

Automated Order Management System for ... “City Mart”

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Assignment Cover Sheet

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Learner declaration

I am T.M.Savindu Pasingtha NG/HNDCSE/24/11, certify that the work submitted for this assignment is my own and research sources are fully acknowledged.

Marks Awarded

First assessor	
IV marks	
Agreed grade	
Signature of the assessor	

FEEDBACK FORM**INTERNATIONAL COLLEGE OF BUSINESS & TECHNOLOGY****Module/Title:****Student:** T.M. Savindu Pasingtha**Assessor:****Assignment:**

Strong features of your work:

Areas for improvement:

Marks Awarded:

ACKNOLEDGMENT

In preparation of my assignment, I had to take the help and guidance of some respected persons, who deserve my deepest gratitude. As the completion of this assignment gave me much pleasure, I would like to show my gratitude **Mr. Sanaka Perera**, our lecturer, on ICBT Campus for giving me good guidelines for assignment throughout numerous consultations. I would also like to expand my gratitude to all those who have directly and indirectly guided me in making this assignment.

ABSTRACT

This assignment comes under Object Oriented Programming skill for module at HNDCSE program. This assignment mainly focus, “CITY MART” wholesaler to develop a new Automated Order Management System. This system very help full to improve their business.

To completely this assignment firstly I discussed about what data is and what the java programming language object oriented concepts and it means explain with proper examples. So I clearly identify where to we can use OOP concept in this system project. In the second task I provide proper UML diagram for the above mentioned requirements. Its include User case diagram, Class diagram and Sequence diagram. Third task I develop the system for “CITY MART” based on the UML designs. Not only that I provide source code and interface screenshots with proper explanation.

In fourth task I mentioned proper testing technics, and after I tested this system. So below I included proper test plan and proper test cases. Finally I discussed what is the weakness and strength in this system. Not only that I included proper references and GANTT chats to this assignment.

INTRODUCTION

This assignment mainly focused to create Automated Order Management System for “CITY MART” using Java programming language. So, object oriented concepts use to build this system. Not only has that how to UML diagrammed techniques using build proper system discuss in this assignment.

So I included this system to, multi user login system and bellow I mention main three **actors** activities in the system.

- **Manager** – Creating and managing user accounts, view stock details, view sales details, view suppliers, view request and approve requests.
- **Stock Keeper** – Create and manage items, view stock details and create purchase requests.
- **Cashier/Accountant** – Generate purchase order.

That all functions are properly work in the system. I used attractive user interfaces to implement this system. MYSQL Database provided the all backend database tasks in XAMPP server. There for any one can quickly data management task in the system such as logging, registering, purchases order and others.

I think this system can easy to use and improve their business every day.

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TASK 1

What is the OOP Concept?

Object oriented programming is a computer programming model that organizes software design around data or objects rather than functions and logic. (Rouse, 2020) In this part we can identify major topics such as object, classes, Inheritance, Polymorphism, Abstract and Encapsulation. When we learn OOP concepts, these concepts depend on below terms. Such as coupling, cohesion, association and composition. Now we consider what the OOP concepts is one by one by one and describe bellow.

Object

Any entity that has state and behavior is known as object. Such chair, car, pen, keyboard and others. Object can be create as instance of class.

```
13  import oop.LoginClass;
14
15  @ public class Loginpage extends javax.swing.JFrame{

    // LoginClass Instance create
    LoginClass log=new LoginClass();

    //instance using access login class variables /methods
    log.setUname(loginusernameTextField.getText());
    log.setPswd(loginPasswordField1.getText());
    log.ManagerCashierStoreLog(logtypecombo);
```

Java data types Data types

We can identify main two type of Data types.

Primitive data types specifies the size and type of variables values, and it has no additional methods. Such as, Boolean, char, byte, short, Int, long, float and double. Not only that, class, interface, arrays, strings and other belong to **Non-primitive** data types. (Anon., 2020)

Access modifiers

Access modifiers in java specific the accessibility or scope of a field, method, constructor or class.so, we can change the access level of fields, constructors, methods and class by applying the

modifier on it. We can see main four type of access modifiers. Such as, **public**, **private**, **protected** and **default**. (Anon., 2011)

Let's understand the access modifiers in Java by a simple table.

Access Modifier	within class	within package	outside package by subclass only	outside package
Private	Y	N	N	N
Default	Y	Y	N	N
Protected	Y	Y	Y	N
Public	Y	Y	Y	Y

Figure 1-Access modifiers

Not only that we can identify Non-access-Modifier as a **static** key word. (Anon., 2011)

Return data type

Most time return data type use when we implement the method or function. Return data type used to identify the returning value data type (void mean is no return value and other data type's int-string-double-float and others or some class object -function.) in the method.

Methods or functions

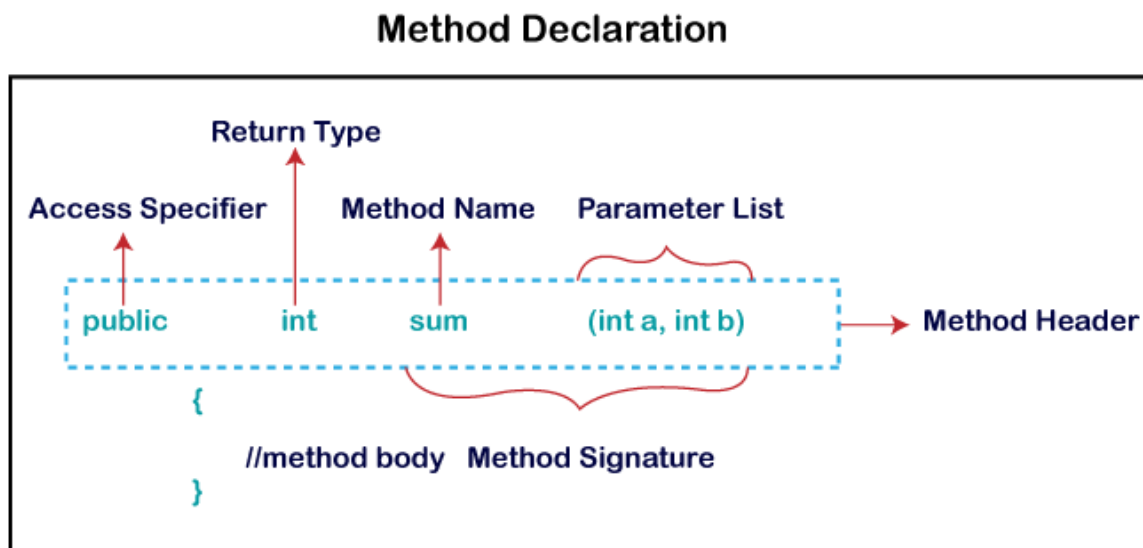


Figure 2-Access Modifiers

Especially the method haven't a return value, so we should use **Void** key word as a return data type.

Class

A class is an extensible program-code-template or blueprint or prototype for creating objects. Class have object's behaviors or states and Methods or fields.

Access Modifier class name of the class { // your body of code here }

```
13  import oop.LoginClass;
14
    public class Loginpage extends javax.swing.JFrame{
```

Constructor method

Constructor method is a same class name to same method name. Constructor method to have no return types. Constructor methods run time compiling. Not only that java constructor cannot be abstract, static, final and synchronized. (Anon., 2020)

Class constructor { constructor () { } }

```
public class DatabaseConnect {
    //constructor method same class name
    public void DatabaseConnect() throws SQLException{
        try {
            conn = (Connection) DriverManager.getConnection(urlldb, usernamedb, passworddb);
            System.out.println(" XAMPP SERVER MYSQL DATABASE CONNCTED. ");

        } catch (SQLException ex) {
            Logger.getLogger(DatabaseConnect.class.getName()).log(Level.SEVERE, null, ex);
        }
    }
}
```

Inheritance

Inheritance in java is a mechanism in which one object requires all the properties and behaviors of a parent object. So, when it's using code reusability and when we use run time polymorphism we can use methods overriding. In the OOP have main five type of inheritance, Such as single, Multilevel, hierarchical, hybrid, and multiple inheritance. But in the java programming not supported to multilevel inheritance. So its problem avoided using the **interfaces** concept. It's like as a java class. "**Extends**" key word use to inherit the some sub class to parent class. When we use interfaces inheritance to use **Implement** key word.

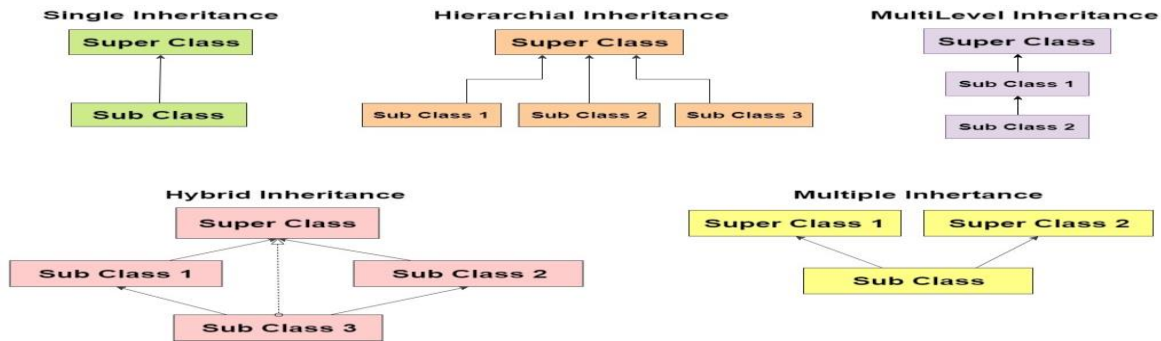


Figure 3-Inheritance types

```

21
22     public class User_Accounts extends javax.swing.JFrame {
23         package oop;

        public class Manager extends DatabaseConnect{

```

Polymorphism

Polymorphism in java is a concept by which we can perform a single action in different ways. (Many forms). We can see two types of polymorphism such as statics and dynamic polymorphism. Compile time polymorphism to tell **static**. So, this concept using **Method Overloading**.

