School Supplies Point of Sale and Inventory System

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Overview

Our project's goal is to create a functioning windows application that works in tandem with a local Microsoft Access database. This project is directly concerned with the legal sale of the items being sold by *School Supplies.* In theory, an application of this sort could be used in a business across multiple computers operating on the same local network. The application login form allows two user types, users and employees, to be directed to different forms within the application. Our application will feature a form for customers which displays *School Supplies* item inventory, a description of each item, a price per unit of each item, and a means for the customer to select the quantity of each item which they intend to buy. The inventory will contain a variety of common office or classroom related items. Our application will then generate a receipt for the customer's order, and simultaneously logs a transaction in the system. Customers may also create an account with the "New Customers" form, which stores information into the "Customers" table inside of our database. Employees can also log in to view tables within the database. Once the transactions table has been populated by customers, employees can see each transaction, as well as the level of inventory for each item. As our inventory is being sold, the system will automatically change the inventory levels by subtracting quantity of each item in a customer's order from our companies' total supply.

Objectives

The main objective for this project is to design a working point of sales application for a company that sells school supplies.

- Deliverables
    - Actor type selection screen
    - Working Logins for Customers and Employees
    - 'Create an Account' and login form for New Customers
    - Employee and Customer views with unique functions
    - Select item(s) form connected to database
    - Checkout and receipt

Specifications/Requirements

- ## **Actors**

  There will be several different 'actors' (user types) using the POS interface:
  - Returning Customer (customer)
    - Should be able to log in using previously created username and password stored within the database
  - New Customer (customer)
    - Should be taken to the New Customer Form to fill out the necessary info for a customer account
  - Employees (employee)
    - Should be able to view and change inventory values within the database from the employee form

- ## **Logins**

  Once the application's login form is displayed, the user will be prompted to login or to create a new account. The provided information will be checked alongside our database to ensure the user receives the appropriate interface based on whether they are a customer or an employee.
  - Employee Login
    - System will automatically detect login information that corresponds to an employee within the database
    - Gains access to Transaction History, Inventory, Customer Database, and Order History
    - Transaction History- tracks the transaction ID, an Item's name, quantity, price, and description, as well as the associated customer email
    - Inventory- allows employee to view pricing of items, item ID's, associated item names and descriptions, and to edit inventory levels of items

- ○ Customer Database- allows employee to see basic information of customers such as first name, last name, account email, and account password, and billing information
- ○ Customer Login
  - ○ Existing Customer- returning customers can enter their login as the information has been stored in our database from their previous visit
  - ○ New Customer- new customers will be redirected to another form that will allow them to create their account
  - ○ Once the customer's account information has been accounted for the shopping may begin!

