**PROJECT BASED LAB REPORT**

**On**

**SUPER MARKET BILL SYSTEM**

**Submitted in partial fulfilment of the**

**Requirements for the award of the Degree of**

**Bachelor of Technology**

**in**

**ELECTRONICS&COMMUNICATION ENGINEERING**

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**2016-2017**

**K L University**

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***CERTIFICATE***

This is to certify that this project based lab report entitled **“SUPER MARKET BILL SYSTEM”** is a bona fide work done by **ROHINI PANDIRI 2100031934** in partial fulfilment of the requirements for the award of degree in **BACHELOR OF TECHNOLOGY** in **DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING** during the Academic year 2016-2017.

**Faculty in Charge Head of the Department**

**Dr.A.S.C.S.Sastry**

**Project guide**

**K L University**

**DEPARTMENT OF COMPUTER SCIENCE ENGINEERING**



***DECLARATION***

We hereby declare that this project based lab report titled **“SUPER MARKET BILL SYSTEM”** has been prepared by us in partial fulfilment of the requirements for the award of degree “**BACHELOR OF TECHNOLOGY in DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING** during the Academic year 2016-2017.

We also declare that this project based lab report is of our own efforts and it has not been submitted to any other university for the award of any degree.

**ROHINI PANDIRI 2100031934**

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**ABSTRACT**

The theme of the project is to provide the bill for the supermarket, In this we have chosen the menu driven program, Generally supermarket is place where we find all the things we use in our daily life and generally the items in the supermarket are divided in to four types 1) Grocery related items 2) Vegetables and fruits 3) Fancy related items 4) Stationary related items, we will display the menu available in each section which includes item’s cost per quantity. The user selects the item number and number of items required and receives the total bill under that section when the person wants to exit the supermarket he/she receives the Total bill amount. Supermarkets plays a key role for existence of a person in daily life, due to the busy schedule and work pressure people don’t find time for shopping regularly, when they do so they prefer supermarkets mostly because they can find all required items at once place which reduces energy and saves time.in this project we are doing a menu driven program which display the all the items available under a section in order to improve the clarity of customers on things available and bill will be displayed under each section and total bill is collected before leaving the supermarket.

We have used java here in order to achieve the aim of the project. In java we used concepts of Inheritance, files, keywords, method over riding e.t.c., to do the project in the most effective way.

**INTRODUCTION**

A **Supermarket bill system** (**SBS**) is an important element in the Supermarket, which mainly focusses on the bill for the customer, In this implementation of SBS the bill calculation includes all the sections of the Supermarket such as grocery, vegetables and fruit section and the stationary section in a customer friendly manner.

As the technology is developing in brisk pace, trade and exports are also increasing and due to this each and every product is being Globalized and in our daily day life we need certain things for existence so supermarket is a place where we find all the required things.

Supermarket bill Systems provides the information about the items available under each section in order to create customer friendly atmosphere, generally by displaying the menu the customer have the clear picture about the things he/she needs and it saves lot of time for customer and once the shopping is done the customer is ready to take the bill , the bill will be displayed as item name, number of items taken, cost and the total bill under each section is displayed and the total bill is given after completing all the sections.

The SBS have many advantages because it displays the menu and calculates the bill under each section we can avoid any mathematical errors, the customer have’s the clarity regarding the items taken and the amount charged per each item, with this we can also store the data of the customer information, stock sold per day which helps to maintain the stock necessity and can also offer some offers to regularly visiting customers like providing memberships etc.

**DESCRIPTION:**

This project is done using Java programming using the concepts of object oriented programming (oops), and it gives the information about the Supermarket bill system which in detail explain about the process of bill calculation in the Supermarket and various steps involved, we have implemented this project in such a way that it displays the items available under each section of super market to give complete information about the items available and the cost per quantity packed in the packet or per item and we will ask the customer whether the person is ready to take the bill, once the person gives the indication that he/she is ready the bill calculation starts. In the process of bill calculation the item number is taken as the product number as displayed in the menu and the bill amount is displayed for each section and total bill amount is calculated after completing every section. We have implemented this project using the concepts of inheritance and created a parent class Supermarket which was extended by the child classes grocery, vegetables, fancy, stationary. we also used method over riding concept

This project can be taken as example and this type of projects can be implemented in various work places like medical store and sports store which also have different sections with different items.

