**Assignment 1**

**1. Discuss your initial thoughts in detail on how you will design this application?**

To collaborate on this project we will be creating a GitHub repository and using git (source control) to keep our project manageable.

Our thought process is to create a full stack application that will provide the user with an interface to create and manage their profiles and request quotes for fuel prices along with viewing the history of their fuel quotes.

To store all this information, we will create a database that holds user information, user credential information, and fuel prices information.

To connect everything together, we will be creating a backend that performs the basic CRUD commands (Create, Read, Update, Delete) to provide information back-and-forth between the frontend and backend.

**2. Discuss what development methodology you will use and why?**

Agile Development.

* Provides adaptability to the client’s needs in the form of a development cycle.
  + Client requests, developers begin development, then developments are confirmed with the clients. If the client requests changes, then requirements can be changed and the cycle repeats, allowing flexibility.
* Incremental Development.
  + Application can be updated as more and more requirements are needed, instead of having to deploy everything all at once. This will allow us to quickly adapt and make changes as needed.

**3. Provide high level design / architecture of your solution that you are proposing?**

Frontend (JavaScript):

* Login Page:
* Initial page loads in as a login screen with an option of creating a new account.
* Options:
* Get a fuel quote.
  + Price based on client location, client history, gallons requested, profit margins.
* View the previous orders of fuel quotes.
  + Receipt
  + Estimated delivery time and date
* Account:
  + Update account settings.
    - Name, address, email, Payment card
  + (\* Credentials reset)
  + (\* Admin)

Backend (Python):

* GET:
  + List of fuel quotes.
  + User and Password confirmation (based on the user).
* POST (INSERT):
  + Inserts a user.
  + Fuel quotes.
* PUT (UPDATE):
  + Updates a user’s information
* DELETE:
  + (\* Delete Account)

Database:

* Clients:
  + Name, address, email, payment card, (\* location), (\* profit margins)
* Fuel Quotes:
  + Client, total price, fuel gallon, delivery time, delivery date
* Users and Passwords:
  + Username, Password, Client