In the run time polymorphism to tell **dynamic**, in this concept use **Method Overriding**.

❖ Method Overloading

Create a same name with multiple methods in same class body. So, do this should all the methods return data type should same and all methods should have difference parameters. This concept to called method overloading. (Anon., 2020)

❖ Method Overriding

When inherited class methods change in the child class body using creating new parent class method name to same method. Not only should that it be same parameters in the method. (Anon., 2020)

- You should know private, statics, final and final class methods cannot be an override.

```

5  import com.mysql.jdbc.Connection;
6  import com.mysql.jdbc.PreparedStatement;
7  import com.mysql.jdbc.ResultSetMetaData;
8  import java.sql.ResultSet;
9  import java.sql.DriverManager;
10 import java.sql.SQLException;
11 import java.util.Vector;
12 import java.util.logging.Level;
13 import java.util.logging.Logger;
14 import javax.swing.table.DefaultTableModel;
15
16 @ public class DatabaseConnect {
17     //DB Connection path/username/password
18     public static String urldb="jdbc:mysql://localhost:3306/city_mart";
19     public static String username="root";
20     public static String password="";
21     //DB Connection classes
22     public Connection conn=null;
23     public PreparedStatement insert;
24     public ResultSet rs= null;
25     public DefaultTableModel model;
26     public ResultSetMetaData rss;
27     //sql query variables
28     public String selectquery;
29     public String deletequery;
30     public String updatequery;
31     public String addquery;
32

```

```

6  import java.awt.HeadlessException;
7  import java.sql.SQLException;
8  import java.util.Vector;
9  import java.util.logging.Level;
10 import java.util.logging.Logger;
11 import javax.swing.JOptionPane;
12 import javax.swing.table.DefaultTableModel;
13
14
15
16
17 public class SupplierClass extends DatabaseConnect{
18     public String s_id,s_name,s_food,s_add,s_contact;
19     public String dq="DELETE FROM supplieraccounttable WHERE s_id=";
20

```



```

131 public void delete(){
132     try{
133         int dialogBoxResult=JOptionPane.showConfirmDialog(null,"Do you want DELETE this Row-Record.. ?",
134             "Warning",JOptionPane.YES_NO_OPTION);
135         if(dialogBoxResult == JOptionPane.YES_OPTION){
136             /* 1- connect database connection */
137             super.DatabaseConnect();
138             super.deletequery=dq;
139             // deletequery="DELETE FROM suplieraccounttable WHERE s_id=?";
140             super.delete(); /*insert=(PreparedStatement) conn.prepareStatement(deletequery);*/
141             int id = Integer.parseInt(s_id);
142             insert.setInt(1,id);
143             /* 3- Executequery Now */
144             super.queryexeute();
145             JOptionPane.showMessageDialog(null,"ID "+id+" Deleted" );
146         } else {System.out.println("Thank you");}
147     }catch (SQLException ex) {
148         JOptionPane.showMessageDialog(null,ex);
149         Logger.getLogger(Cashier.class.getName()).log(Level.SEVERE, null, ex);
150         System.out.println(ex.getMessage()+"This is ERROR -- ");
151     }catch (HeadlessException x){
152         JOptionPane.showMessageDialog(null,x);
153         System.out.println("This is ERROR -- "+x);
154     }finally{
155         /* 4- close the connection */
156         super.Connectionclose();
157     }
158 }

```

```

public class Storemanager extends javax.swing.JFrame {

```

```

private void deleteitemTextField5MouseClicked(java.awt.event.MouseEvent evt) {
    try{
        //okedi kale Cashier ge delete query ek pass krl Supplier object ekt ethnin Cashier purchase order ek execute kala
        SupplierClass s=new SupplierClass();
        s.s_id=itemidtf.getText();
        s.dq="DELETE FROM store WHERE id=?";
        // int storedid = Integer.parseInt(itemidtf.getText());
        s.delete();
    }catch (NumberFormatException e){ JOptionPane.showMessageDialog(this, e); }finally{cleartxt();}
}

```

21

```

22 public class User_Accounts extends javax.swing.JFrame {
23

```

```

904 private void r_deleteButtonActionPerformed(java.awt.event.ActionEvent evt) {
905     try{
906         //okedi kale Cashier ge delete query ek pass krl Supplier object ekt ethnin Cashier p
907         SupplierClass s=new SupplierClass();
908         s.s_id=r_idTextField.getText();
909         s.dq="DELETE FROM user_accountstable WHERE id=?";
910         // int storedid = Integer.parseInt(itemidtf.getText());
911         s.delete();
912     }catch (NumberFormatException e){ JOptionPane.showMessageDialog(this, e);
913     }finally{clearedText();}
914
915 }

```

Casting

➤ *Up casting*

When there are inherited parent class object put to sub class object, this concept to call up casting. Therefore when we can access the sup class methods and variable using calling through the parent class object.

➤ *Down casting*

When there are inherited sub/child class object put to the parent class object, this concept to call down casting. Therefore when we can access the parent class methods and variable using calling through the sub class object.

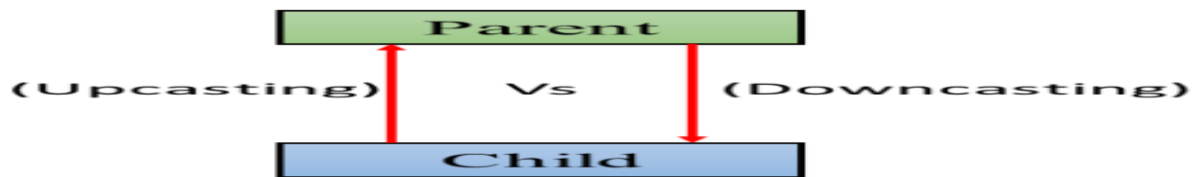


Figure 4-Casting

Abstract

Abstract mean is we cannot write codes. So, some time we can will be identify some methods and class we cannot write codes. So, its class and methods to us call as abstract class or abstract methods. So, when we implement the abstract class or method firstly we should the put “**abstract**”

Keyword before the class keyword or method name.

- You should know, abstract class cannot generate an objects in this class using. Because we cannot generate constructor method in the abstract class. But we can inherited that abstract class and after we can access the sub class through the parent (abstract) class methods and variables. Not only that we can override the other methods in the abstract class.
- Abstract methods access to have another way is that all inherited class should be an abstract. So this task to do have another way. It is an **interfaces** concept. Interface like as a classes. (Anon., 2020)

Encapsulation

Encapsulation in java is a mechanism of wrapping the data variables and code acting on the data (method) together as a single unit. In encapsulation, the variables of a class will be hidden from

other classes, and can be accessed only through the methods of their current class. Therefore, it is also known as **data hiding**.

- Firstly we declare the **variables** with **private access modifier**. After generate **getters** and **setters** with **public** access modifier to, put values in to variable and get the value in inside the variable.

```
6      import All_Frames.Loginpage;
7      import All_Frames.Managerhome;
8      import All_Frames.Storekeep;
9      import All_Frames.cashier;
10     import java.awt.HeadlessException;
11     import java.sql.SQLException;
12     public class LoginClass extends DatabaseConnect{
13         private String uname, pswd,w;
14
15         //ENCAPSULATION - getters/setters create
16         public String getUname() {
17             return uname;
18         }
19         public void setUname(String uname) {
20             this.uname = uname;
21         }
22         public String getPswd() {
23             return pswd;
24         }
25         public void setPswd(String pswd) {
26             this.pswd = pswd;
27         }
28         public String getW() {
29             return w;
30         }
31         public void setW(String w) {
32             this.w = w;
33         }
34     }
35
36     import oop.LoginClass;
37
38     public class Loginpage extends javax.swing.JFrame{
39
40         private void logbtnActionPerformed(java.awt.event.ActionEvent evt) {
41             String logtypecombo=logComboBox.getSelectedItemAt().toString();
42             LoginClass log=new LoginClass();
43             log.setUname(loginusernameTextField.getText());
44             log.setPswd(loginPasswordField1.getText());
45             log.ManagerCashierStoreLog(logtypecombo);
46         }
47     }
```

“This” Key word

This key word use to access current class variables and methods.

Ex- this. Variable; this. Method ();