**FUNCTIONAL REQUIREMENTS**

|  |  |  |  |
| --- | --- | --- | --- |
| 1 |  | Supermarket information |  |
|  |  | To take the customer details | Here we are taking the customer name and phone number on which the bill will be generated and data is stored |
|  |  | Displays all items available under all the sections | Displays all the items(Menu)available under all the sections such as grocery, vegetable, fancy, stationary |
|  |  | To calculate the bill as per the items taken by the customer. | This is used to calculate the bill for the customer based on items taken in each section of the Supermarket |
|  |  | To return the bill amount under each section | The bill amount under each section of the supermarket will be returned in order to calculate the total bill of a customer |
| 2 |  | Main Module |  |
|  |  | Display System | To display all the sections available in supermarket and ask the customer his choice |
|  |  | To process menu | To process menu as per customer choice one after the other until the customer chooses to exit |
|  |  | Initializations | Here Initializationscan be done to methods, variables as well as objects which are present in classes |
|  |  |  |  |
|  |  | To access | To provide easy access we informed everything to user which will able to access his details. we can be able to read the file and record of that file, and write that file where he can be able to do modifications for files that are present. |

**Purpose**  
  The purpose of this project is to implement the Supermarket bill system which displays all the items available under all the sections of the Supermarket and calculate the bill with zero errors

**NON-FUNCTIONAL REQUIREMENTS**

INHERITANCE :

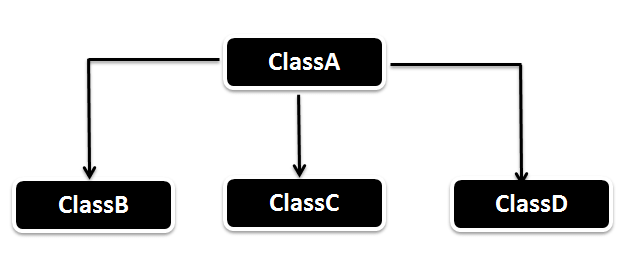
Inheritance in java is a mechanism in which one object acquires all the properties and

behaviors of parent object. The idea behind inheritance in java is that you can create new

classes that are built upon existing classes.

MUTIPLE INHERITANCE :

In this [inheritance](https://www.javainterviewpoint.com/inheritance-in-java/) multiple classes inherits from a [single](https://www.javainterviewpoint.com/single-inheritance-in-java-with-example/) class i.e there is one super class and [multiple](https://www.javainterviewpoint.com/multiple-inheritance-in-java-with-example/) sub classes. As we can see from the below diagram when a same class is having more than one sub class (or) more than one sub class has the same parent is called as **Hierarchical Inheritance.**



METHOD OVERRIDING:

In object oriented programming, is a language feature that allows a subclass or child class to provide a specific implementation of a method that is already provided by one of its super classes `or parent classes.

EXCEPTION HANDLING:

An exception (or exceptional event) is a problem that arises during the execution of a program. When an Exception occurs the normal flow of the program is disrupted and the program/Application terminates abnormally, which is not recommended, therefore, these exceptions are to be handled.

I/O FILES:

The java.io package contains nearly every class you might ever need to perform input and output (I/O) in Java. All these streams represent an input source and an output destination. The stream in the java.io package supports many data such as primitives, object, localized characters, etc.

CODE:

import java.util.\*; import java.io.\*;

class supermarket{

String cname;

long cphno;

void display(String name,long n){

cname=name; cphno=n;

System.out.println("customer name"+" "+cname);

System.out.println("customer phone number"+" "+cphno);}}

class grossery extends supermarket{

void display(){

System.out.println(" welcome to the grossery section");

System.out.println("The menu is");

System.out.println("product no name Quantity perpacket cost in Rs");

System.out.println("1 cashew nuts 0.5kg 500 ");

System.out.println("2 Green pepper 0.5kg 300");

System.out.println("3 Black gram 1kg 130");

System.out.println("4 Bengal gram 1kg 85");

System.out.println("5 Green gram 1kg 120");

System.out.println("6 Red gram 1kg 100");

System.out.println("7 poppy seeds 0.5kg 199");

System.out.println("8 coriander seeds 1kg 127");

System.out.println("9 Rice 1kg 50");

System.out.println("10 Ground nuts 1kg 130");

System.out.println("enter any number other than zero(1-10)to incidate your ready to take the bill");}

int calculatebill(){

int costp1=0,costp2=0,costp3=0,costp4=0,costp5=0,costp6=0,costp7=0,costp8=0, costp9=0, costp10=0,Totalcost1=0;int itmno;Scanner sc=new Scanner(System.in);

itmno=sc.nextInt();

while(itmno!=0){

System.out.println("enter the item number");

System.out.println("enter item number as zero if you want exit this section");

itmno=sc.nextInt();

if(itmno==1){

System.out.println("enter the no of packets required");int n1;

n1=sc.nextInt();

costp1=n1\*500;

System.out.println("cashew nuts 0.5kg "+ n1+"packets"+" "+costp1);}

else if(itmno==2){

System.out.println("enter the no of packets required"); int n2;

n2=sc.nextInt();

costp2=n2\*300;

System.out.println("Green pepper 0.5kg "+ n2+"packets"+" "+costp2);}

else if(itmno==3){

System.out.println("enter the no of packets required"); int n3;

n3=sc.nextInt();

costp3=n3\*130;

System.out.println("Black gram 1kg "+ n3+"packets"+" "+costp3);}

else if(itmno==4){

System.out.println("enter the no of packets required"); int n4;

n4=sc.nextInt(); costp4=n4\*85;

System.out.println("Bengal gram 1kg "+ n4+"packets"+" "+costp4);}

else if(itmno==5){

System.out.println("enter the no of packets required"); int n5;

n5=sc.nextInt();

costp5=n5\*120;

System.out.println("Green gram 1kg "+ n5+"packets"+" "+costp5);}

else if(itmno==6){

System.out.println("enter the no of packets required"); int n6;

n6=sc.nextInt();

costp6=n6\*100;

System.out.println("Red gram 1kg "+ n6+"packets"+" "+costp6);}

else if(itmno==7){

System.out.println("enter the no of packets required");

int n7;

n7=sc.nextInt();

costp7=n7\*199;

System.out.println("poppy seeds 0.5kg "+ n7+"packets"+" "+costp7);}

else if(itmno==8) {

System.out.println("enter the no of packets required");

int n8;

n8=sc.nextInt();

costp8=n8\*127;

System.out.println("coriander seeds 1kg "+ n8+"packets"+" "+costp8);}

else if(itmno==9) {

System.out.println("enter the no of packets required");

int n9;

n9=sc.nextInt();

costp9=n9\*50;

System.out.println("Rice 1kg "+ n9+"packets"+" "+costp9);}

else if(itmno==10) {

System.out.println("enter the no of packets required");

int n10;

n10=sc.nextInt();

costp10=n10\*130;

System.out.println("Ground nuts 1kg "+ n10+"packets"+" "+costp10);} }

Totalcost1=costp1+ costp2+ costp3+ costp4+ costp5+ costp6+ costp7+ costp8+ costp9+ costp10;

System.out.println("The total bill under the grossery section is"+ " "+Totalcost1);

return(Totalcost1);

}}

class Vegetables extends supermarket{

void display() {

System.out.println(" welcome to the vegetable section");

System.out.println("The menu is");

System.out.println("product no name Quantity perpacket cost in Rs");

System.out.println("1 Tomato 1kg 13");

System.out.println("2 Brinjal 1kg 22");

System.out.println("3 Ladies finger 1kg 22");

System.out.println("4 potato 1kg 35");

System.out.println("5 carrot 1kg 70 ");

System.out.println("6 apple dozen 300");

System.out.println("7 Banana dozen 60");

System.out.println("8 orange dozen 50");}

int calculatebill(){

int costv1=0,costv2=0,costv3=0,costv4=0,costv5=0,costf1=0,costf2=0,costf3=0,Totalcost2=0;

int itmn1;

System.out.println("enter any number other than zero(1-10)to incidate your ready to take the bill");

Scanner sc=new Scanner(System.in);

itmn1=sc.nextInt();

while(itmn1!=0) {

System.out.println("enter the item number");

