System.out.println("Kernel :" + this.kernel);

}

}

public void setSensors(String s)

{

sensors = s;

}

public void setRam(int n)

{

Ram = n;

}

public void setMemory(int i,int e)

{

internalMemory = i;

externalMemory = e;

}

public void setCamera(float r,float f)

{

fcam = f;

rcam = r;

}

public void displayMobile()

{

super.displayMobile();

OS.osDisplay();

System.out.println("RAM : "+Ram+" GB\nInternal memory: "+internalMemory+" gb\nExternal memory: "+externalMemory+" gb\nfront camera : "+fcam+"mp\nrear camera : "+rcam+"mp");

}

}

class Cart

{

private String productName;

private float price,subTotal;

private int quantity;

private static float total=0;

Cart()

{

productName = " ";

price = 0;

quantity =0;

}

public void addToCart(SmartMobile id,int qty)

{

productName = id.getBrand()+id.getModel();

price = (float) id.getPrice();

quantity = qty;

subTotal = quantity \* price;

total +=subTotal;

}

public void addToCart(FeaturedMobile id,int qty)

{

productName = id.getBrand()+id.getModel();

price = (float) id.getPrice();

quantity = qty;

subTotal = quantity \* price;

total +=subTotal;

}

public float getTotal()

{

return total;

}

public void removeFromCart()

{

total -= subTotal;

}

public void displayCartItem()

{

int i=0;

System.out.println((i+1)+" " +productName+" "+price+" \* "+quantity+" = "+subTotal);

}

}

class Address

{

private String door\_no,st\_name,locality,city,pincode;

public void setAddress()

{

Scanner in = new Scanner(System.in);

System.out.println("enter the door number:");

door\_no = in.next();

System.out.println("enter the street name:");

st\_name = in.next();

System.out.println("enter the locality:");

locality = in.next();

System.out.println("enter the city:");

city = in.next();

System.out.println("enter the pincode:");

pincode = in.next();

}

public void getAddress()

{

System.out.println("No:"+door\_no+","+st\_name+","+locality+","+city+","+pincode);

}

}

interface User

{

public void logIn();

public void addCartItem(SmartMobile m,int q);

public void addCartItem(FeaturedMobile m,int q);

public void removeCartItem(int id);

public void displayCart();

}

class Member implements User

{

private static int numcart = 0,id=0;

protected int ph\_no;

protected String name,password2,email,password;

private Address address = new Address();

List<Cart> cart = new ArrayList<Cart>();

public void signUp()

{

Scanner in = new Scanner(System.in);

String password2;

id=id++;

System.out.println("\n enter the NAME :");

name = in.next();

System.out.println("\n enter the E-mail ID:");

email = in.next();

do

{

System.out.println("\n enter the PASSWARD :");

password = in.next();

System.out.println("\n enter the PASSWARD again :");

password2 = in.next();

}while(password.compareTo(password2)!=0);

System.out.println("\n enter the address:");

address.setAddress();

}

public boolean logIn(List<Member> member)

{

Scanner in = new Scanner(System.in);

System.out.println("\n enter the NAME :");

name = in.next();

System.out.println("\n enter the E-mail ID:");

email = in.next();

System.out.println("\n enter the PASSWARD :");

password = in.next();

for(Member m:member)

{

if(m.email.compareTo(email)==0)

{

if(m.password.compareTo(password)==0)

{

System.out.println("\n LOGGED IN AS "+name);

return true;

}

}

}

System.out.println("error in logging in");

return false;

}

public void addCartItem(SmartMobile m,int q)

{

Cart c = new Cart();

c.addToCart(m,q);

cart.add(c);

displayCart();

}

public void addCartItem(FeaturedMobile m,int q)

{

Cart c = new Cart();

c.addToCart(m,q);

cart.add(c);

displayCart();

}

public void removeCartItem(int id)

{

cart.get(id-1).removeFromCart();

cart.remove(id-1);

}

public void displayCart()

{

System.out.println("s\_no Product price quantity Total" );

for(Cart c:cart)

{

c.displayCartItem();

}

System.out.println("total "+cart.get(0).getTotal());

}

public void displayMemberDetails()

{

System.out.println("name:"+name+" e-mail:"+email);

System.out.printf("address:");address.getAddress();

}

}

class Guest implements User

{

private int ph\_no;

private String name,email;

private Address address = new Address();

List<Cart> cart = new ArrayList<Cart>();

public boolean logIn(List<Member> member)

{

Scanner in = new Scanner(System.in);

System.out.println("\n enter the NAME :");

name = in.next();

