KC Energy Project
Java Program Application
Amy Ngo
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1. *Video Link*

Demo Link: https://youtu.be/230VMPVdtiY

2. *Usernames and Passwords*

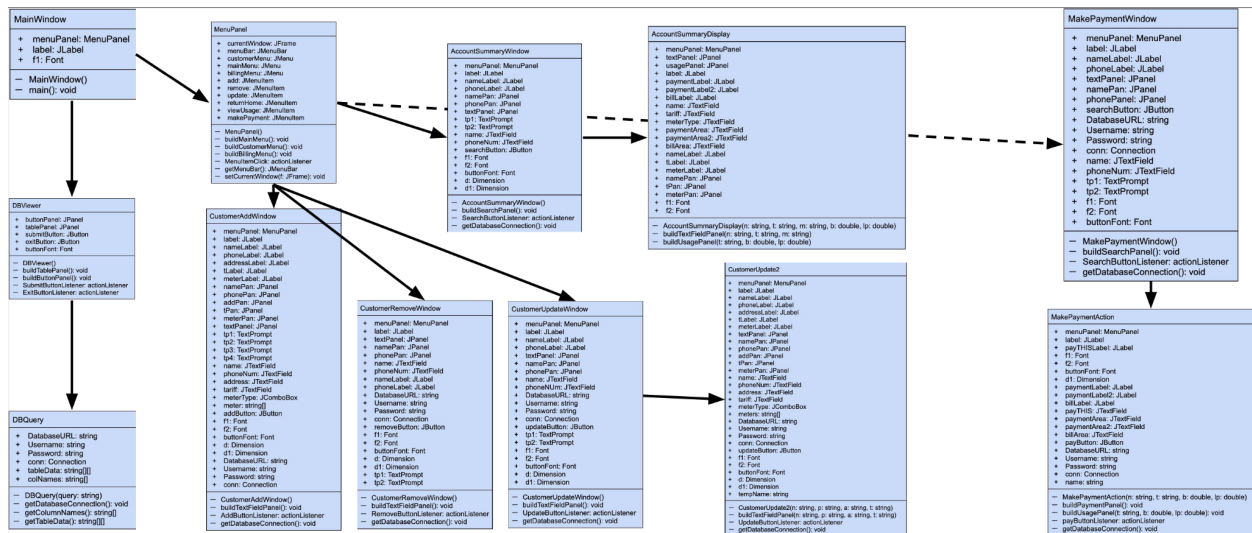DatabaseURL: `"jdbc:mysql://localhost:3306/KCEnergy"`

Username: `"root"`

Password: `"root1234"`

3. *UML Class Diagram Map*

Class Diagram Link:

https://drive.google.com/file/d/1tRFerUvW4yiTPHMZEeaCdw2d6js02Cqd/view?usp=sharing
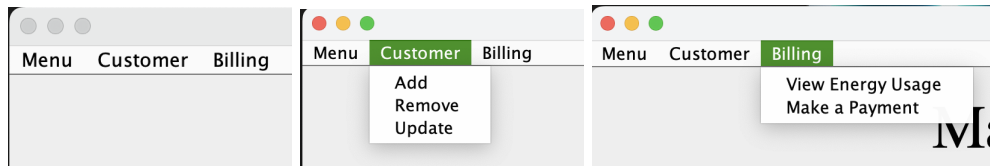
4. Table of Features

Features	Implemented (Full/Partial)	Any Comments
View database in table form	full	Refreshes every time the main menu/return home button is pressed.
Exit Window Button	full	
Record a new customer	full	No error validation for duplicate entries. Bill automatically starts at 400.
Delete a previous customer	full	Ability to search for a customer by name or phone number.
Update a current customer	full	Ability to search for a customer by name or phone number.
Display a customers energy usage	full	Ability to search for a customer by name or phone number.
Make a payment under a specific customer	full	Ability to search for a customer by name or phone number. Make any amount of payment towards the customer's bill.

5. Additional Information

- Starting from the main window class, it implements the menu panel class. It also implements the Database Viewer and Database Query classes in order to show the database on the front page.
- From the menu panel class, I create the menu bar that includes options under a menu tab where you can open the main menu. Another tab to add a customer, remove a customer, and update a customer. Along with a billing tab that includes options to display their energy usage and make a payment towards their bill.
- In the menu panel class, we implement the "AddCustomerWindow." When you go to add a customer, you can enter your information into the fields, you cannot add a customer without filling in all the fields. Once a customer is added, their info is stored into a database which can be viewed in the main window.
- From the menu panel class, we implement the classes that can remove a customer and update their info. Similar to the "AddCustomerWindow," but in these other windows, you can search for a customer by name or phone number. No error handling added to the search window. Within the "RemoveCustomerWindow. " The search button will give you confirmation if you delete a customer. Within the "UpdateCustomerWindow," the search button will take you to a window to edit a customer's details where the fields are already filled with previously entered information.
- From the menu panel, there is also the billing drop down menu. The "AccountSummaryWindow" displays a search window that opens up a specific customer's energy usage. The "MakePaymentWindow" displays another search window that leads to another window where you can make a payment towards the customer's bill that you searched up previously.

6. Key Features

- Menu bar

- AddCustomerWindow

Add a Customer

Name: ex. John Doe.

Phone Number: ex. 816-808-5555

Address: ex. 1234 Fishbowl Ct.

Energy Tariff: ex. 0.75, 0.69, etc.

Meter Type: Choose a Meter Below

Add Customer

- RemoveCustomerWindow

Remove a Customer

Name: ex. Jane Doe

Phone Number: ex. 816-808-5555

Remove Customer

- Search up a customer by name/number

Search for Customer

Name: ex. Jane Doe

Phone Number: ex. 816-808-5555

Search Customer

- UpdateCustomerWindow

Update Customer

Name: Stephen

Phone Number: 8029555644

Address: 446 Spring St

Energy Tariff: 0.85

Meter Type: Choose a Meter Below

Update Customer

- Search up a customer by name/number

Search for Customer

Name: ex. Jane Doe

Phone Number: ex. 816-808-5555

Search Customer

- MakePaymentWindow

Make your Payment

Enter in Payment

Your last payment: 18.0   Your next payment: 93.75   Your current bill is: 192.0

Pay Bill

View Energy Usage
Menu   Customer   Billing

Energy Usage

Name: Bishop   Energy Tariff: 0.75   Meter Type: ETIM: Electromechanical Type Induction Meter

Your last payment: 93.0   Your next payment: 93.75   Your current bill is: 307.0

- Display of Energy Usage

7. References

Classes "DBViewer," "DBQuery," "TableFormatter": Adu Baffour Example

"TextPrompt" Class: https://tips4java.wordpress.com/2009/11/29/text-prompt/

Connecting MySQLServer: https://www.youtube.com/watch?v=e8g9eNnFpHQ

Inserting Data into MySQL: https://youtu.be/ohOPyXZlsB0

Updating and Deleting Data: https://youtu.be/NPYj9Z5k1kY

Prepared Statements: https://youtu.be/jTasm64rz-c