System.out.println("enter item number as zero if you want exit this section");

itmn1=sc.nextInt();

if(itmn1==1) {

System.out.println("enter the no of packets required"); int v1;

v1=sc.nextInt();

costv1=v1\*13;

System.out.println("Tomato 1kg "+ v1+"packets"+" "+costv1);}

else if(itmn1==2) {

System.out.println("enter the no of packets required"); int v2;

v2=sc.nextInt();

costv2=v2\*22;

System.out.println("Brinjal 1kg "+ v2+"packets"+" "+costv2);}

else if(itmn1==3){

System.out.println("enter the no of packets required");int v3;

v3=sc.nextInt();

costv3=v3\*22;

System.out.println("ladies finger 1kg "+ v3+"packets"+" "+costv3);}

else if(itmn1==4) {

System.out.println("enter the no of packets required"); int v4;

v4=sc.nextInt();

costv4=v4\*35;

System.out.println("potato 1kg "+ v4+"packets"+" "+costv4);}

else if(itmn1==5) {

System.out.println("enter the no of packets required"); int v5;

v5=sc.nextInt();

costv5=v5\*70;

System.out.println("carrot 1kg "+ v5+"packets"+" "+costv5);}

else if(itmn1==6){

System.out.println("enter the no of packets required"); int v6;

v6=sc.nextInt();

costf1=v6\*300;

System.out.println("apple dozen "+ v6+"packets"+" "+costf1);}

else if(itmn1==7) {

System.out.println("enter the no of packets required"); int v7;

v7=sc.nextInt();

costf2=v7\*60;

System.out.println("Banana dozen "+ v7+"packets"+" "+costf2);}

else if(itmn1==8) {

System.out.println("enter the no of packets required"); int v8;

v8=sc.nextInt();

costf3=v8\*50;

System.out.println("orange dozen "+ v8+"packets"+" "+costf3);}}

Totalcost2=costv1+ costv2+ costv3+ costv4+ costv5+ costf1+ costf2+ costf3;

System.out.println("The total bill under the vegetable section is"+" "+Totalcost2);

return(Totalcost2);}}

class fancy extends supermarket{

void display() {

System.out.println(" welcome to the fancy section");

System.out.println("The menu is");

System.out.println("product no name Quantity perpacket cost in Rs");

System.out.println("1 Bottle 1 130 ");

System.out.println("2 Lunch box 1 240");

System.out.println("3 Umbrella 1 300");

System.out.println("4 Makeup kit 1 780");

System.out.println("5 LED light 1 175");}

int calculatebill(){

int costs1=0,costs2=0,costs3=0,costs4=0,costs5=0,Totalcost3;

int itmn2;

System.out.println("enter any number other than zero(1-10)to incidate your ready to take the bill");

Scanner sc=new Scanner(System.in);

itmn2=sc.nextInt();

while(itmn2!=0) {

System.out.println("enter the item number");

System.out.println("enter item number as zero if you want exit this section");

itmn2=sc.nextInt();

if(itmn2==1) {

System.out.println("enter the no of bottles required"); int s1;

s1=sc.nextInt();

costs1=s1\*130;

System.out.println("bottle 1 "+ s1+" "+costs1);}

else if(itmn2==2) {

System.out.println("enter the no of items required"); int s2;

s2=sc.nextInt();

costs2=s2\*240;

System.out.println("lunch box "+ s2+" "+costs2);}

else if(itmn2==3){

System.out.println("enter the no of umbrellas required"); int s3;

s3=sc.nextInt();

costs3=s3\*130;

System.out.println("Umbrella "+ s3+" "+costs3);}

else if(itmn2==4){

System.out.println("enter the no of kits required"); int s4;

s4=sc.nextInt();

costs4=s4\*785;

System.out.println("make up kit "+ s4+" "+costs4);}

else if(itmn2==5) {

System.out.println("enter the no of packets required");

int s5;

s5=sc.nextInt();

costs5=s5\*175;

System.out.println("Led light "+ s5+" "+costs5);}}

Totalcost3=costs1+ costs2+ costs3+ costs4+ costs5;

System.out.println("The total bill under the Fancy section is"+ " "+Totalcost3);

return(Totalcost3);}}

class stationary extends supermarket{

void display() {

System.out.println(" welcome to the stationary section");

System.out.println("The menu is");

System.out.println("product no name Quantity cost in Rs");

System.out.println("1 pencil 1 5 ");

System.out.println("2 eraiser 1 5");

System.out.println("3 scale 1 10");

System.out.println("4 Book 1 30");

System.out.println("5 pen 1 10");

System.out.println("6 pouch 1 50");}

int calculatebill() {

int costd1=0,costd2=0,costd3=0,costd4=0,costd5=0 ,costd6=0;

int itmn3; int Totalcost4;

System.out.println("enter any number other than zero(1-10)to incidate your ready to take the bill");

Scanner sc=new Scanner(System.in);

itmn3=sc.nextInt();

while(itmn3!=0) {

System.out.println("enter the item number");

System.out.println("enter item number as zero if you want exit this section");

itmn3=sc.nextInt();

if(itmn3==1) {

System.out.println("enter the no of pencils required");

int d1;

d1=sc.nextInt();

costd1=d1\*5;

System.out.println("Pencil "+ d1+" "+costd1);}

else if(itmn3==2) {

System.out.println("enter the no of eraises required"); int d2;

d2=sc.nextInt();

costd2=d2\*5;

System.out.println("Eraiser "+ d2+" "+costd2);}

else if(itmn3==3) {

System.out.println("enter the no of scales required");

int d3;

d3=sc.nextInt();

costd3=d3\*10;

System.out.println("scale "+ d3+" "+costd3);}

else if(itmn3==4) {

System.out.println("enter the no of books required");

int d4;

d4=sc.nextInt();

costd4=d4\*25;

System.out.println("Book "+ d4+" "+costd4);}

else if(itmn3==5){

System.out.println("enter the no of pens required");

int d5;

d5=sc.nextInt();

costd5=d5\*10;

System.out.println("pen"+ d5+" "+costd5);}

else if(itmn3==6) {

System.out.println("enter the no of pounches required");

int d6;

d6=sc.nextInt();

costd6=d6\*50;

System.out.println("pouches"+ d6+" "+costd6);} }

Totalcost4=costd1+ costd2+ costd3+ costd4+ costd5 + costd6;

System.out.println("The total bill under the stationarysection is"+" "+Totalcost4);

return(Totalcost4);}}

public class Supermarketdem{

public static void main( String args[])throws Exception {

System.out.println("Enter your name and phone number");

String name;long n; int p=0,q=0,r1=0,s1=0;

Scanner sc=new Scanner(System.in);

name=sc.next(); n=sc.nextLong();

supermarket s =new supermarket();

supermarket r;

System.out.println("welcome to the supermarket");

System.out.println("Enter your choice");

System.out.println("Enter your choice other than '5'(1-4) to indicate your ready for shopping");

int choice;

choice=sc.nextInt();

s.display(name,n);

while(choice!=5){

System.out.println("Enter your choice");

System.out.println("Enter 1 for grossery related items");

System.out.println("Enter 2 for vegetable related items");

System.out.println("Enter 3 for fancy items ");

System.out.println("Enter 4 for stationary related items");

System.out.println("Enter 5 for exit");

choice=sc.nextInt();

if(choice==1) {

grossery g =new grossery();

g.display();

p=g.calculatebill();}

else if(choice==2) {

Vegetables v=new Vegetables();

v.display();

q=v.calculatebill();}

else if(choice==3) {

fancy f=new fancy();

f.display();

r1=f.calculatebill();}

else if(choice==4) {

stationary st=new stationary();

st.display();

s1=st.calculatebill(); }

else if (choice>=6){

System.out.println("please enter the correct choice");}}

int Totalbill=p+q+r1+s1;

System.out.println("the totalbill amount is "+Totalbill);

System.out.println("Thanks for shopping visit again");

File fil=new File("Supermarketdata.txt");

BufferedWriter output=new BufferedWriter(new FileWriter("Supermarketdata.txt",true));

output.write("name of customer"+" "+name+" ");

output.write("phone number of customer"+" "+n+" ");

output.write("bill of customer"+" "+Totalbill+" ");

output.newLine();

output.close();}}

**OUTPUT:**

**SCREEN SHOTS**

