**Pseudo Code**

**Login Class**

Calls DB to obtain usergroup ID based on passed user credentials

execute and read the returned value from DB to see which group the user belongs to

Opens MainMenu form based on the logged in users credentials

**MainMenu Class**

Based on the logged in users credentials the user will have access to the appropriate forms.

Forms the user does not have access to will be disabled but still visible.

Forms the user does have access to they will be able to open within the MainMenu MDI.

**NewCustomer Class**

Can be opened directly from Main Menu or from within the ProcessTransaction Class

Only contains a method that validates form fields and connects to the DB to add the new record to the customers table

Two separate ways to call the form you can call it with or without a Customer object

Save button validates, and then either save a new or update an existing customer record, lastly clears the form

Method to clear all text fields in the form

Method to validate all text fields prior to creating or updating a customer record

Method to track the birthdate datetimerpicker for validating if it was changed

Method to track if the length of the cellphone text field is at least 10

Button to close the form

Button to create a new card which is only available if the form was passed a customer object

Method to populate the form with the passed customer object and also add any transactions for the customer in the transaction datagridview

**ProcessTransaction Class**

Timer that updates every half a second to keep it in sync with current system time

New customer button that opens a new customer form within the MDI

Close button to close the form

Button to open a Card\_Information form to select a card for the transaction This button can only be selected if a customer is currently selected.

Two radio buttons to track the payment type which would be either cash or card

Select customer button which opens the view modify form that allows the customer to select a customer which will update the process transaction form with the selected customer

A method to load the datagridview with all of the products that a customer can purchase. This datagrid view will also contain a term for any items that can be charged during a monthly basis

Method to track cell changed events which will update the total price of all of the users selected products to purchase

Method to enable the term field in the datagridview only for products that can be charged on a monthly basis

Process transaction button that will validate all fields and then process the transaction updating the transactions table

Method to get the customers name and ID necessary for the transaction to be processed

Method to get the card number which is necessary for the transaction to be processed

Method that handles all validation for the transaction to be processed.

**View New Class**

Class contains two datagridviews and two tabs. One for Customers data and one for Cards data

Method to get the customers data for the customers datagridview

Method to get the cards data for the cards datagridview

Button to send selected customer in customer datagridview customer ID to the Process Transactions table

Customers cell click event method to track the selected rows customer ID and Name

Tab index changed method to track when the customer switches between the cards and customer tabs

Cards cell click event method to track the selected rows customerID, CardID, and customer name

Edit button which depending on the selected tab will open either the customer information form based on the selected customer or the Card Information form based on the selected card record.

**Card Information Class**

Can be opened with either a customers or Cards object data

Method to call the DB to get the list of cards for the listbox based on the CustomerID provided

Listbox Selected Index Changed method to update all text fields when the user selects a different card in the list

Save button that first validates the fields, adds the card record to the database, clears all the form fields, then reloads the cards list

Clear button that clears all form fields

Select button to select a card for a transaction. Will only work if a Process Transactions window is open

Method to clear all text fields and the list box

Method to validate all form fields

Method to check for expiration date changes in order to validate the datetimepicker