System.out.println("\n enter the E-mail ID:");

email = in.next();

System.out.println("\n enter the Address:");

address.setAddress();

System.out.println("\n LOGGED IN AS guest");

return true;

}

public void addCartItem(SmartMobile m,int q)

{

Cart c = new Cart();

c.addToCart(m,q);

cart.add(c);

displayCart();

}

public void addCartItem(FeaturedMobile m,int q)

{

Cart c = new Cart();

c.addToCart(m,q);

cart.add(c);

displayCart();

}

public void removeCartItem(int id)

{

cart.get(id-1).removeFromCart();

cart.remove(id-1);

}

public void displayCart()

{

System.out.println("s\_no Product price quantity Total" );

for(Cart c:cart)

{

c.displayCartItem();

}

System.out.println("total "+cart.get(0).getTotal());

}

}

class eshop

{

public static void main(String[] args) throws IOException

{

int i,j,fn=0,sn=0;

List<SmartMobile> smobile = new ArrayList<SmartMobile>();

List<FeaturedMobile> fmobile = new ArrayList<FeaturedMobile>();

List<Member> member = new ArrayList<Member>();

List<Guest> guest = new ArrayList<Guest>();

Scanner in = new Scanner (System.in);

do{

System.out.println("\n1->Seller\n2->Customer\n3->exit\n\n enter your choice:");

int ch = in.nextInt();

switch(ch)

{

case 1: System.out.println("\n1->add mobile to stack\n2->list the member");

ch = in.nextInt();

switch(ch)

{

case 1:

System.out.println("\n the the number of featured Mobiles");

fn = in.nextInt();

System.out.println("\n the the number of SmartMobiles");

sn = in.nextInt();

for(i=0;i<sn;i++)

{

System.out.println("Enter the details of Smart mobile "+(i+1)+" :");

System.out.println("Enter brand: ");

String st= in.next();

System.out.println("Enter model : ");

int md= in.nextInt();

System.out.println("Enter rate :") float f=in.nextFloat();

System.out.println("Enter Quantity: ");

int qty=in.nextInt();

System.out.println("Enter the display size :");

float ds = in.nextFloat();

System.out.println("Enter the weight :"); int w=in.nextInt();

System.out.println("Enter battery :");

int b=in.nextInt();

System.out.println("Enter Dual sim (Yes/No):");

String d =in.next(); System.out.println("Enter Ram size :");

int ram=in.nextInt();

System.out.println("Enter the OS :");

String o=in.next(); System.out.println("Enter the Version of OS :");

String v=in.next(); System.out.println("Enter Kernel build no :");

String k=in.next(); System.out.println("Enter internal memory :");

int im=in.nextInt(); System.out.println("Enter external Memory :");

int em=in.nextInt(); System.out.println("Enter rear camera :");

float rc=in.nextFloat(); System.out.println("Enter front camera :");

float fc=in.nextFloat();

SmartMobile tmp = new SmartMobile (st,md,qty,f,ds,b,w,d,o,v,k,ram,im,em,rc,fc);

smobile.add(tmp);

}

for(j=0;j<fn;j++)

{

System.out.println("Enter the details of Featured mobile "+(j+1)+" :");

System.out.println("Enter brand: ");

String st= in.next(); System.out.println("Enter model : ");

int md= in.nextInt();

System.out.println("Enter rate :");

float f=in.nextFloat(); System.out.println("Enter Quantity: ");

int qty=in.nextInt();

System.out.println("Enter the display size :");

float ds = in.nextFloat();

System.out.println("Enter the weight :");

int w=in.nextInt();

System.out.println("Enter battery :");

int b=in.nextInt();

System.out.println("Enter Dual sim (Yes/No):");

String d =in.next();

FeaturedMobile tmp1 = new FeaturedMobile(st,md,qty,f,ds,b,w,d);

fmobile.add(tmp1);

continue;

}

break;

case 2:

for(Member m:member)

{

m.displayMemberDetails();

}

break;

}

break;

case 2: login:

System.out.println("Log in as....\n1->member\n2->guest\n\nTo be a member ....\n3->register");

ch=in.nextInt();

switch(ch)

{

case 1: Member m = new Member();

if(m.logIn(member))

{System.out.println("ID Brand Model Price Quantity");

System.out.println("Featured mobiles :");

for(FeaturedMobile f:fmobile)

{

f.printDetails();

}

System.out.println("Smart mobiles :");

for(SmartMobile s:smobile)

{

s.printDetails();

}

System.out.println("enter the ID to see details:");

i = in.nextInt();

if (i<smobile.size())