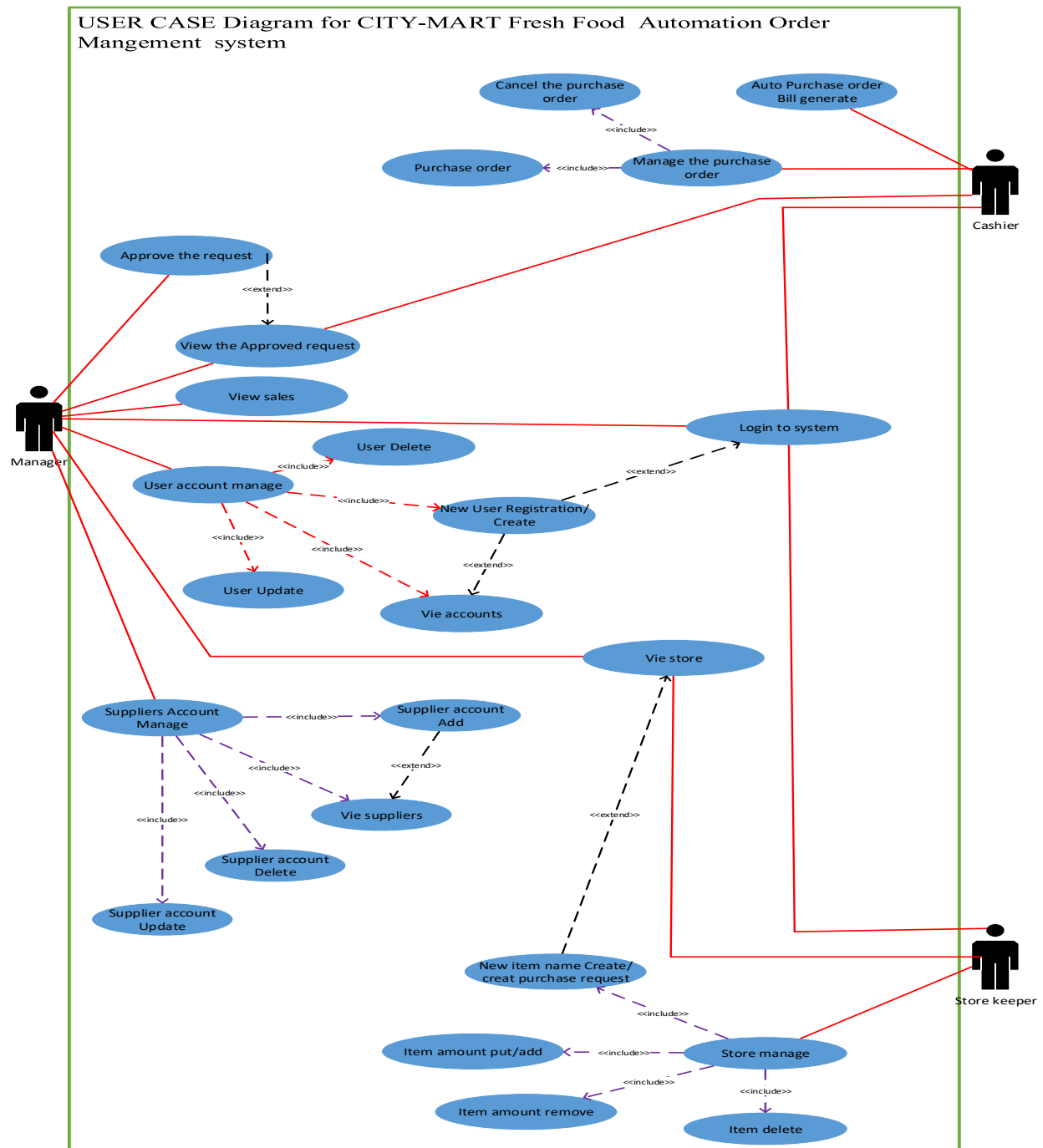
“Super” Key word

Super key word use to access Parent or super class variables and methods.

Ex- super.variable; super.Methods ();

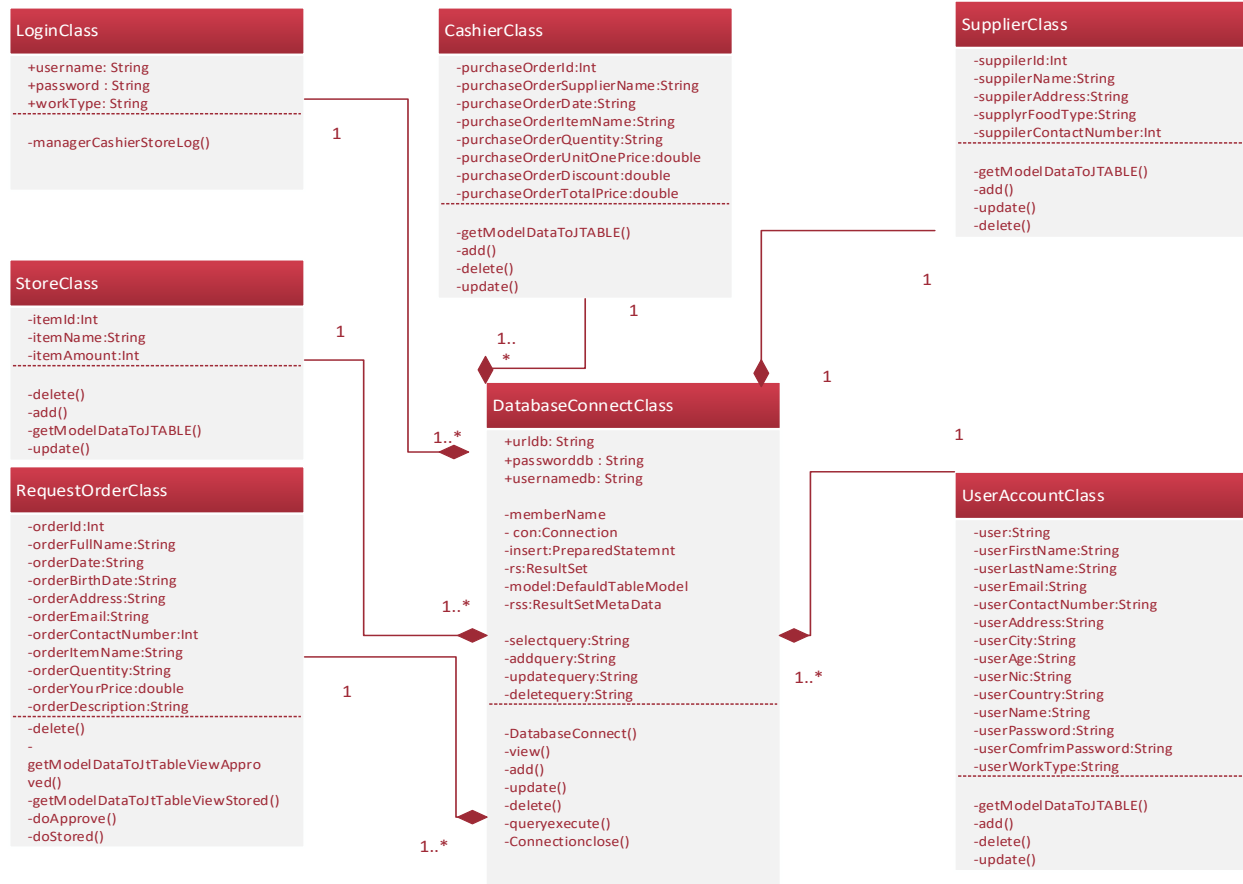
TASK 2

User Case Diagram



In this diagram I show all the this automation order system functions and who is the it's do. So I identified main three actors as “manager, cashier and supplier” and their tasks.

Class Diagram for City Mart Automation Order System



Assumptions

- I thought all DatabaseConnectionClass with other all the class have “COMPOSITION” relationship.
- Not only that I thought DatabaseConnectionClass multiplicity have “one to many” with other classes.
- DatabaseConnectionClass have Add, delete, update methods inherit and override to other all the classes. Because I could identify that methods common to all the classes. Not only have that in the Java between normal classes can’t multiple inheritance.
- GetModelDataToJTable methods to use return the DefaultTableModel class object. So this objects after the cached in design pages “jTable” to send all the model data to view rows and Columns in the Database Table.

TASK 3

Home Page



This is a Home page or Landing window page of System. This page have Home, Manager, Cashier, Stock-keeper buttons. It's to use me all the label to set mouse click events to like as to work buttons.

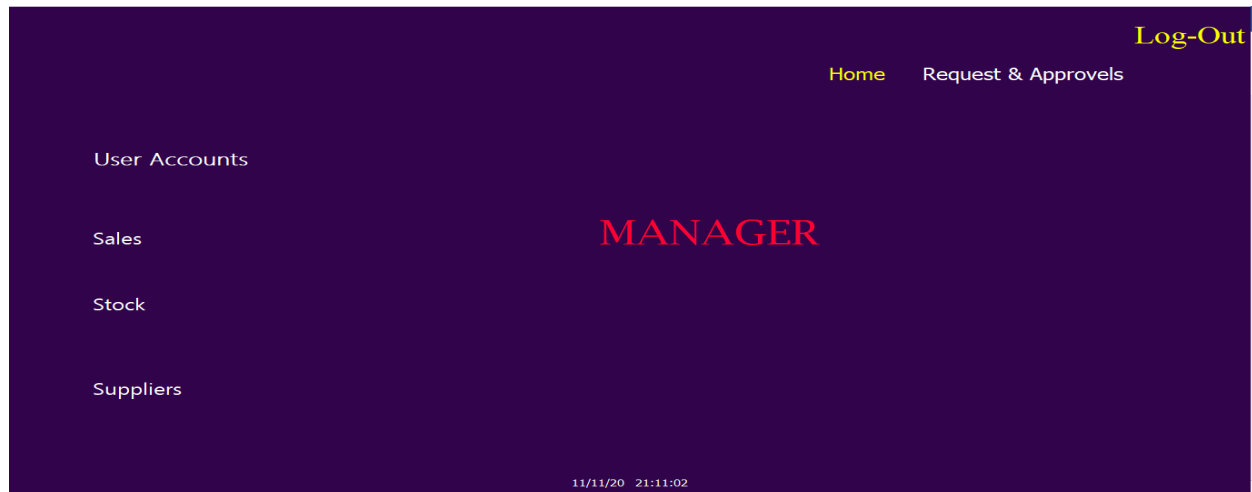
When clicked the buttons we carry to the login page. If login success open new windows page as a Manager, Cashier, Stock-keeper home pages. Middle of the page have label “city mart fresh food”, so we can mouse move through it then change it font color.

Cashier Page



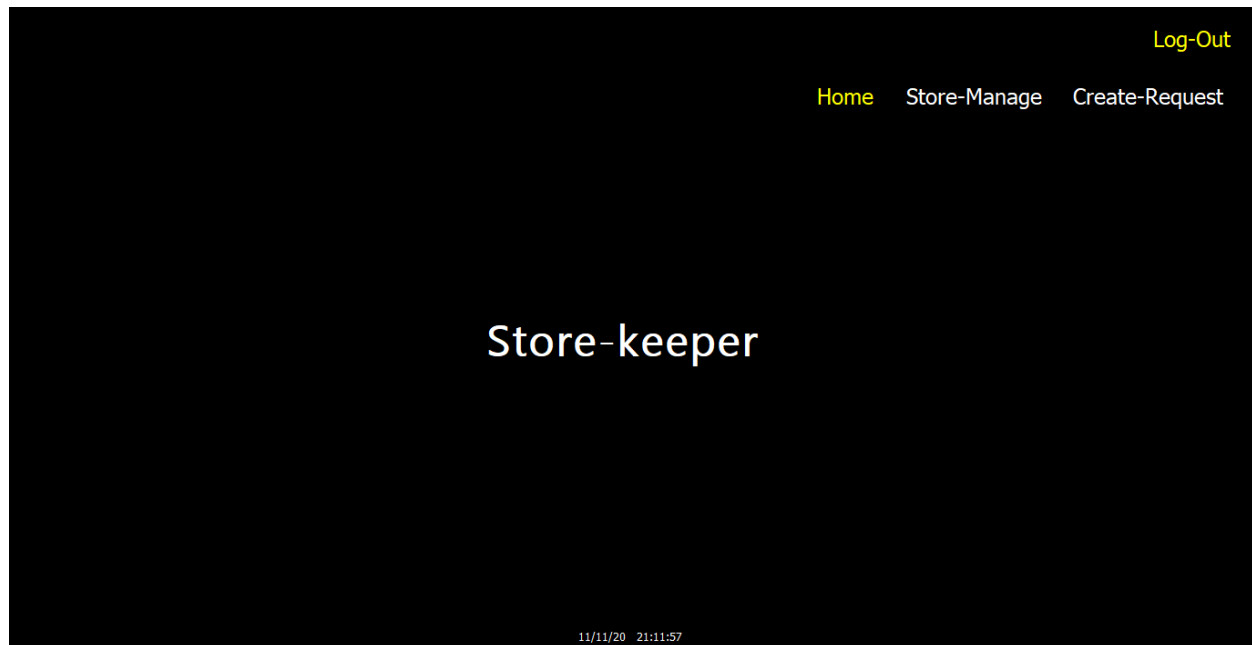
Cashier can view the Approve-request, sales view and purchase-order. I think when purchasing order cashier to helpful to check this order is approve or not. Then he or she can purchase the order within bill.

Manager page



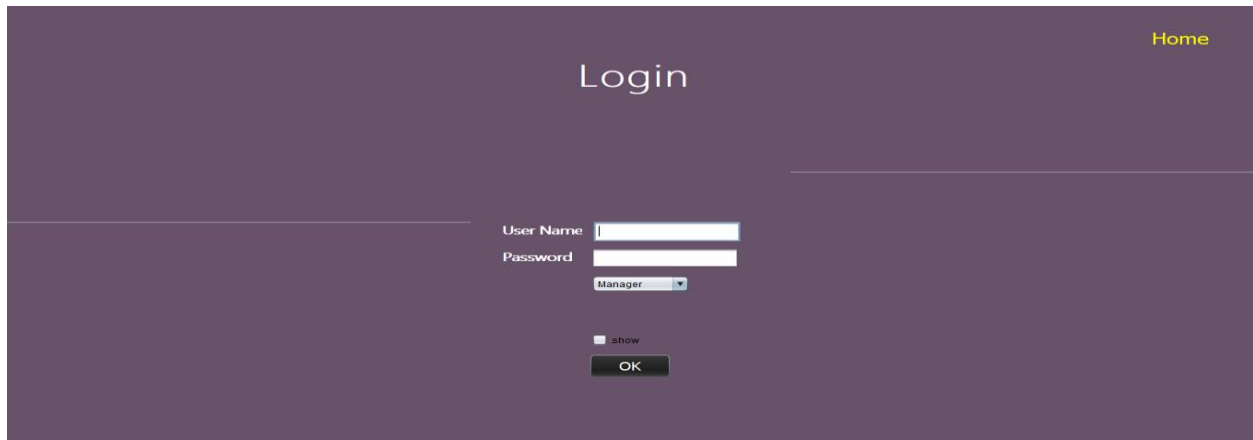
Manager can approve the order, user accounts manage, Suppliers mange, sales and stock view access. .

Store-Keeper page



Stock-keeper can create request and he can stack manage.

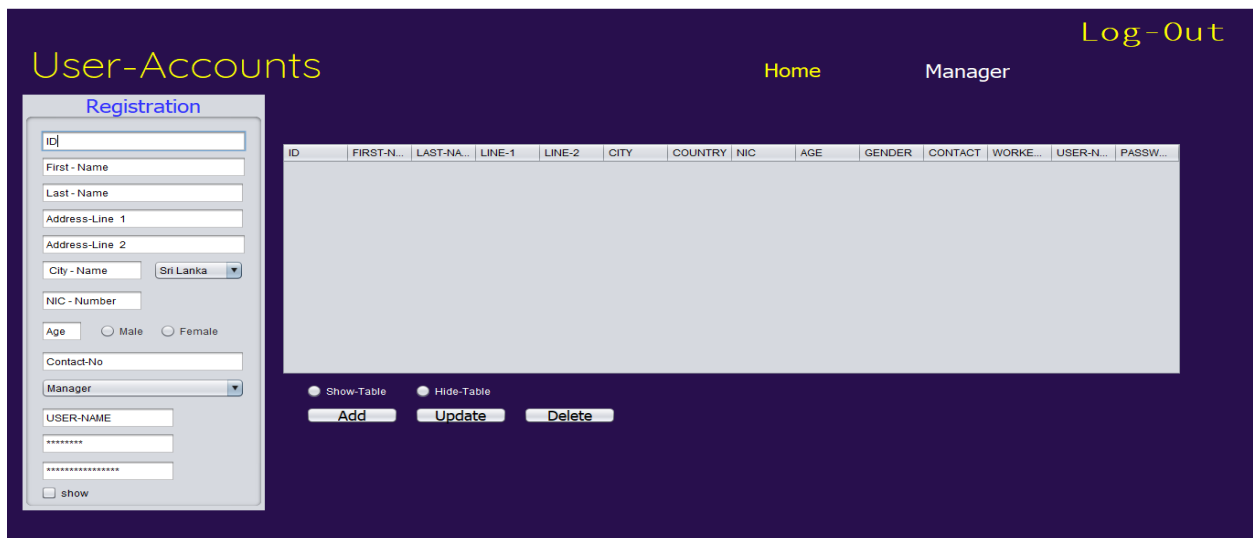
Login page



The screenshot shows a login page with a dark purple background. At the top right is a yellow 'Home' link. The word 'Login' is centered in white. Below it, there are input fields for 'User Name' and 'Password'. A dropdown menu is set to 'Manager'. There is a 'show' checkbox and an 'OK' button.

Login page have multi user login facility. When some user want to login to the system first he should enter he or she username, password and about what is her work position. When click radio button we can hide user name and password. Finally, clicked the “ok” button, its true the login details open the new work space windows. (Go to cashier/manager/ stock-keeper home pages). Else, refresh the login page.

User Account Registration Page



The screenshot shows a 'User-Accounts' page with a dark purple background. At the top right are yellow links for 'Home', 'Manager', and 'Log-Out'. The title 'User-Accounts' is in yellow. On the left is a 'Registration' form with fields for ID, First-Name, Last-Name, Address-Line 1, Address-Line 2, City-Name (dropdown), NIC-Number, Age, Gender (radio buttons), Contact-No, Manager (dropdown), USER-NAME, and Password (with a 'show' checkbox). On the right is a table with columns: ID, FIRST-N..., LAST-NA..., LINE-1, LINE-2, CITY, COUNTRY, NIC, AGE, GENDER, CONTACT, WORKE..., USER-N..., and PASSW... Below the table are 'Show-Table' and 'Hide-Table' radio buttons, and 'Add', 'Update', and 'Delete' buttons.

ID	FIRST-N...	LAST-NA...	LINE-1	LINE-2	CITY	COUNTRY	NIC	AGE	GENDER	CONTACT	WORKE...	USER-N...	PASSW...
----	------------	------------	--------	--------	------	---------	-----	-----	--------	---------	----------	-----------	----------

In the user account page, manager can add, delete, updates the users to system. Such ass manager, cashier or store-keeper. In this time all the users’ username and password generated to login the system. Additionally “show-Table and Hide-Table” button using manager can control the table data.

Request-Order page

Request - Order

Date	<input type="text" value="11/11/20 21:16:42"/>
Full Name	<input type="text" value=""/>
Birth Date	<input type="text" value=""/>
Address	<input type="text" value=""/>
E-Mail	<input type="text" value=""/>
Contact Number	<input type="text" value=""/>
Supply Item	<input type="text" value=""/>
Quantity	<input type="text" value=""/>
Your Price	<input type="text" value=""/>
Description	<input type="text" value=""/>

Your order total and order number will be communicated via email. Orders outside of Trinidad will be cancelled.

Submit

This part doing stock keeper. In this page some supplier can requites their orders after filling the form.

Request View Page

Request & Approvals

Home Manager

Order ID	Full name	Birthdate	Address	Email	Contact	Item	Quantity	Your price	Description	Request Date	Approve
----------	-----------	-----------	---------	-------	---------	------	----------	------------	-------------	--------------	---------

Approval-Order ID

OK **Cancel** ☐ Refresh Table

Request-Delete

View Approved Request

This part doing in Manger. In this page he can show requests and then he or she can Approved or not and delete the requests. Not only can that manager view the only approved request clicking “view approved request” button.

Approved-Request View Page

Home Cahshier

Approved-Requests

ORDER ID	FULL NAME	ITEM	QUT	THEIR PRICE	DATE	APPROVED
3	Oshada Nethsara	Mango	500	2560	Yes	No

In this page provide some specific details with view the only approved request to stock keeper and cashier. So this details want to when purchasing order and when store manage.

Purchase-Order Page

Home Cashier

Purchase - Order

Order-ID

Item-Name

Supplier Name

Date & Time

Unit Price

Quantity

Discount

Total-Price

Buy

Cancel-order

Welcome TO City-Mart

Customer

Order Id

Date

Item

Quantity

Unite-price

price

Discount

Total

*** Come Again ***

This page only can access cashier. He or she can purchased the approved orders and issue the bill. So cashier should enter above information.

Store-Manager Page

Store-Manage

HomeStore-Keeper

Item-ID	Item- NAME	Amount
---------	------------	--------

ITEM NAME	New AMOUNT	Manager APPROVED Y...	PURCHASE DATE	NOW STORED YES-NO	STORED DATE
-----------	------------	-----------------------	---------------	-------------------	-------------

Add -New-Item

Put-Items- Quantity

Remove- Amount

Delete-Item

Amount

☐ Show☐ Hide

NOYES

STORED

All the approved orders can storing to the data base. Right side table view the app the approved type yes orders details and left side table using view all the inserted store item data. This page provide new item add, that item update or delete , that item amount only add or remove facility and store keeper can order item after the store that order update as a stored “yes or no”.

Store-View

View-Store

HomeManager

Item-ID	Item- NAME	Amount
1	Mango	1000
2	Apple	10088
3	pinapple	18384
4	Grapes	876

This page can access manager to view how about the these days item store.

Supplier-Mange Page

Suppliers

HomeManager

Id

Name

contact-No

Address

Food-Type

Show

Hide

Add Supplier

Edit

Delete

SUPPLIER ID	SUPPLIER NAME	CONTACT PERSON	ADDRESS	FOOD TYPE
-------------	---------------	----------------	---------	-----------

This page provide to system to add about who is the over company suppliers details. Not only that manager can add, delete and update facilities to handle the supplier database table.

TASK 4

TEST PLAN

Test case number		Test case name	Steps	Expected result
TC 2		Login Testing		
	TC2.1	Check Login with Valid Data	Input valid work type, Username and password	“..Login Successfully..” message view
	TC2.2	Check Login with invalid data	Input invalid work type, Username and password	“Incorrect User name or Password” message view and then sql exception error message view
TC1		User registration Testing		
	TC1.1	Check Data Add to user registration	Entering the data in all the text fields then add button click.	“Added successfully” message view
	TC1.2	Check User account registration data update	Click the table row or then enter new values to text fields.	“Update successfully” message view
	TC1.3	Check User account registration data Delete	Click the table row or then enter ID value to text fields.	View Message Dialog box with Yes No option and then view “Deleted successfully” message view
TC6		Store-Manage testing		
	TC6.1	Check store-item entry.	Entering the data in all the text fields then add button click.	“ID 4 to Add Grapes 876” like as message view.

	TC6.2	Check store-item update	New data input to change old data in the record	“ID 3 Pineapple Updated” like as message view
	TC6.3	Check store-item id delete	Click the table row or then enter ID value to text field.	“Do you want to delete this row record?” message and view “ID 4 Deleted” like as message
	TC6.4	Check store-item View page	Click view button	Open new window and Show the table data
TC4		Supplier Data Manage		
	TC4.1	Check the create new supplier	Entering the data in all the text fields then add button click.	“Added successfully” message view
	TC4.2	Check the supplier data update	Table row click or after new data insert to text fields.	View “Updated Successfully” message
	TC4.3	Check the supplier data delete	Click the table row or then enter ID value to text field.	“Do you want to delete this row record?” message and view “ID 4 Deleted” like as message
	TC4.4	Check the supplier data view.	Clicked the show button	Table data view.
TC3		Create purchase requisitions		
	TC3.1	Check the request-order data entering.	Entering the data in all the text fields then Submit button click.	“Added successfully” message view.
TC5	TC5.1	Generate purchase order checking	Entering the data in all the text fields then Submit button click	View the with entered data.

TC4		Approval Manage		
	TC4.1	Check the Approve “Yes”	Click the table row or enter request ID value and after click “OK” button.	View as message “ID 5 APPROVED “Yes”
	TC4.2	Check the Approve Cancel as “No”	Click the table row or enter request ID value and after click “CANCEL” button.	View as message “ID 5 APPROVED “No”
TC8		Check the Home page buttons	Clicking the all the buttons	Go to the login page

TEST CASES

1. Home Page

Test Case NO	08
TEST DATE	2020/11/11
Test OBJECTIVE	Check Home page Buttons mouse click, move events
OBJECTIVE ID	1
Test Data	<ul style="list-style-type: none">i. Clicked on “Home”ii. Clicked on “Manger”iii. Clicked on “Cashier”iv. Clicked on “Stock-keeper”v. Mouse move on “City Mart Organic Fresh Food”
Expected Results	<ul style="list-style-type: none">i. Refresh the Home pageii. Go to “Login Page” pageiii. Go to “Login Page” pageiv. Go to “Login Page” pagev. Change the “City Mart Organic Fresh Food” label colour white to green
Actual Results	All Home page items accurately working in the system.
Pass/Fail	pass
Conclusion	Expected actual output.



Log-Out

HomeStore-ManageCreate-Request

Store-keeper

11/11/20 21:11:57

Log-Out

HomeRequest & Approvels

User Accounts

Sales

Stock

Suppliers

MANAGER

11/11/20 21:11:02

Log-Out

HomeApproved-RequestSales-viewPurchase-Order

Cashier

11/11/20 21:09:49

2. Login Authentication

Test Case NO	02
TEST DATE	2020/11/11
Test OBJECTIVE	Check Login Page with valid Data
OBJECTIVE ID	1
Test Data	<ul style="list-style-type: none">i. User name= “supunisulakshana99”ii. Password= “99pass”iii. Select “combo box item” = “Cashier”iv. Check box = enabledv. Mouse move the “Login” label
Expected Results	Login Successful message and open “Cashier” Page
Actual Results	Login Successful message and open “Cashier” Page
Pass/Fail	pass
Conclusion	Expected actual output.

[Home](#)

Login

User Name

SupuniSulakshana99

Password

99pass

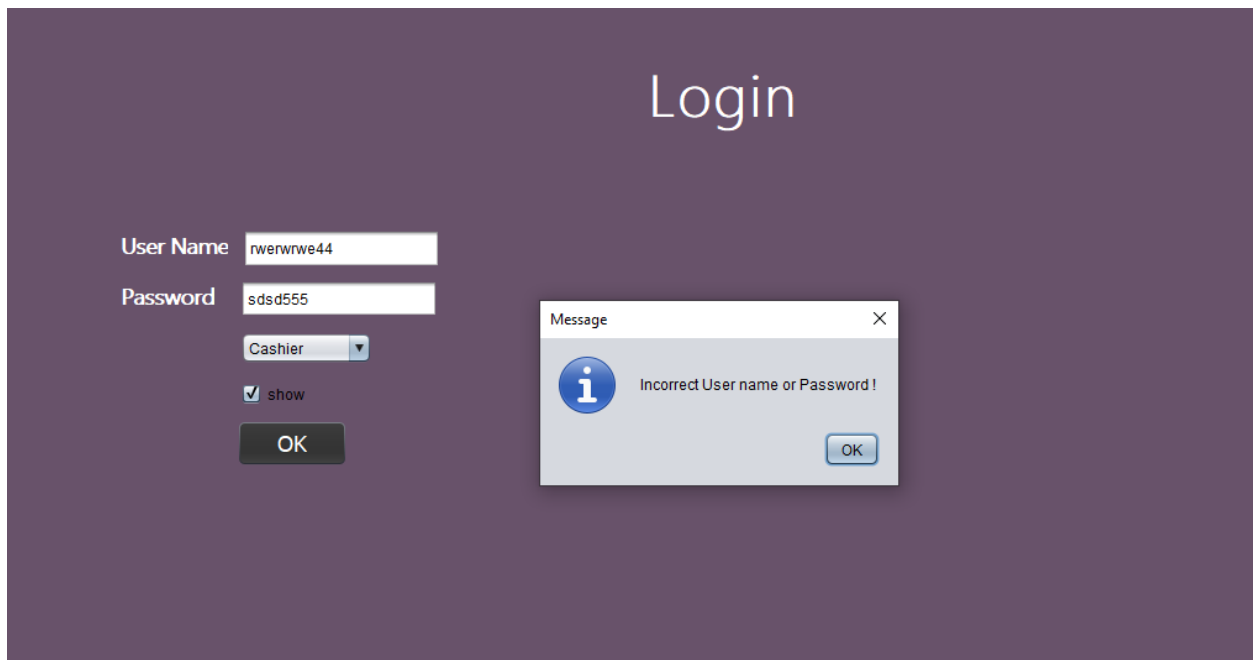
Cashier

☒ show

OK

3. Login with invalid data

Test Case NO	02
TEST DATE	2020/11/11
Test OBJECTIVE	Check Login Page with invalid Data
OBJECTIVE ID	2
Test Data	<ul style="list-style-type: none">i. User name= “rwerwrwe44”ii. Password= “sdsd555”iii. Select “combo box item” = “Cashier”
Expected Results	Invalid username or password message and Refresh “Login” Page
Actual Results	Login fail and direction again login page.
Pass/Fail	Pass
Conclusion	Expected actual output.



4. User Registration

Test Case NO	01
TEST DATE	2020/11/11
Test OBJECTIVE	User Account Registration to data add.
OBJECTIVE ID	1
Test Data	<ul style="list-style-type: none">i. ID="100"ii. First-Name= "savindu"iii. Last-Name= "pasingtha"iv. Address-Line 1= "No.57,Ritiketiya"v. Address-Line 1= "New Colony"vi. City-Name= "Aluthgama"vii. Select country= "Sri Lanka"viii. NIC-Number= "991452273v"ix. Age= "21"x. Contact-No= "0768755787"xi. Select Work type = "Manager"xii. USER-NAME= "savindupasintha123"xiii. Password= "pass99"xiv. Confirm password= "pass99"
Expected Results	Added success full message view and clear the all text fields' values as an empty. Then "SHOW TABLE" click after view the "Registration data"
Actual Results	Expected result Successfully.
Pass/Fail	Pass
Conclusion	Expected actual output.

User-Accounts

[Home](#)[Manager](#)[Log-Out](#)

Registration

100

savindu

pasintha

No.57,Riliketiya

New Colone

Aluthgama Sri Lanka

991452278v

21 ☒ Male ☐ Female

0768755787

Manager

savindupasintha123

pass99

pass99

☒ show

ID	FIRST-NA...	LAST-NAME	LINE-1	LINE-2	CITY	COUNTRY	NIC	AGE	GENDER	CONTACT	WORKED...	USER-NA...	PASSWO...

☒ Show-Table☐ Hide-Table[Add](#)[Update](#)[Delete](#)

User-Accounts

[Home](#)[Manager](#)[Log-Out](#)

Registration

100

savindu

pasintha

No.57,Riliketiya

New Colone

Aluthgama Sri Lanka

991452278v

21 ☒ Male ☐ Female

0768755787

Manager

savindupasintha123


pass99

pass99

☒ show

ID	FIRST-NA...	LAST-NAME	LINE-1	LINE-2	CITY	COUNTRY	NIC	AGE	GENDER	CONTACT	WORKED...	USER-NA...	PASSWO...

Message

 ...ADDED SUCCESSFULL..

OK

☒ Show-Table☐ Hide-Table[Add](#)[Update](#)[Delete](#)

Test Case NO	01
TEST DATE	2020/11/11
Test OBJECTIVE	Check Delete the User Registration data
OBJECTIVE ID	3
Test Data	Click Table Row and Then Click Delete Button.
Expected Results	“Do you want to delete this row record?” message coming and after clicking ok then view “deleted successful” message and after table Refresh.
Actual Results	Expected result successfully.
Pass/Fail	Pass
Conclusion	Expected actual output.

User-Accounts

Home

Manager

Log-Out

Registration

Sri Lanka

 ☒ Male ☐ Female

☒ show

ID	FIRST	LAST	LINE	LINE-2	CITY	COUNT	NIC	GENDER	CONTACT	WORKED TYPE	USER-NAME	PASSWORD
8	kamal	rathnay	no 56	kalaut	panadura	Sri Lanka	991452273	male	71555555	Manager	kamal	kamal

Warning

?

Do You Want DELETE This Row Record.. ?

Yes No

Show-Table Hide-Table

Add Update Delete

User-Accounts

Home

Manager

Log-Out

Registration

8
kamal
rathnayaka
no 56
kalauthara
panadura Sri Lanka
991452273
25 Male Female
71555555
Manager
kamal
kamal
pass99
☒ show

ID	FIRST	LAST	LINE	LINE-2	CITY	COUNT	NIC	GENDER	CONTACT	WORKED TYPE	USER-NAME	PASSWORD
8	kamal	rathnay	no 56	kalaut	panadu				71555555	Manager	kamal	kamal

Message
...DELETE SUCCESSFULL!
OK

Show-Table

Hide-Table

Add

Update

Delete

6. User Registration Update

Test Case NO	01
TEST DATE	2020/11/11
Test OBJECTIVE	Check Update the User Registration data
OBJECTIVE ID	2
Test Data	<p>Click Table Row.</p> <p>Enter Data below,</p> <ul style="list-style-type: none">i. ID="4"ii. First-Name= "Supuni"iii. Last-Name= "Sulakshana"iv. Address-Line 1= "No.68"v. Address-Line 1= "Galmaththa"vi. City-Name= "Aluthgama"vii. Select country= "Japan"viii. NIC-Number= "0764567890"ix. Age= "20"x. Contact-No= "0768755787"xi. Select Work type = "Cashier"xii. USER-NAME= "SupuniSulakshana999"xiii. Password= "99pass"xiv. Confirm password= "99pass" <p>Then Click Update Button</p>
Expected Results	"Update successfully" message coming and after table Refresh.
Actual Results	Expected result successfully.
Pass/Fail	Pass
Conclusion	Expected actual output.

User-Accounts

[Home](#)[Manager](#)[Log-Out](#)

Registration

☐ Male ☒ Female

☒ show

ID	FIRST...	LAST...	LINE...	LINE-2	CITY	COUNT...	NIC	...	GENDER	CONTACT	WORKED TYPE	USER-NAME	PASSWORD
4	savinsu	pasintha	no.57	ritiketya	aluthgama	Sri Lanka	07687557...		female	768755787	Manager	u	p

Message

..UPDATE SUCCESSFULL..

OK

☒ Show-Table☐ Hide-Table

User-Accounts

[Home](#)[Manager](#)[Log-Out](#)

Registration

☐ Male ☒ Female

☒ show

ID	FIRST...	LAST...	LINE...	LINE-2	CITY	COUNT...	NIC	...	GENDER	CONTACT	WORKED TYPE	USER-NAME	PASSWORD
4	Supuni	Sulaks...	No.68	Galma...	Aluthgama	Japan	07645678...		female	768755787	Cashier	SupuniSulakshana9...	99pass

☒ Show-Table☐ Hide-Table

7. Store-Item Entry

Test Case NO	06
TEST DATE	2020/11/11
Test OBJECTIVE	Check ADD Items in the Store Manger
OBJECTIVE ID	1
Test Data	Enter Data below, i. ID="4" ii. Item-Name= "Grapes" iii. Quantity= "878" Then Click ADD Button
Expected Results	"ID 4 to Add Grapes 876" message coming and after table Refresh.
Actual Results	Expected result successfully.
Pass/Fail	Pass
Conclusion	Expected actual output.

Store-Manage

HomeStore-Keeper

ITEM ID	ITEM NAME	QUANTITY
1	Mango	1000
2	Apple	10099
3	pinapple	18384

ORDER ID	ITEM	QUT	APPROVED	STORED
3	Mango	500	Yes	No

Message

ID 4 to ADD Grapes 876

OK

4

Id

Grapes

876

NO

YES

STORED

Add -New-Item

Put-Items-Quantity

Remove-Amount

Delete-Item

Show

Hide

8. Store-Item Update

Test Case NO	06
TEST DATE	2020/11/11
Test OBJECTIVE	Check Update Items in the Store Manger
OBJECTIVE ID	2
Test Data	Enter Data below, <ul style="list-style-type: none">i. ID="3"ii. Item-Name= "Pineapple"iii. Quantity= "384" Then Click Put-Item-Quantity Button
Expected Results	"ID 3 Pineapple Updated" message coming and after table Refresh.
Actual Results	Expected result successfully.
Pass/Fail	Pass
Conclusion	Expected actual output.


Store-Manage

HomeStore-Keeper

ITEM ID	ITEM NAME	QUANTITY
1	Mango	4258
2	Apple	10088
3	pinapple	18000

ORDER ID	ITEM	QUT	APPROVED	STORED
2	Orange	380	Yes	Yes
3	Mango	500	YES	No

Message

 ID 3 pinapple Updated.

OK

pinapple

3

384

Id

☐ NO☐ YES

STORED

Add -New-Item

Put-Items-Quantity

Remove-Amount

Delete-Item

☒ Show☐ Hide

9. Store-Item Delete

Test Case NO	06
TEST DATE	2020/11/11
Test OBJECTIVE	Check Delete the User Store Item
OBJECTIVE ID	3
Test Data	Click Table Row or ID = "8" enter Then Click Delete Button.
Expected Results	"Do you want to delete this row record?" message and view "deleted successful" message and after table Refresh.
Actual Results	Expected result successfully.
Pass/Fail	Pass
Conclusion	Expected actual output.

Store-Manage

HomeStore-Keeper

ITEM ID	ITEM NAME	QUANTITY
2	Apple	10088
3	pinapple	9100
8	Grapes	36

ORDER ID	ITEM	QUT	APPROVED	STORED
2	Orange	380	Yes	Yes
3	Mango	500	YES	No

Warning

Do you want DELETE this Row-Record. ?

YesNo

Grapes

8

36

Id

NO

YES

STORED

Add -New-Item

Put-Items-Quantity

Remove-Amount

Delete-Item

ShowHide

Store-Manage

HomeStore-Keeper

ITEM ID	ITEM NAME	QUANTITY
2	Apple	10088
3	pinapple	9100
8	Grapes	36

ORDER ID	ITEM	QUT	APPROVED	STORED
2	Orange	380	Yes	Yes
3	Mango	500	YES	No

Message

ID 8 Deleted Now.

OK

Grapes

8

36

Id

NO

YES

STORED

Add -New-Item

Put-Items-Quantity

Remove-Amount

Delete-Item

ShowHide

Store-Manage

HomeStore-Keeper

Item-ID	Item- NAME	Amount
---------	------------	--------

ITEM NAME	New AMOUNT	Manager APPROVED Y...	PURCHASE DATE	NOW STORED YES-NO	STORED DATE
-----------	------------	-----------------------	---------------	-------------------	-------------

Item-Name

Add -New-Item

Put-Items-Quantity

Remove-Amount

Delete-Item

Id

Amount

ShowHide

Id

NOYES

STORED

10.Store view data

HomeManager

View-Store

Item-ID	Item- NAME	Amount
1	Mango	82255
2	Apple	10088
3	pinapple	9100
8	Grapes	36

11. Supplier Entry

Test Case NO	04
TEST DATE	2020/11/11
Test OBJECTIVE	Check Delete the User Store Item
OBJECTIVE ID	1
Test Data	<ul style="list-style-type: none">i. ID = “3”ii. Name = “Oshada”iii. Contact-No = “0768755787”iv. Address = “Aluthgama, Kalauthara”v. Food-Type = “Mango” Clicked added-supplier Button.
Expected Results	“Added Successfully” message and after table Refresh.
Actual Results	Expected result successfully.
Pass/Fail	Pass
Conclusion	Expected actual output.

Suppliers

HomeManager

ShowHideAdd SupplierEditMessage

SUPPLIER ID	SUPPLIER NAME	ADDRESS	FOOD TYPE
-------------	---------------	---------	-----------

...ADDED SUCCESSFULL..
OK

Test Case NO	04
TEST DATE	2020/11/11
Test OBJECTIVE	Check Delete the User Store Item
OBJECTIVE ID	2
Test Data	<ul style="list-style-type: none"> i. ID = “3” ii. Name = “Aloka” iii. Contact-No = “0754015676” iv. Address = “No.57, Pahekanuwa,Aluthgama” v. Food-Type = “Orange” <p>Clicked Edit button.</p>
Expected Results	“Updated Successfully” message and after table Refresh.
Actual Results	Expected result successfully.
Pass/Fail	Pass
Conclusion	Expected actual output.

12.Supplier Update

Test Case NO	04
TEST DATE	2020/11/11
Test OBJECTIVE	Check Delete the User Store Item
OBJECTIVE ID	3
Test Data	Click Table Row or ID = “4” enter Then Click Delete Button.
Expected Results	“Do you want to delete this row record?” message and view “deleted successful” message and after table Refresh.
Actual Results	Expected result successfully.
Pass/Fail	Pass
Conclusion	Expected actual output.

Suppliers Home Manager

3 Aloka 0754015676 No.57,Pahekanuwa,Ak. Orange

Show Hide Add Supplier Edit

SUPPLIER ID	SUPPLIER NAME	ADDRESS	FOOD TYPE
3	Oshada	Aluthgama, Kaluthara	Mango

Message ..UPDATE SUCCESSFULL..! OK

13.Supplier Delete

Suppliers

HomeManager

4savindu4777777sSassmango

ShowHideAdd SupplierEdit

Warning

Do You Want DELETE This Row-Record.. ?

YesNo

SUPPLIER ID	SUPPLIER NAME	ADDRESS	FOOD TYPE
4	savindu	sSass	mango

Suppliers

HomeManager

4savindu4777777sSassmango

ShowHideAdd SupplierEdit

Message

...DELETE SUCCESSFULL..!

OK

SUPPLIER ID	SUPPLIER NAME	ADDRESS	FOOD TYPE
4	savindu	sSass	mango

Suppliers

HomeManager

3Aloka754015676ahekanuwa,AluthgamaOrange

ShowHideAdd SupplierEditDelete

SUPPLIER ID	SUPPLIER NAME	CONTACT PERSON	ADDRESS	FOOD TYPE
2	Supun	342273512	No.5 Nugegoda,Colombo 7	Apple
3	Aloka	754015676	No.57.Pahekanuwa,Aluthgama	Orange

14.Generate Purchase Order (PO)

Test Case NO	05
TEST DATE	2020/11/11
Test OBJECTIVE	Generate bill and Purchase order
OBJECTIVE ID	1
Test Data	<ul style="list-style-type: none">i. Order-ID="3"ii. Item-Name= "Mango"iii. Supplier-Name= "Oshada"iv. Date and Time = ""v. Unit-Price = "25"vi. Quantity = "1300"vii. Discount = "760"viii. Total = "" Clicked Buy Button.
Expected Results	Automatically Added "Total" and Bill print and clear the all text field's values.
Actual Results	Expected result Successfully.
Pass/Fail	Pass
Conclusion	Expected actual output.

[Home](#)[Cashier](#)

Purchase - Order

Order-ID

Item-Name

Supplier Name

Date & Time

Unit Price

Quantity

Discount

Total-Price

Welcome TO City-Mart

Customer Oshada

Order Id 3

Date 11/11/20 21:06:24

Item	Quantity	Unit-price
------	----------	------------

Mango	1300	25
-------	------	----

price	1000.00
-------	---------

Discount	760
----------	-----

Total	31740.0
-------	---------

*** Come Again ***


15.Create a Purchase Requisition (PR)

Test Case NO	03
TEST DATE	2020/11/11
Test OBJECTIVE	User Account Registration
OBJECTIVE ID	1
Test Data	<ul style="list-style-type: none"> i. Date="11/11/20 21:16:42" ii. Full Name= "Savindu Pasingtha Lakml" iii. Birth Date = "" iv. Address= "pasingtha" v. E-Mail = "savindu@gmail.com" vi. Contact No = "0768755787" vii. Supply Item = "Mango" viii. Quantity = "600" ix. Your Price = "8540" x. Description = "Dear sir, our mango is very tasty and it have more calories. Please contact me quickly and I think you can get big profit after selling. Thank you." <p>Enter submit button.</p>
Expected Results	Added success full message view and clear the all text fields' values as an empty.
Actual Results	Expected result Successfully.
Pass/Fail	Pass
Conclusion	Expected actual output.

Request - Order

Date	11/11/20 21:16:42
Full Name	Savindu Pasintha Lakaml
Birth Date	1999-05-24
Address	No.57,Ritiketiya,New Colene,Meegama
E-Mail	savindu@gmail.com
Contact Number	0768755787
Supply Item	Mango
Quantity	600
Your Price	8540
Description	

Message

 ...ADDED SUCCESSFULL...

OK

Dear sir,
Our mango very tasy and It have more
calalies.Please contact me to quickly.I
think you can get big profit using after
it seling.
Thank you.

Your order total

a email. Orders outside of Trinidad will be cancelled.

Submit

16.Approve

Request & Approvals

[Home](#)[Manager](#)

Order ID	Full name	Birthdate	Address	Email	Contact	Item	Quantity	Your price	Description	Request Date	Approve

Approval-Order ID

OK

Cancel

☐ Refresh Table

Request-Delete

[View Approved Request](#)

17.Request Delete

Test Case NO	02
TEST DATE	2020/11/11
Test OBJECTIVE	Check Delete the Request
OBJECTIVE ID	1
Test Data	Click Table Row or ID = "1" enter Then Click Request-Delete Button.
Expected Results	"Do you want to delete this row record?" message and view "deleted successful" message and after table Refresh.
Actual Results	Expected result successfully.
Pass/Fail	Pass
Conclusion	Expected actual output.

Request & Approvals
Home
Manager

ORDER ID	FULL NAME	BIRTHDAY PER...	ADDRESS	EMAIL	CONTACT	ITEM	QUT	THEIR PRICE	DESCRIPTION	DATE	APPROVED
1	k		h	h	5	h	8	1000	hhhhhhhhhh	h	Yes
2	Savindu Pasintha	1999-08-24	Klauthar,Benthota	savindu@gmail.c...	745557588	Orange	380	3544	Big tasty Orange		No
3	Oshada Nethsara	1999-05-24	No 57,kaluthra.C...	Oshada@gmail...	768755787	Mango	500	2560	Its very delicious ...	09/10/20 08:07...	Yes

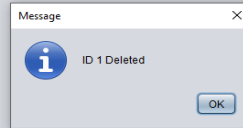
Warning
Do you want DELETE this Row-Record. ?
Yes No

Approval-Order ID

Request & Approvals

Home Manager

ORDER ID	FULL NAME	BIRTHDAY PER...	ADDRESS	EMAIL	CONTACT	ITEM	QTY	THEIR PRICE	DESCRIPTION	DATE	APPROVED
1	k		h	h	5	h	8	1000	hhhhhhhhhhh	h	Yes
2	Savindu Pasintha	1999-08-24	Klauthar Benthot	savindu@gmail.c...	745557588	Orange	380	3544	Big tasty Orange		No
3	Oshada Nethsara	1999-05-24	No 57 kaluthra.C...	Oshada@gmail...	768755787	Mango	500	2560	its very delicious ...	09/10/20 08:07...	Yes



Approval-Order ID

1

OK

Cancel

Refresh Table

Request-Delete

View Approved Request

18.Approve the Request

Test Case NO	04
TEST DATE	2020/11/11
Test OBJECTIVE	Check Delete the User Store Item
OBJECTIVE ID	1
Test Data	Click Table Row or ID = “3” enter Then Click “ok” and “cancel” Button.
Expected Results	When “ok” clicked updated as “YES” When “cancel” clicked updated as “NO”
Actual Results	Expected result successfully.
Pass/Fail	Pass
Conclusion	Expected actual output.

Request & Approvals
Home
Manager

ORDER ID	FULL NAME	BIRTHDAY PER...	ADDRESS	EMAIL	CONTACT	ITEM	QUT	THEIR PRICE	DESCRIPTION	DATE	APPROVED
2	Savindu Pasintha	1999-08-24	Klauffar,Benthota	savindu@gmail.c...	745557588	Orange	380	3544	Big tasty Orange		Yes
3	Oshada Nethsara	1999-05-24	No.57,kaluthra.C...	Oshada@gmail...	768755787	Mango	500	2560	Its very delicious ...	09/10/20 08:07...	No

Message
X

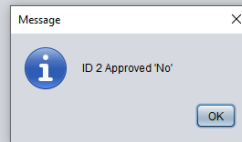
i
ID 3 Approved 'Yes'
OK

Approval-Order ID
3
OK
Cancel
Refresh Table
Request-Delete
View Approved Request

Request & Approvals

Home Manager

ORDER ID	FULL NAME	BIRTHDAY PER...	ADDRESS	EMAIL	CONTACT	ITEM	QUT	THEIR PRICE	DESCRIPTION	DATE	APPROVED
2	Savindu Pasintha	1999-08-24	Klauthar,Benthota	savindu@gmail.c...	745557588	Orange	380	3544	Big tasty Orange		Yes
3	Oshada Nethsara	1999-05-24	No.57,kaluthra,C...	Oshada@gmail...	768755787	Mango	500	2560	its very delicious ...	09/10/20 08:07:...	Yes



Approval-Order ID

2

OK

Cancel

Refresh Table

Request-Delete

View Approved Request

Request & Approvals

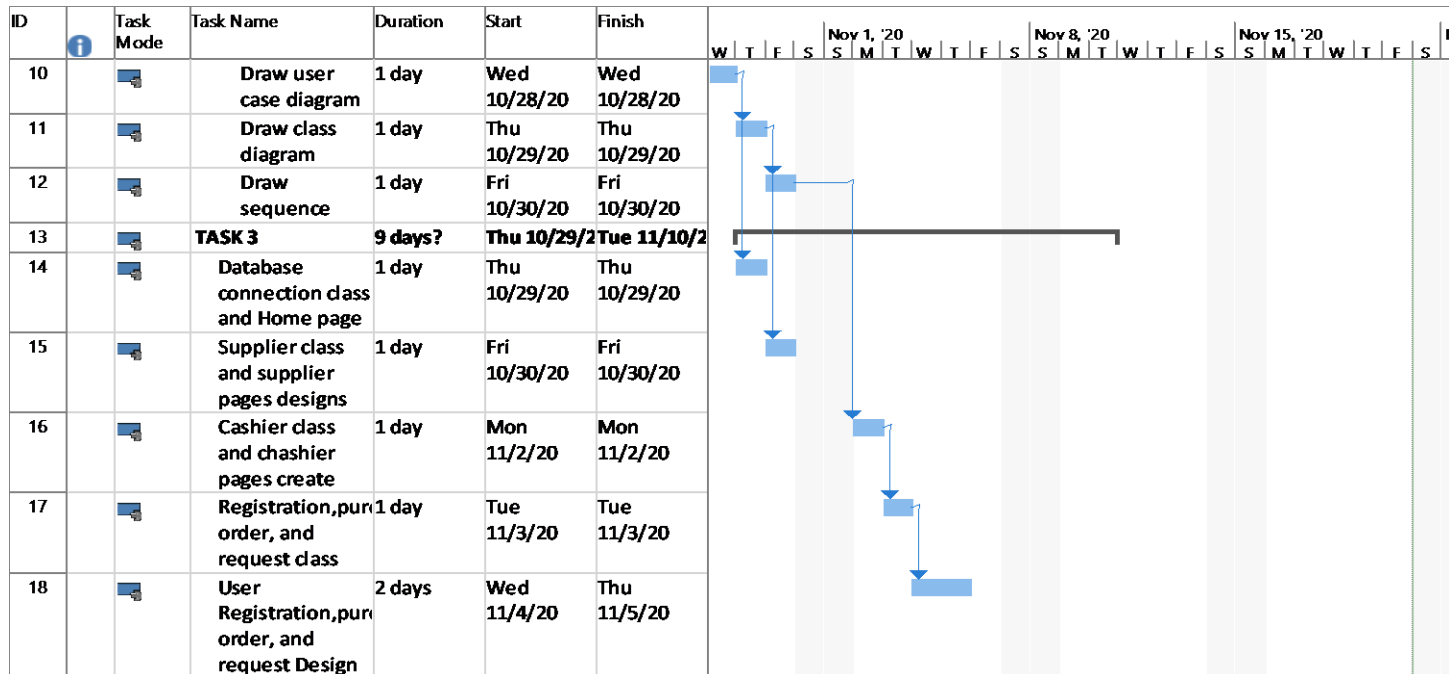
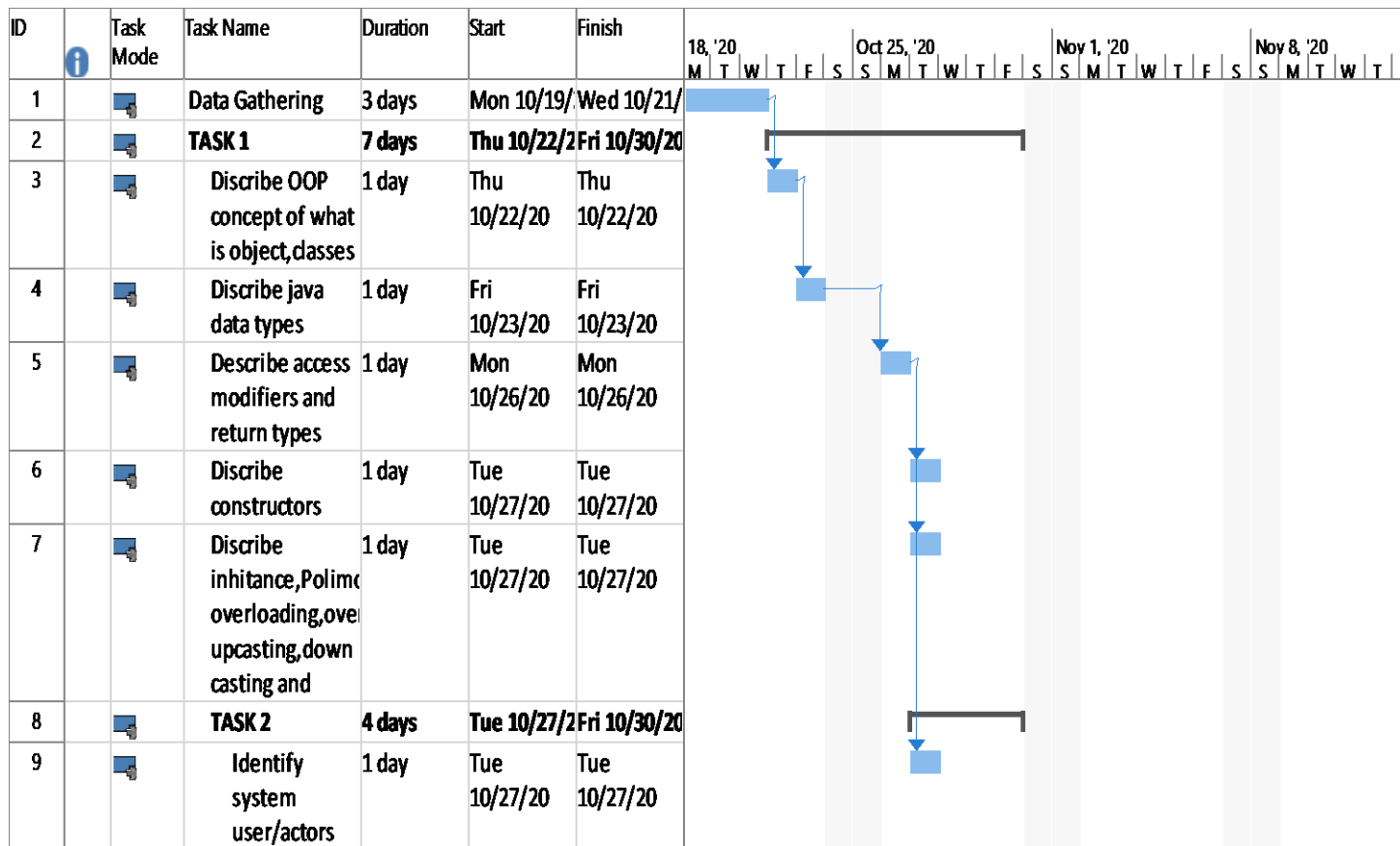
Home Manager

ORDER ID	FULL NAME	BIRTHDAY PER...	ADDRESS	EMAIL	CONTACT	ITEM	QUT	THEIR PRICE	DESCRIPTION	DATE	APPROVED
2	Savindu Pasintha	1999-08-24	Klauthar,Benthota	savindu@gmail.c...	745557588	Orange	380	3544	Big tasty Orange		No
3	Oshada Nethsara	1999-05-24	No.57,kaluthra,C...	Oshada@gmail...	768755787	Mango	500	2560	its very delicious ...	09/10/20 08:07:...	Yes
















CONCLUTION

This automation order management system to created “city mart”. We can identify main actors as manager, cashier, and store keeper in the system. This system allows difference functions as automation doing to this actors. Manager can view the sales, suppliers, customer requests, stock and he can delete requests and approve the requests. Not only has that he can creating and managing system user accounts and suppliers. Cashier allows generate orders and receive bill. Not only that I added new function as a show the approved request view page to when generating the order to sometime check request details. Stock keeper can manage stock and create purchase request to customers. This system have more facilities to user to easy. Tables show, hide and refresh functions allows some security of the system. It can hide what is the data in the Database. I used user like bright colors to decorate the system. Some labels and background clicked the mouse, I it to added change the background colors functions. This system using all the data automatically store to database in ‘MySQL’. I think this system very simple to handle any one. So “city mart” can increase their sales every day with handle the organic fresh foods. Any one enter the invalid data to system, then quickly popup the error messages. When create this system I used java programming language object oriented concepts with the “APACHE NETBEANS 12.0 IDE” to coding. I think this system can use any other order automation system, after little changes in the system. Not only that I think this system will be very useful to success their business.

GANTT



[illegible]

ID		Task Mode	Task Name	Duration	Start	Finish	Nov 15, '20							Nov 22, '20							Nov 29, '20													
							F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F						
27			Test stor item manage and store vie pages and create test	1 day	Fri 11/13/20	Fri 11/13/20																												
28			Test supplier manage and vie pages and create test cases	1 day	Mon 11/16/20	Mon 11/16/20																												
29			Appvoed page tes ans create test case	1 day	Tue 11/17/20	Tue 11/17/20																												
30			Other Documentation completing	3 days	Wed 11/18/20	Fri 11/20/20																												
31			Acknowlegment and Abstract writing	1 day	Wed 11/18/20	Wed 11/18/20																												
32			Introduction writing	1 day	Thu 11/19/20	Thu 11/19/20																												
33			Conclution writing	1 day	Fri 11/20/20	Fri 11/20/20																												

References

Anon., 2011. *Access Modifiers in Java.* [Online]
Available at: <https://www.javatpoint.com/access-modifiers>
[Accessed 1 November 2020].

Anon., 2011. *static keyword in java.* [Online]
Available at: <https://www.javatpoint.com/static-keyword-in-java>
[Accessed 1 November 2020].

Anon., 2020. [Online]
Available at: <https://www.javatpoint.com/method-overriding-in-java>
[Accessed 1 November 2020].

Anon., 2020. *abstract-class-in-java.* [Online]
Available at: <https://www.javatpoint.com/abstract-class-in-java>
[Accessed 1 November 2020].

Anon., 2020. *Java constructor.* [Online]
Available at: <https://www.javatpoint.com/java-constructor>
[Accessed 1 November 2020].

Anon., 2020. *Java Data Types.* [Online]
Available at: https://www.w3schools.com/java/java_data_types.asp
[Accessed 1 November 2020].

Anon., 2020. *Method Overloading in Java.* [Online]
Available at: <https://www.javatpoint.com/method-overloading-in-java>
[Accessed 1 November 2020].

Rouse, M., 2020. *object-oriented programming (OOP).* [Online]
Available at: <https://searcharchitecture.techtarget.com/definition/object-oriented-programming-OOP>
[Accessed 1 November 2020].