● **Use Cases**

The Use Case Diagram shows which actions are available to the user based on their classification within the database, i.e. whether the system detects an employee or a customer.
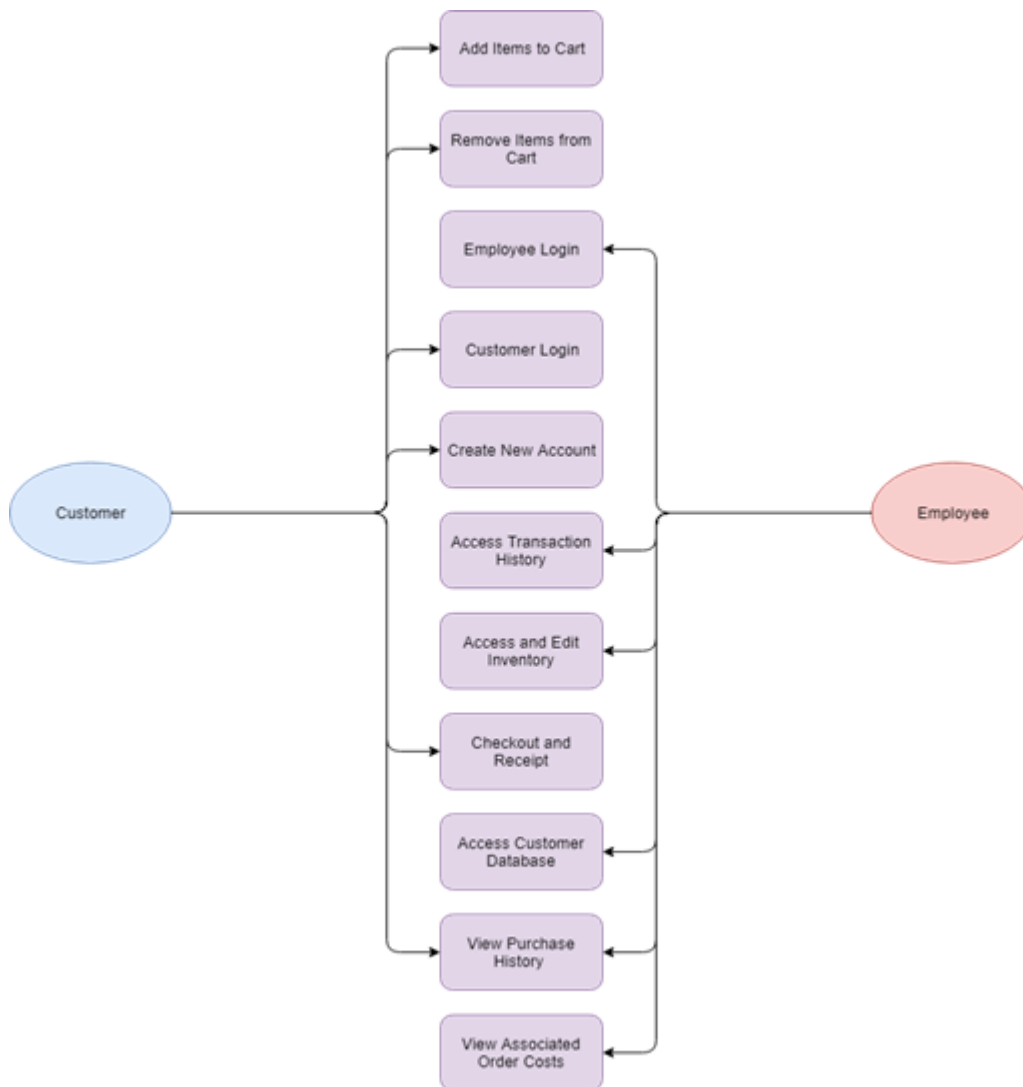
Figure 1: Use Case Diagram

○ Login

Before any purchases or changes are made, the customer or employee will enter their login credentials on the Initial Login form or create an account if the user is a new customer.
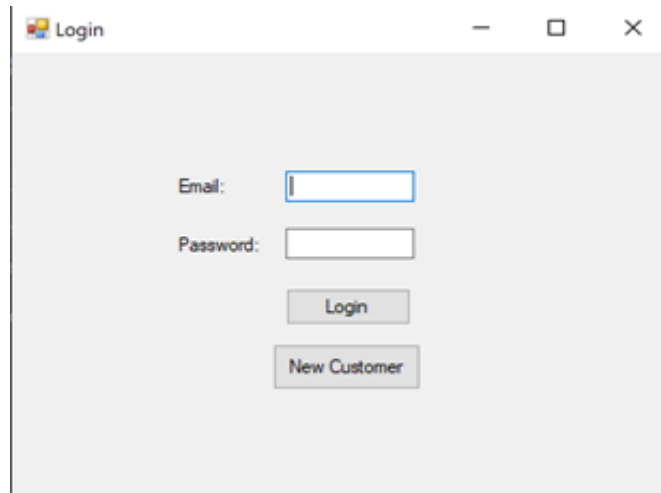
Figure 2: Login Form

This login form serves as the entry point for the application. When opened, the user will be greeted by the platform and prompted to login into their shopping account. Based on the entered information, it will check with our database and lead to 3 options: the Create an Account form, the CustomerView form, or the EmployeeView form.

○ Customer Login
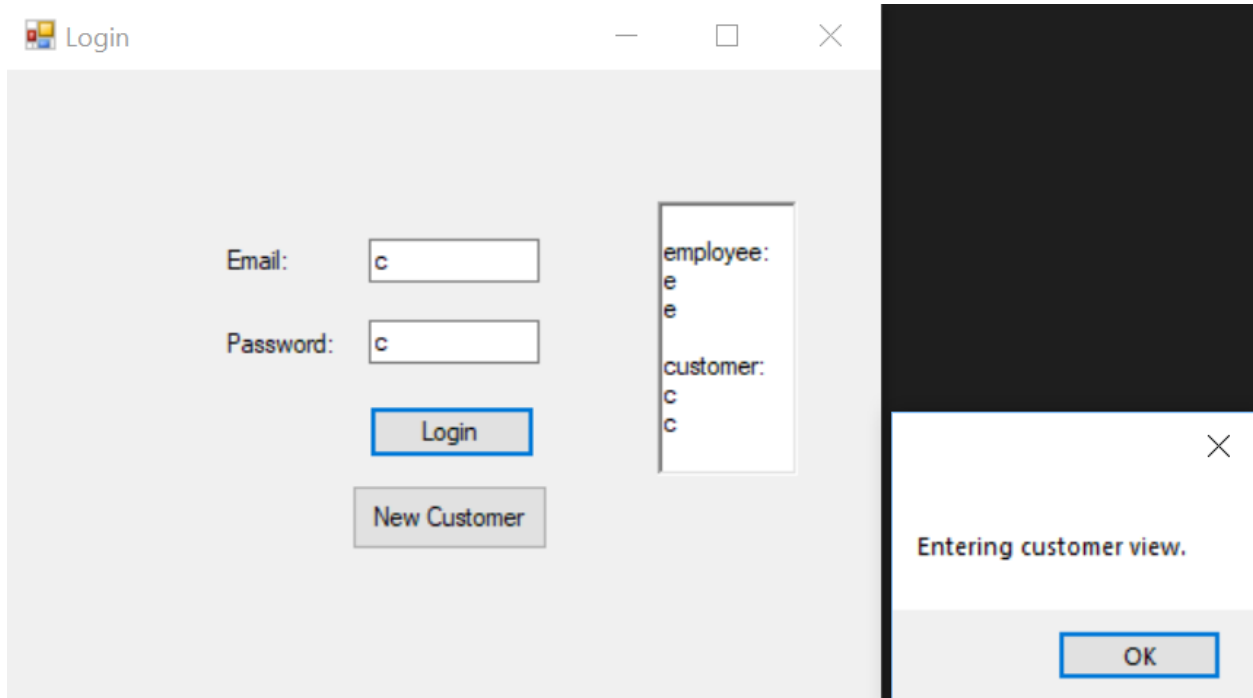
Figure 3: Customer Login View
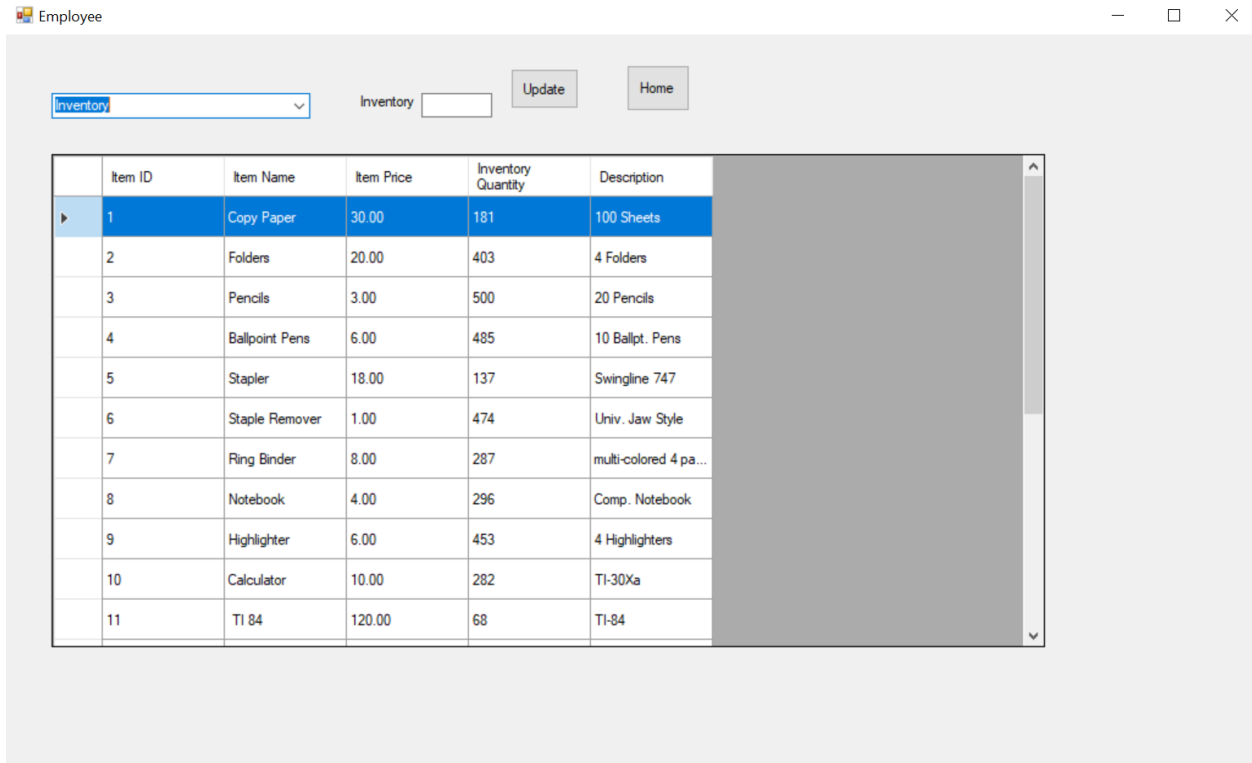
○ Employee Login
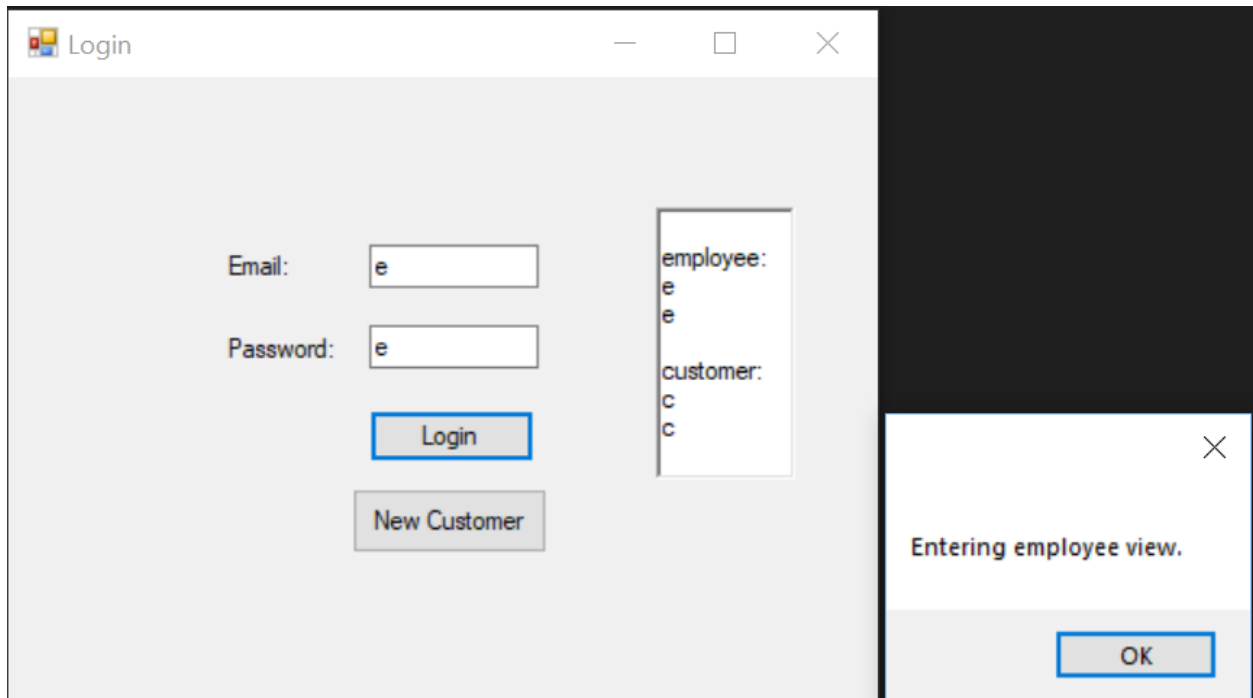
Figure 4: Employee Login View

○ Access and Edit Inventory

After logging into the login screen, the employee will have access to all the necessary information needed to do their job.

Figure 5: Employee Inventory Interface

This form is the initial view employees will see once logging in. From this form, employees will have access to information such as Inventory levels, Transaction History, Order History, and the Customer Database. The drop-down menu serves as a simple and ergonomic way for the employee to easily traverse through the information tables for the one he/she may need.

○ Customer View

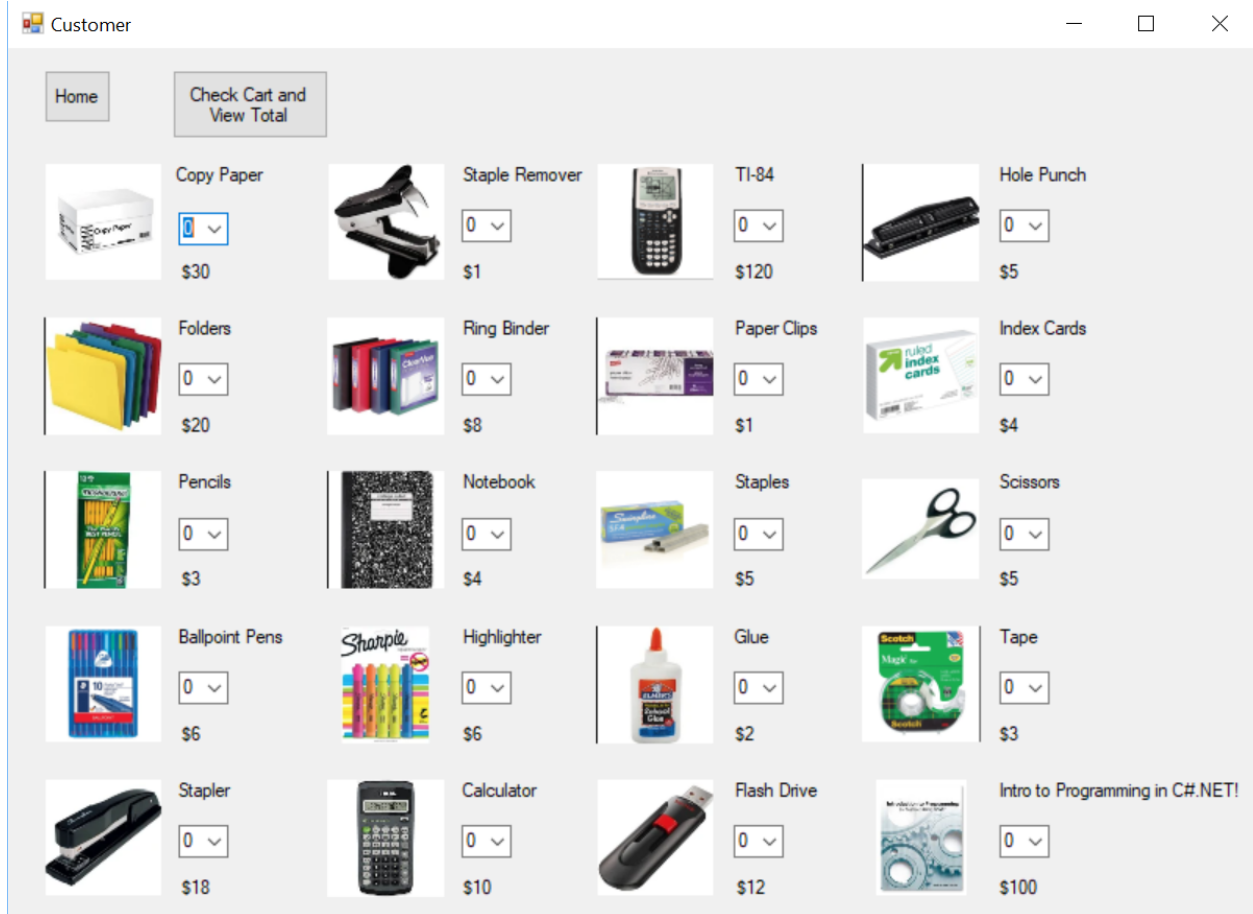Once the customer logs into their pre-existing account, they will be taken to the CustomerView.

Figure 6:CustomerView/Shopping Interface
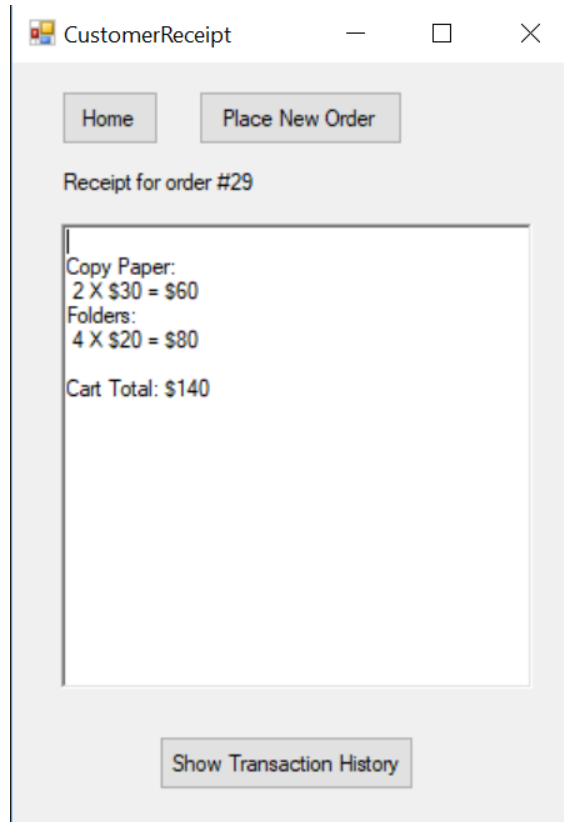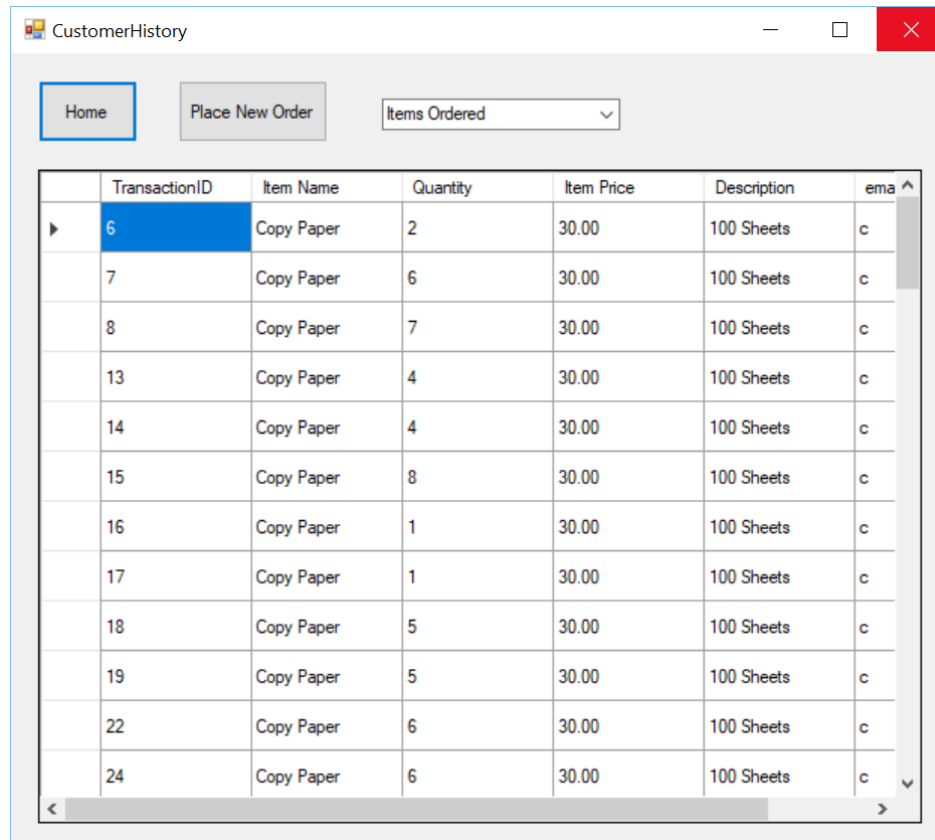
This form

○ Checkout and Receipt

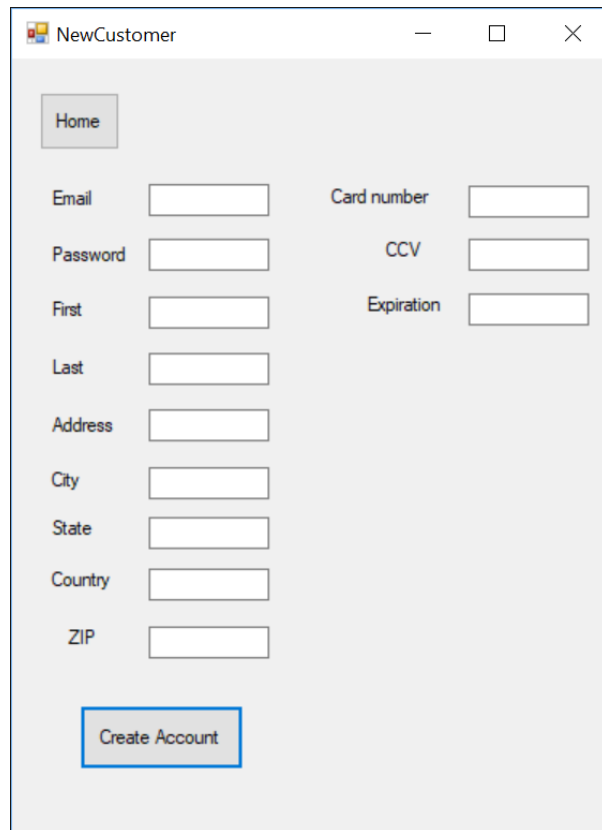*Figure 7: Customer Receipt*

○ Purchase History (Customer)

Figure 8: Purchase History

○ Create an Account

New Customers will be taken to the New Customer Form where they will insert their information, create an account, and log in from there. Then they can access the store and begin shopping!

Figure 9: New Customer Form

● **Navigation**

Navigation throughout the system is shown below.
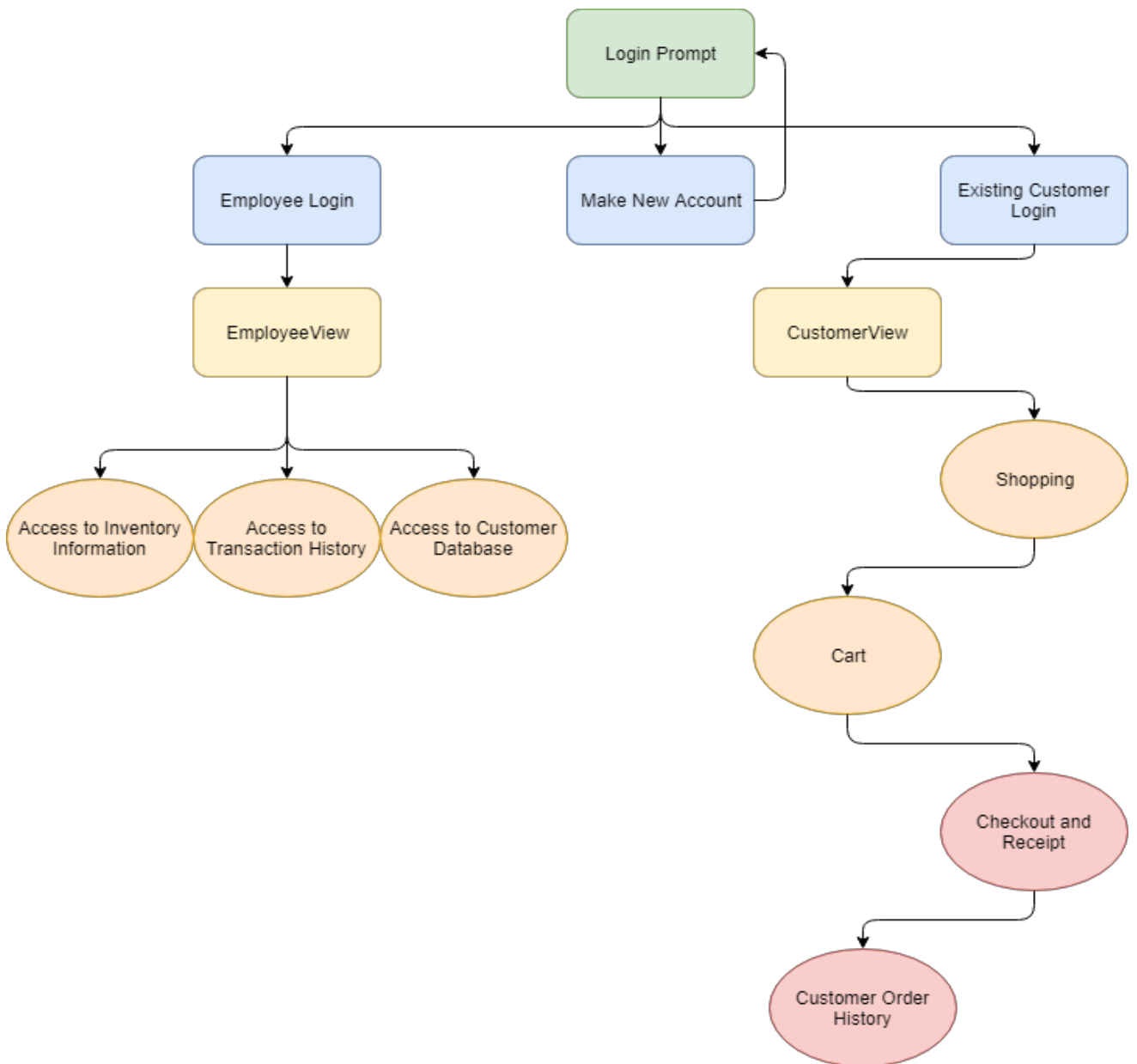
Figure 10: Navigation Diagram

● Data Design
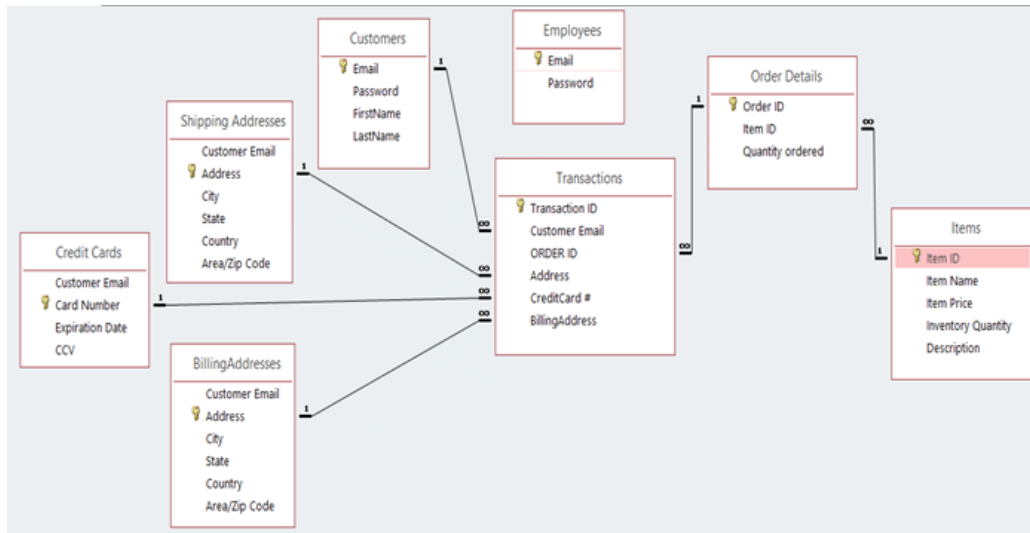
Item ID	Item Name	Item Price	Inventory Quant	Description
1	Copy Paper	30.00	181	100 Sheets
2	Folders	20.00	403	4 Folders
3	Pencils	3.00	500	20 Pencils
4	Ballpoint Pens	6.00	485	10 Ballpt. Pens
5	Stapler	18.00	137	Swingline 747
6	Staple Remover	1.00	474	Univ. Jaw Style
7	Ring Binder	8.00	287	multi-colored 4 pa
8	Notebook	4.00	296	Comp. Notebook
9	Highlighter	6.00	453	4 Highlighters
10	Calculator	10.00	282	TI-30Xa
11	TI 84	120.00	68	TI-84
12	Paper Clips	1.00	488	10 Paper Clips
13	Staples	5.00	277	3,750 Ind. Staples
14	Glue	2.00	283	Elmer's Glue
15	FlashDrive	12.00	187	Sandisk Cruzer Glic
16	Hole Punch	5.00	140	Universal UNV743;
17	Index Cards	4.00	292	100 Count
18	Scissors	5.00	290	Westcott Scissors
19	Tape	3.00	196	Scotch Magic Tape
20	Intro to Progra	100.00	136	For Engineers Usin

Email	Password
Asheen@lsu.edu	BaconisOK
Bharp41@yahoo.com	BumbleBee
e	e
Eburgess@yahoo.com	asdfghjkl
employee	password
Fjames@msn.com	TrexRidingASkateboard
Jgui112	123456
Jsmart@me.com	RawCrabMeat
Kwilson@me.com	Mypasswordis
Pgilbert@me.com	Fireman250
Svai@me.com	ColorJem
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