{

smobile.get(i).displayMobile();

}

else

{

fmobile.get(i-smobile.size()) .displayMobile();

}

System.out.println("enter the ID to add to cart:");

i = in.nextInt();

System.out.println("enter the quantity:");

int q = in.nextInt();

if (i<smobile.size()){

m.addCartItem(smobile.get(i), q);

}

else

{

m.addCartItem(fmobile.get(i-sn),q);

}

}

break;

case 2: Guest g = new Guest();

boolean k=g.logIn(member);

guest.add(g);

System.out.println("ID Brand Model Price Quantity");

System.out.println("Featured mobiles :");

for(FeaturedMobile f:fmobile)

{

f.printDetails();

}

System.out.println("Smart mobiles :");

for(SmartMobile s:smobile)

{

s.printDetails();

}

System.out.println("enter the ID to see details:");

i = in.nextInt();

if (i<sn){

smobile.get(i).displayMobile();

}

else

{

fmobile.get(i-smobile.size()).displayMobile();

}

System.out.println("enter the ID to add to cart:");

i = in.nextInt();

System.out.println("enter the quantity:");

q = in.nextInt();

if (i<smobile.size()){

g.addCartItem(smobile.get(i), q);

}

else

{

g.addCartItem(fmobile.get(i-smobile.size()),q);

}

break;

case 3: Member n = new Member();

n.signUp();

member.add(n);

continue;

default:System.out.println("illegal user");

System.exit(0);

}

break;

case 3:

default : System.exit(0);

}

}while(true);

}

}

1->Seller

2->Customer

3->exit

enter your choice:

1

1->add mobile to stack

2->list the member

1

enter the number of featured Mobiles

1

enter the number of SmartMobiles

1

Enter the details of Smart mobile 1 :

Enter brand:

samsumg

Enter model :

1212

Enter rate :

1200

Enter Quantity:

20

Enter the display size :

4.4

Enter the weight :

120

Enter battery :

3000

Enter Dual sim (Yes/No):

yes

Enter Ram size :

3

Enter the OS :

oreo

Enter the Version of OS :

8.0

Enter Kernel build no :

4.9

Enter internal memory :

16

Enter external Memory :

64

Enter rear camera :

13

Enter front camera :

5

Enter the details of Featured mobile 1 :

Enter brand:

nokia

Enter model :

3200

Enter rate :

3000

Enter Quantity:

30

Enter the display size :

2.2

Enter the weight :

200

Enter battery :

900

Enter Dual sim (Yes/No):

no

1->Seller

2->Customer

3->exit

enter your choice:

2

Log in as....

1->member

2->guest

To be a member ....

3->register

3

enter the NAME :

ranjan

enter the E-mail ID:

ranjanrab@gmail.com

enter the PASSWARD :

drumstick

enter the PASSWARD again :

drumstick

enter the address:

enter the door number:

4

enter the street name:

kamaraj\_st

enter the locality:

ariyankuppam

enter the city:

puducherry

enter the pincode:

605007

1->Seller

2->Customer

3->exit

enter your choice:

2

Log in as....

1->member

2->guest

To be a member ....

3->register

3

enter the NAME :

rana\_prathap\_singh

enter the E-mail ID:

k.ranaprathap@gmail.com

enter the PASSWARD :

ranarana

enter the PASSWARD again :

ranarana

enter the address:

enter the door number:

3

enter the street name:

kovil\_st

enter the locality:

arumathapuram

enter the city:

puducherry

enter the pincode:

605017

1->Seller

2->Customer

3->exit

enter your choice:

2

Log in as....

1->member

2->guest

To be a member ....

3->register

3

enter the NAME :

praveen

enter the E-mail ID:

praveenblaze8@gmail.com

enter the PASSWARD :

praveen

enter the PASSWARD again :

praveen

enter the address:

enter the door number:

4

enter the street name:

gangai\_st

enter the locality:

lawspet

enter the city:

puducherry

enter the pincode:

605009

1->Seller

2->Customer

3->exit

enter your choice:

1

1->add mobile to stack

2->list the member

2

Name :ranjan e-mail:ranjanrab@gmail.com

address:No:4,kamaraj\_st,ariyankuppam,puducherry,605007

name :rana\_prathap\_singh e-mail:k.ranaprathap@gmail.com

address:No:3,kovil\_st,arumathapuram,puducherry,605017

name :praveen e-mail:praveenblaze8@gmail.com

address:No:4,gangai\_st,lawspet,puducherry,605009

1->Seller

2->Customer

3->exit

enter your choice: