



Name	Manthan Sudhir Kapadia
Project Name	StoreFrenzy- A store inventory management system
Semester	Spring 2017
CWID	A20376738
Due Date	05/02/2017

Problem Statement:

To develop a store inventory management system using JavaFx as the front end and MySQL for database operations i.e. backend.

Project Description:

Store inventory management system which achieves objectives mentioned below. These are just few of many tasks which it can perform-

- Add
 - available products
 - customer details
 - description of new product
 - new entered category of products
- Maintain
 - Available products
 - Customer details
 - Description of new products
 - New entered category of products
- Provides a convenient solution of billing pattern.
- Make an easy to use environment for users and customers.
- User management option
- RMA module (return merchandise authorization) is also added which keeps track of product returns, replacements, refunds or damaged product covered under warranty period.

It can be used for tracking inventory count, sales, purchases, deliverables and much more where inventory management module is required. It is a very good replacement to book-keeping and maintaining spreadsheets for inventory purpose, along with additional features.

Features:

- Management of stock
- Sales and purchases
- User management with added roles
- Summary details



- Light in handling and responsive

Roles of Users:

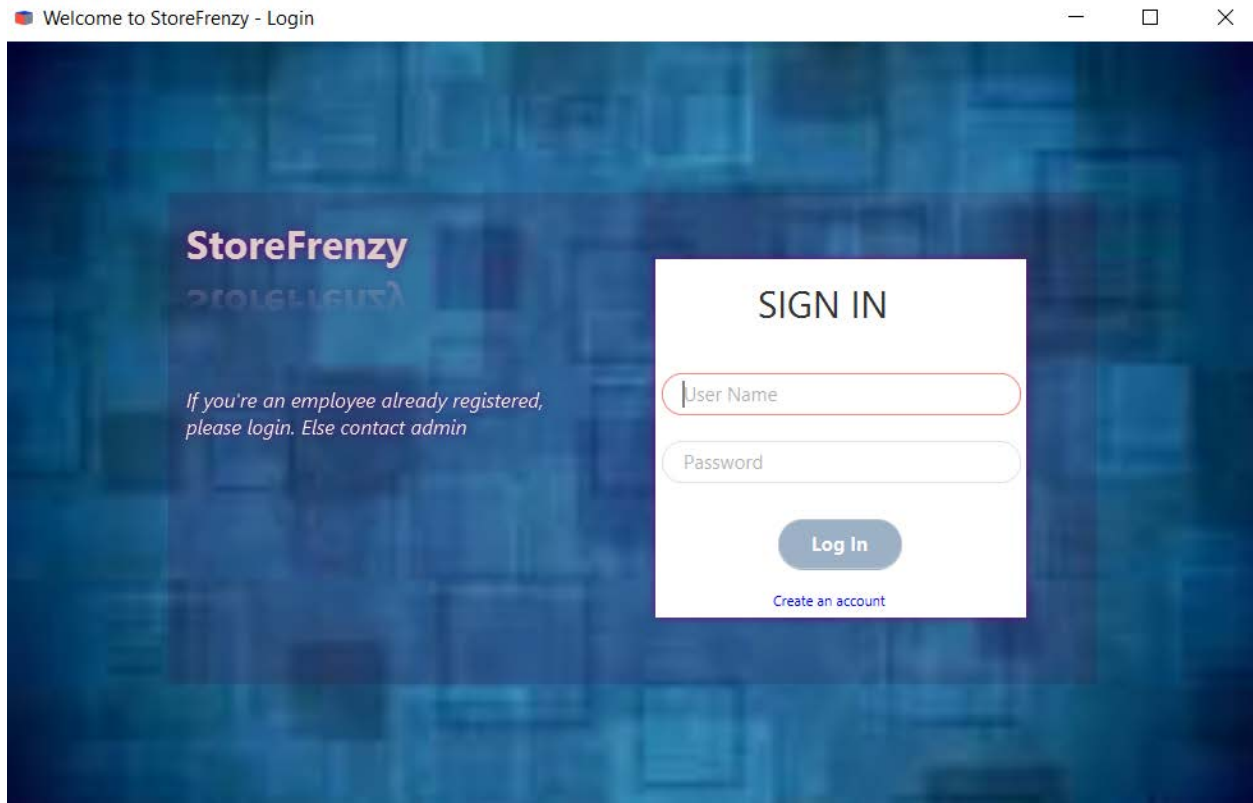
- **Admin**
 - Complete Stock Management of stock
 - Add, Update, Delete of product, brands, supplier, category, unit, rma
 - Sell Management
 - Sell of products, adding and updating customer, providing discount
 - Employee and User Management
 - Add, Update of Employee, Changing password and updating personal details
 - Organization Management
- **Regular Employee**
 - There are several employees which manage different areas.
 - People working in Store management have access only to store management with CRUD privileges in it. They don't have access/ privileges to any other area.
 - People working in Sell and Employee management area have access only to this area with CRUD privileges. They don't have access/privileges to any other area.

Login Credentials:

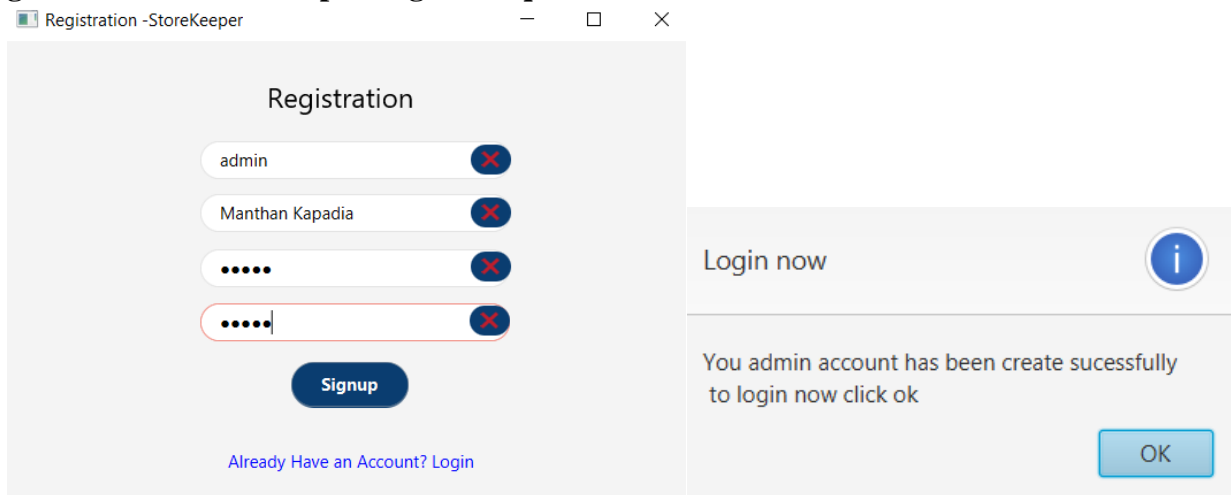
Employee name	User name	Password	Role assigned	Area managing
Manthan Kapadia	admin	admin	Administrator	All areas
Jimmy Trigs	jimmy	jimmy	Administrator	All areas
Jenny Oswal	jenny	jenny	Employee	Store Management
Martha Rolando	rolando	rolando1	Employee	Store Management
Henry Rutherford	henry	henry	Employee	Sell and Employee Management
Rooney Williams	rooney	rooney	Employee	Sell and Employee Management

Test Cases and Screenshots:

Login Screen:

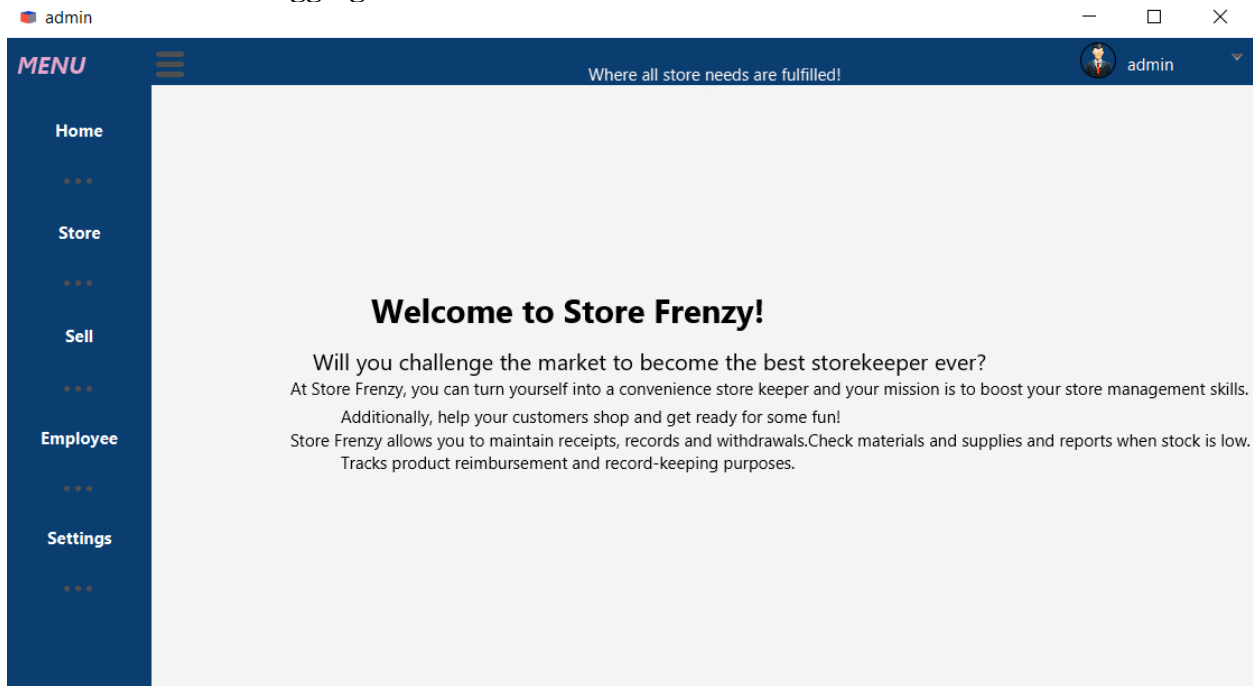


The very first account which will be created is Administrator account. This application supports only one administrator account and multiple employee accounts. They can be granted administrator privileges if required.






Home screen after logging in:



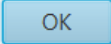
Adding employee:

Add Employee


User Name :

ERROR : Enter a valid phone number. 

Please check the length

 OK


Phone :

31289655681 

Salary :


1000


Password :

jenny 

Address :

West Paulina, Chicago, IL- 60673

 Save

 [Attach Image](#)

Add Employee

ERROR : Enter a valid email id

OK


3128965568

1000

jenny

West Paulina, Chicago, IL- 60673

Save



Attach Image

Sucess

User jenny Added sucessfully

OK

Granting privileges to the employee:

Employee

Search Employee

Employee

admin

jenny

rolando

henry

rooney

jimmy

User Permissions

✓ Stock Management

✓ Add Product

✓ Add Supplier

✓ Add Brands

✓ Add Category

✓ Add Unit

✓ Update Unit

✓ Manage RMA

✓ Update Product

✓ Update Supplier

✓ Update Brands

✓ Update Category

✗ Sell Management

✗ Sell Product

✗ Add Customer

✗ Update Customer

✗ Provide Discount

✗ Employee Management

✗ Add Employee

✗ Update Emplo...

✗ Change Employee Pass...

✗ User

✗ Change Password

✓ Change Personal Details

✗ Org mange

Update

admin

Update

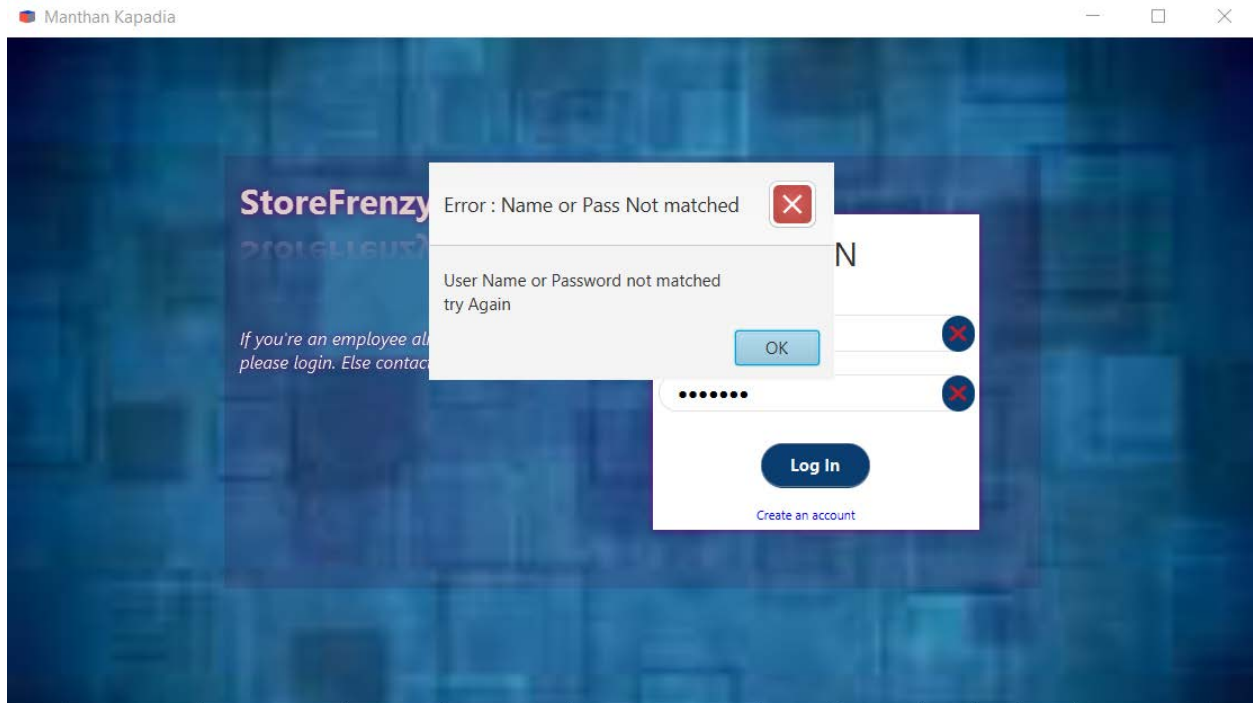
Delete

Sucess

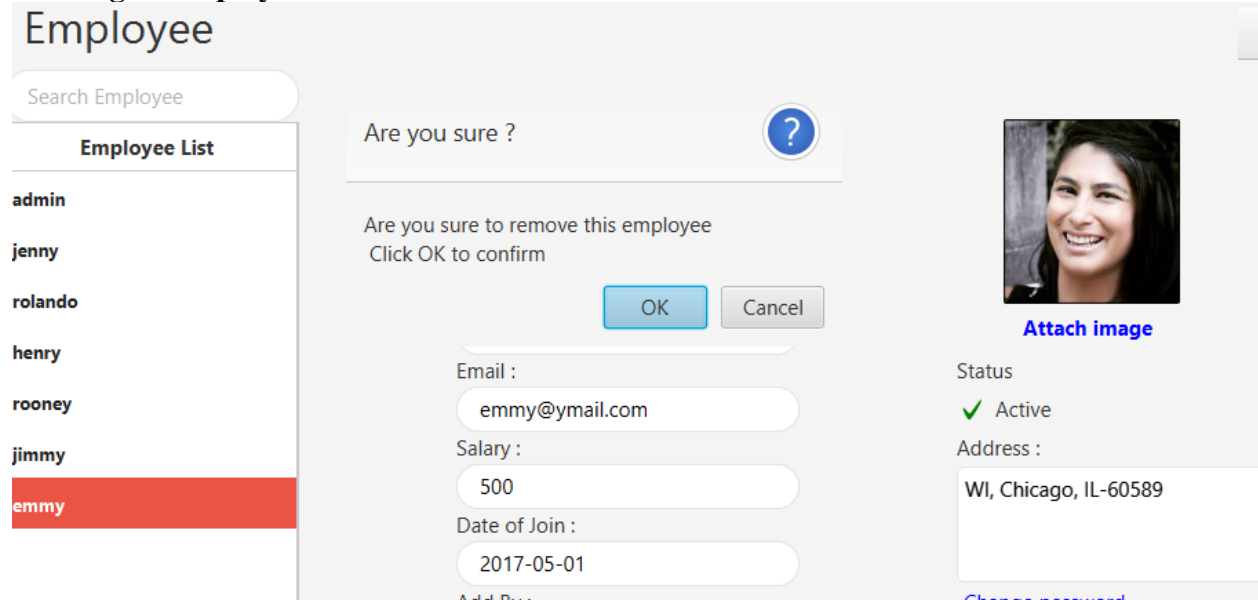
Permission change sucessfully

OK

User name and password pair validation:



Deleting an employee:





Adding Units:

The screenshot shows a web application interface for managing units. A modal form titled "ADD UNIT" is open, allowing users to add a new unit. The form has a close button (X) in the top right corner. It contains two input fields: "Unit Name" with the value "Frozen products" and a "Comment" field with the text "All sorts of Frozen foods and beverages". A "Save" button is at the bottom of the modal. In the background, the "Unit" management page is visible, showing a table with columns "Unit Name", "Create By", and "Date". The "Unit" tab is selected in the top navigation bar.

Unit Name	Create By	Date
Handwash & Tissue		2017-05-01

After every single operation we perform, for the changes to get reflected, dashboard should be refreshed.

Updating Unit:

The screenshot shows the same web application interface, but now the "UNIT DETAILS" modal form is open for updating an existing unit. The modal has a close button (X) in the top right corner. It contains two input fields: "Unit Name" with the value "Alcohol" and a "Comment" field with the text "All types of hard drinks". An "Update" button is at the bottom of the modal. In the background, the "Unit" management page is visible, showing a table with columns "Unit Name", "Create By", and "Date". The "Unit" tab is selected in the top navigation bar. The table now has three rows, with "Wine" highlighted in red.

Unit Name	Create By	Date
Handwash & Tissue		2017-05-01
Frozen products		2017-05-01
Wine		2017-05-01

Populating Supplier dashboard:

admin

MENU

- Home
- Store
- Sell
- Employee
- Settings

Where all store needs are fulfilled!

admin

Supplier

Stock **Supplier** Brands Category Unit RMA

Search Supplier

Suppliers	Contact Number	Address	Supplier Since	Supplier Description
WillFroth	5026987412	WI, US	2017-05-01	Supplier of hard drinks
Mills & Walker	8562030012	MI, US	2017-05-01	Supplier of bakery products
Willis Sweets	2030056032	NJ, US	2017-05-01	Supplier of sweets and choc...
SWAD	6809523218	IN, US	2017-05-01	Supplier of Frozen products
Bath & More	7325689023	NY, US	2017-05-01	Supplier of hygiene product...
Frussel	4089630041	GA, US	2017-05-01	Supplier of snacks and break...

Add New Update Delete

Now, adding brands. Adding and updating operation was seen above. In this section, we will Delete one of the brand.

Brands

Stock Supplier **Brands** Category Unit RMA

See Confirm ?

Are you sure to delete this item to Confirm click ok

OK Cancel

Brands	Add By	Creation Date
Hangouts		2017-05-01
Edens		2017-05-01
Shreenathji	Mills & Walker	Cakes & More
Pars	SWAD	Paratha & more
Nanak	SWAD	Frozen food
Chabua	SWAD	
Rokals	SWAD	Rolls
Sachs	Willis Sweets	Sweets
Lao Malni	Willis Sweets	Sweets
Malab Dine	Willis Sweets	Sweets

Add Brand Update Delete

Employee named Henry and Rooney are only authorized for Sell Management and Employee Management. They do not have Store Management privileges.

Rooney Williams

MENU

- Home
- Store
- Sell
- Employee
- Settings

Where all store needs are fulfilled!

rooney

Store

Stock Supplier Brands Category Unit RMA

ID	NAME	Quantity	Unit	RMA	Supplier	Brand	Category
101101	Whisky	50	Alcohol	Alcohol	WillFroth	Jack Daniels	Hard Drinks
501201	Cakes and Pastry	30	Bakery	Bakery	Mills & Walker	FrenchConne...	Creamy cakes

Add New Update Delete

Rooney Williams

MENU

- Home
- Store
- Sell
- Employee
- Settings

Where all store needs are fulfilled!

rooney

Sells

Sell Customer

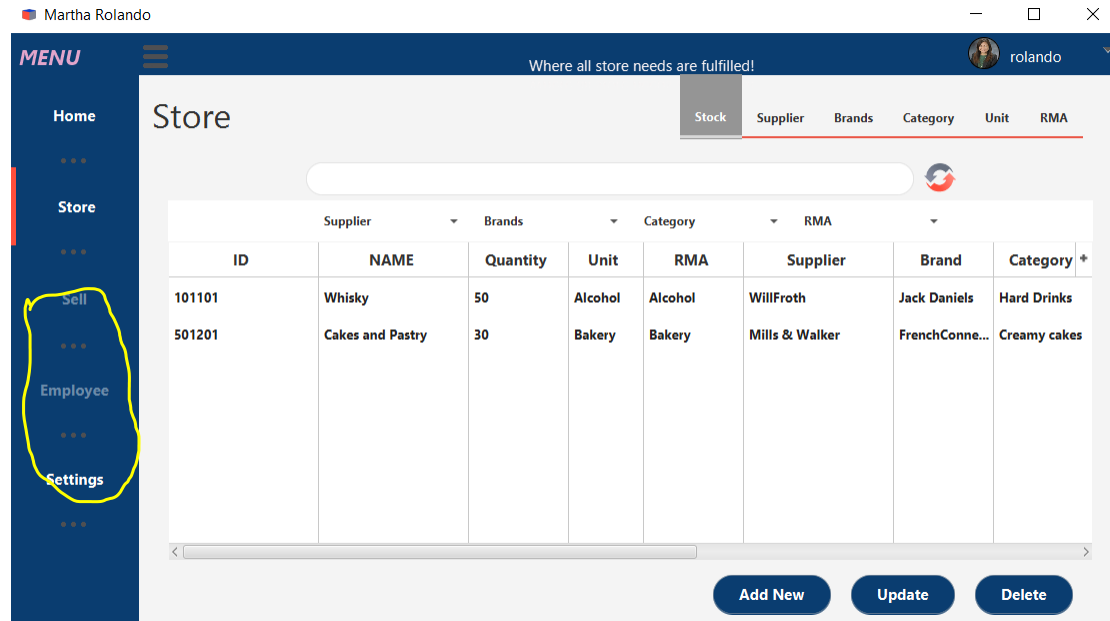
Search Sell

Sell Id	Product...	Customer Name	Sold Date	Purchas...	Sell Price	Quantity	Total Price	RMA	Sold By
No content in table									

Sell Order Replace

Employee named Martha Rolando and Jenny Oswal are only authorized for Store Management. They do not have Sell Management and Employee Management privileges.

Martha Rolando

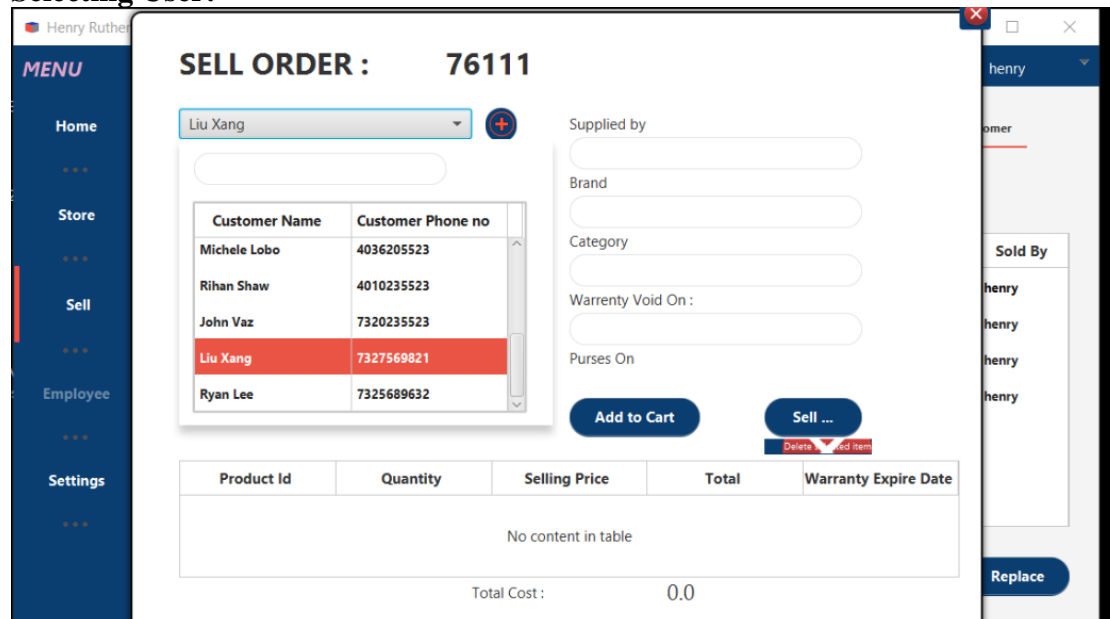


ID	NAME	Quantity	Unit	RMA	Supplier	Brand	Category
101101	Whisky	50	Alcohol	Alcohol	WillFroth	Jack Daniels	Hard Drinks
501201	Cakes and Pastry	30	Bakery	Bakery	Mills & Walker	FrenchConne...	Creamy cakes

Sell Management Screen:

This is where you manage the orders. If an order is by mistakenly added to the cart for a customer, we can delete it. Enter the product id and hit enter for all the details to get populated. Click on Sell order, click on drop down button of Customer, click in the empty area for list to populate, select the customer or you can add a new customer using '+' sign. Once it is done, click outside and then enter product id and hit enter for all the details to populate. Add quantity, add to cart and then sell. All the items sold will reflect in Sell dashboard.

Selecting User:



SELL ORDER : 76111

Customer: Liu Xang

Customer Name	Customer Phone no
Michele Lobo	4036205523
Rihaan Shaw	4010235523
John Vaz	7320235523
Liu Xang	7327569821
Ryan Lee	7325689632

Supplied by: _____
 Brand: _____
 Category: _____
 Warranty Void On: _____
 Purses On: _____

Add to Cart **Sell ...**


Product Id	Quantity	Selling Price	Total	Warranty Expire Date
No content in table				

Total Cost : 0.0



Entering product id and adding to cart:

SELL ORDER : 76111

Liu Xang 

Enter Product Id :

Product Name :

Quantity On Stock :

Selling Price Purchase Pric...

Items Cost :

Total Items 2

Supplied by

Brand

Category

Warrenty Void On :

Purses On


Add to Cart **Sell ...**

Product Id	Quantity	Selling Price	Total	Warranty Expire Date
802601	10	11.99	119.899994	2017-05-17
633451	2	16.99	33.98	2017-05-12

Total Cost : 153.87999

Deleting selected product by clicking on delete selected item:

SELL ORDER : 76111

Liu Xang 

Enter Product Id :

Product Name :

Quantity On Stock :

Selling Price Purchase Pric...

Items Cost :

Total Items 1

Supplied by

Brand

Category

Warrenty Void On :

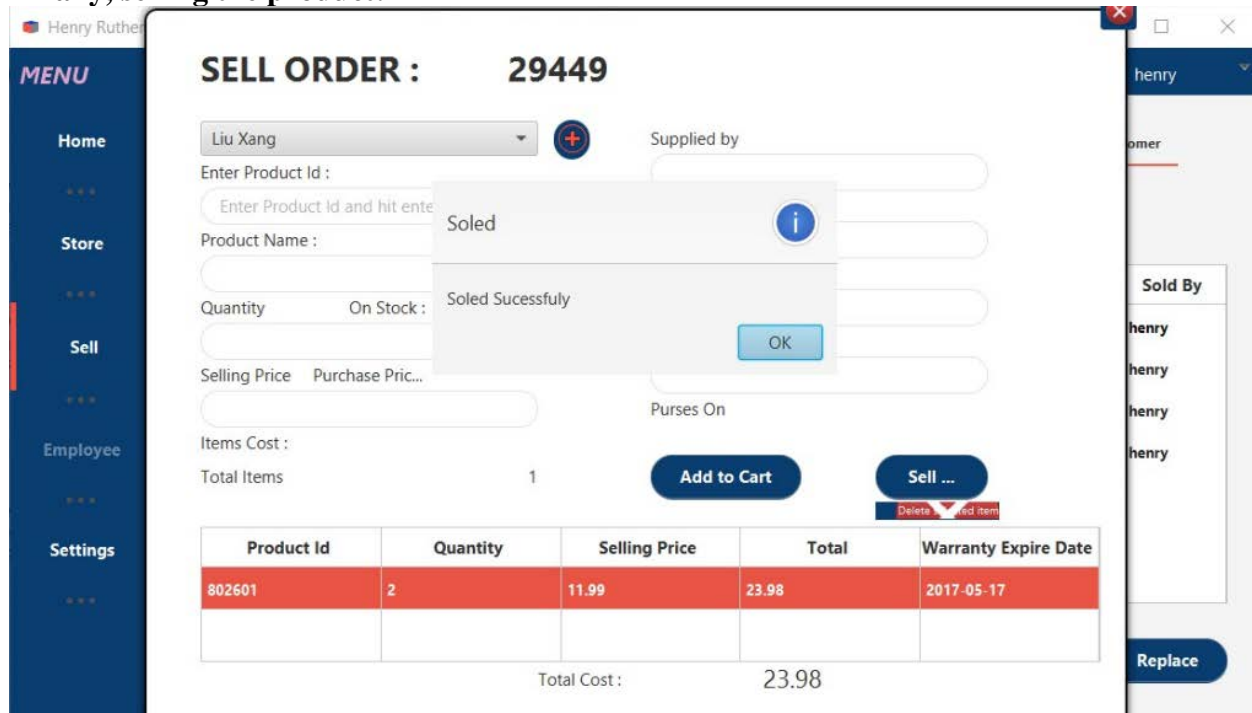
Purses On

Add to Cart **Sell ...**

Product Id	Quantity	Selling Price	Total	Warranty Expire Date
802601	10	11.99	119.899994	2017-05-17

Total Cost : 119.899...

Finally, selling the product:



SELL ORDER : 29449

Liu Xang

Enter Product Id :

Enter Product Id and hit enter

Product Name :

Quantity On Stock :

Selling Price Purchase Pric...

Items Cost :

Total Items 1

Add to Cart

Sell ...

Soled

Soled Sucessfully

OK

Product Id	Quantity	Selling Price	Total	Warranty Expire Date
802601	2	11.99	23.98	2017-05-17
Total Cost :			23.98	

Specifications met:

- **CRUD functionality**
- **MVC architecture**
- **Implementation of polymorphism**
- **Login screens for all employees on the basis of their privileges**
- **Validation and Exception handling**
- **User friendly GUI**

DDL statements of all the entities:

1. Table: brands_mk

```
CREATE TABLE `brands_mk` (
  `Id` int(11) NOT NULL AUTO_INCREMENT,
  `BrandName` varchar(70) DEFAULT NULL,
  `Description` text,
  `SupplierId` varchar(20) DEFAULT NULL,
  `CreatorId` int(11) DEFAULT NULL,
  `Date` date DEFAULT NULL,
  PRIMARY KEY (`Id`),
  UNIQUE KEY `Id` (`Id`)
```



```
) ENGINE=InnoDB DEFAULT CHARSET=utf8
```

2. Table: Category_mk

```
CREATE TABLE `Category_mk` (  
  `Id` int(11) NOT NULL AUTO_INCREMENT,  
  `CategoryName` varchar(70) DEFAULT NULL,  
  `CategoryDescription` text,  
  `BrandId` varchar(20) DEFAULT NULL,  
  `SupplierId` int(11) DEFAULT NULL,  
  `CreatorId` int(11) DEFAULT NULL,  
  `Date` date DEFAULT NULL,  
  PRIMARY KEY (`Id`),  
  UNIQUE KEY `Id` (`Id`)  
) ENGINE=InnoDB DEFAULT CHARSET=utf8
```

3. Table: customer_mk

```
CREATE TABLE `customer_mk` (  
  `Id` int(11) NOT NULL AUTO_INCREMENT,  
  `CustomerName` varchar(200) NOT NULL,  
  `CustomerContNo` varchar(200) DEFAULT NULL,  
  `CustomerAddress` text,  
  `TotalBuy` varchar(50) DEFAULT NULL,  
  `CreatorId` varchar(11) DEFAULT NULL,  
  `Date` datetime NOT NULL,  
  PRIMARY KEY (`Id`),  
  UNIQUE KEY `Id` (`Id`)  
) ENGINE=InnoDB DEFAULT CHARSET=utf8
```

4. Table: organize_mk

```
CREATE TABLE `organize_mk` (  
  `Id` int(1) NOT NULL,  
  `OrgName` varchar(100) DEFAULT NULL,  
  `OrgWeb` varchar(100) DEFAULT NULL,  
  `OrgContactNumbers` text,  
  `OrgContactAddress` text,  
  `OrgLogo` mediumblob,  
  `UserId` int(11) DEFAULT NULL,  
  PRIMARY KEY (`Id`),  
  UNIQUE KEY `Id` (`Id`)  
) ENGINE=InnoDB DEFAULT CHARSET=utf8
```

5. Table: products_mk



```
CREATE TABLE `products_mk` (  
  `Id` int(11) NOT NULL AUTO_INCREMENT,  
  `ProductId` varchar(20) NOT NULL,  
  `ProductName` varchar(150) NOT NULL,  
  `Quantity` varchar(11) NOT NULL DEFAULT '0',  
  `Description` text,  
  `SupplierId` varchar(11) NOT NULL,  
  `BrandId` varchar(11) NOT NULL,  
  `CategoryId` varchar(11) NOT NULL,  
  `UnitId` varchar(11) NOT NULL,  
  `PursesPrice` varchar(100) NOT NULL,  
  `SellPrice` varchar(100) NOT NULL,  
  `RMAId` varchar(11) NOT NULL,  
  `UserId` varchar(11) NOT NULL,  
  `Date` date NOT NULL,  
  PRIMARY KEY (`Id`),  
  UNIQUE KEY `Id` (`Id`)  
) ENGINE=InnoDB DEFAULT CHARSET=utf8
```

6. Table: rma_mk

```
CREATE TABLE `rma_mk` (  
  `Id` int(11) NOT NULL AUTO_INCREMENT,  
  `RMAName` varchar(100) DEFAULT NULL,  
  `RMADays` varchar(11) NOT NULL,  
  `Comment` text,  
  `CreatorId` int(11) DEFAULT NULL,  
  `Date` date DEFAULT NULL,  
  PRIMARY KEY (`Id`),  
  UNIQUE KEY `Id` (`Id`)  
) ENGINE=InnoDB DEFAULT CHARSET=utf8
```

7. Table: sell_mk

```
CREATE TABLE `sell_mk` (  
  `Id` int(11) NOT NULL AUTO_INCREMENT,  
  `SellId` varchar(10) NOT NULL,  
  `CustomerId` varchar(11) NOT NULL,  
  `ProductId` varchar(11) NOT NULL,  
  `PursesPrice` double NOT NULL,  
  `SellPrice` double NOT NULL,  
  `Quantity` int(10) NOT NULL,  
  `TotalPrice` double NOT NULL,  
  `WarrentyVoidDate` varchar(20) NOT NULL,  
  `SellerId` int(11) NOT NULL,
```



```
`SellDate` datetime NOT NULL,  
PRIMARY KEY (`Id`)  
) ENGINE=InnoDB DEFAULT CHARSET=utf8
```

8. Table: supplier_mk

```
CREATE TABLE `supplier_mk` (  
  `Id` int(11) NOT NULL AUTO_INCREMENT,  
  `SupplierName` varchar(100) DEFAULT NULL,  
  `SupplierPhoneNumber` text,  
  `SupplierAddress` text,  
  `SupplierDescription` text,  
  `CreatorId` int(11) DEFAULT NULL,  
  `Date` date NOT NULL,  
  PRIMARY KEY (`Id`),  
  UNIQUE KEY `Id` (`Id`)  
) ENGINE=InnoDB DEFAULT CHARSET=utf8
```

9. Table: unit_mk

```
CREATE TABLE `unit_mk` (  
  `Id` int(11) NOT NULL AUTO_INCREMENT,  
  `UnitName` varchar(50) DEFAULT NULL,  
  `UnitDescription` text,  
  `CreatorId` int(11) DEFAULT NULL,  
  `Date` date DEFAULT NULL,  
  PRIMARY KEY (`Id`),  
  UNIQUE KEY `Id` (`Id`)  
) ENGINE=InnoDB DEFAULT CHARSET=utf8
```

10. Table: user_mk

```
CREATE TABLE `user_mk` (  
  `Id` int(11) NOT NULL AUTO_INCREMENT,  
  `UserName` varchar(20) NOT NULL,  
  `FullName` varchar(100) DEFAULT NULL,  
  `EmailAddress` varchar(100) DEFAULT NULL,  
  `ContactNumber` varchar(100) DEFAULT NULL,  
  `Salary` double DEFAULT NULL,  
  `Address` text,  
  `Password` varchar(45) DEFAULT NULL,  
  `Status` tinyint(1) NOT NULL DEFAULT '0',  
  `UserImage` mediumblob,  
  `Date` date NOT NULL,  
  `CreatorId` int(11) DEFAULT NULL,
```



```
PRIMARY KEY (`Id`),  
UNIQUE KEY `Id` (`Id`)  
) ENGINE=InnoDB DEFAULT CHARSET=utf8
```

11.Table: userpermission_mk

```
CREATE TABLE `userpermission_mk` (  
  `Id` int(11) NOT NULL AUTO_INCREMENT,  
  `AddProduct` tinyint(1) DEFAULT NULL,  
  `AddSupplier` tinyint(1) DEFAULT NULL,  
  `AddBrand` tinyint(1) DEFAULT NULL,  
  `AddCategory` tinyint(1) DEFAULT NULL,  
  `AddUnit` tinyint(1) DEFAULT NULL,  
  `AddCustomer` tinyint(1) DEFAULT NULL,  
  `UpdateProduct` tinyint(1) DEFAULT NULL,  
  `UpdateSupplier` tinyint(1) DEFAULT NULL,  
  `UpdateBrand` tinyint(1) DEFAULT NULL,  
  `UpdateCategory` tinyint(1) DEFAULT NULL,  
  `UpdateUnit` tinyint(1) DEFAULT NULL,  
  `UpdateCustomer` tinyint(1) DEFAULT NULL,  
  `RMAManage` tinyint(1) DEFAULT NULL,  
  `SellProduct` tinyint(1) DEFAULT NULL,  
  `ProvideDiscount` tinyint(1) DEFAULT NULL,  
  `EmployeeManage` tinyint(1) DEFAULT NULL,  
  `OrgManage` tinyint(1) DEFAULT NULL,  
  `ChangeOwnPass` tinyint(1) DEFAULT NULL,  
  `UserId` int(11) NOT NULL,  
  PRIMARY KEY (`Id`),  
  UNIQUE KEY `Id` (`Id`)  
) ENGINE=InnoDB DEFAULT CHARSET=utf8
```

ERD Diagram:

Image is on next page...

