Group 7

	Roles (R: Responsible, C: Consulted)		
Team Members	**Question 1**	**Question 2**	**Question 3**
Elizabeth Nguyen	**R**	**C**	**R**
Pouria Narimisa	**C**	**R**	**R**
Ali Sura Ozdemir	**C**	**R**	**R**

Assignment 1

Question 1: Discuss your initial thoughts in details on how you will design this application? (2 points)

In our initial start, we listed the details of what the clients need and include specifics on how to handle each of the functionality of our application (listed below). We determine that this application can be implemented using an IOS app or a website that can navigate the clients through the application. With the pros and cons of both formats, we decide to use the website as our main format. We reference how facebook's "login page" designs/buttons as our model to how our login/register page would look like. For the pricing module that can predict the rate of fuel, we refer to a google forum format that contains "fields" where users can enter their required information to generate the total cost of fuel.

(drafting in process)

Goal: predict rate of fuel		
Descriptions of what we need to do	**Client access (what they can see)**	**Programmer access (what we do...specifics)**
Login	-username -password -register	-username/password management to check if valid or invalid login <<automatic action choices: IF NEW CLIENT, take to client profile management after login IF OLD CLIENT, take >>
Register	-username -password -confirm password	-validity: check if password is strong and valid -validity: check if username is

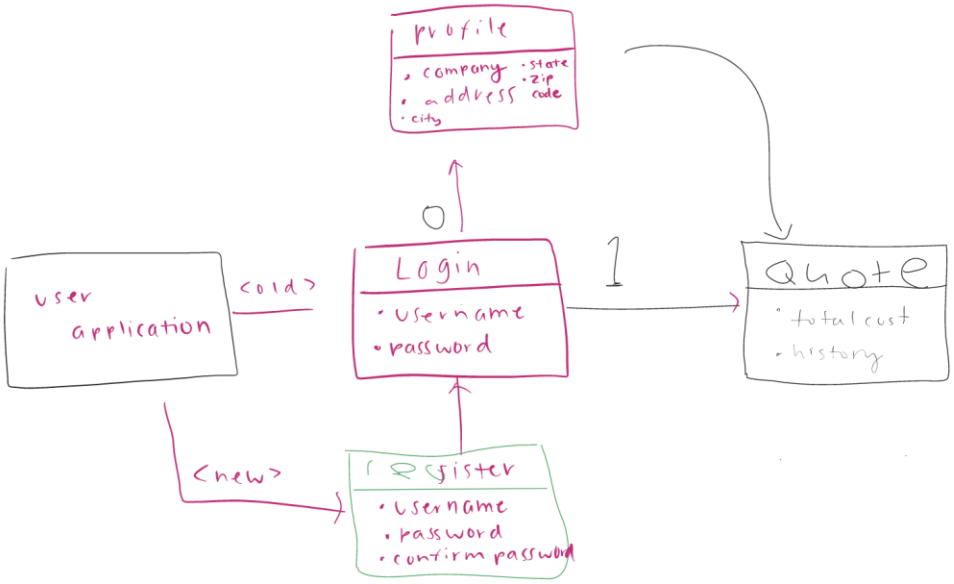
		taken or valid <<automatic action: take to login page after register>>
Client profile management Complete their profile -restriction: have to be register/login	PROFILE INFO ENTER -first/last name -company -company address -state -zipcode	-validity: check if each strings are valid (no blanks, no weird characters…)
Fuel Quote Form with Pricing module client enters all required info and calculates the rate provides total cost	REUQIRED INFO ENTER -gallon request -location (more info needed)	-valdity: check if info is valid/invalid string/int <<automatic action: put total cost to history>>
Fuel quote history stores all total cost	-displays history to client	Use queue/stack to store adn show data?

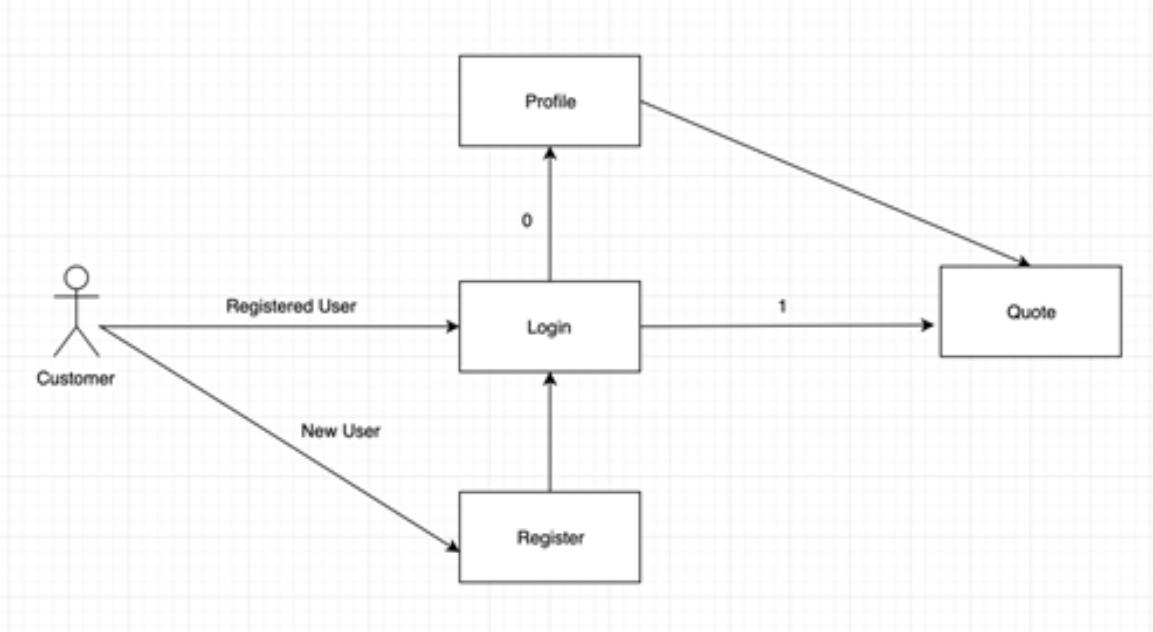
Question 2:Discuss what development methodology you will use and why ? (2 points)

We had a look at both Agile and Waterfall methodologies. Waterfall is better for projects completed in a linear fashion and does not allow going back to a prior phase. Agile methods break projects into smaller, iterative periods. We select the Agile methodology for this project.

Question 3:Provide high level design / architecture of your solution that you are proposing? (6 points)

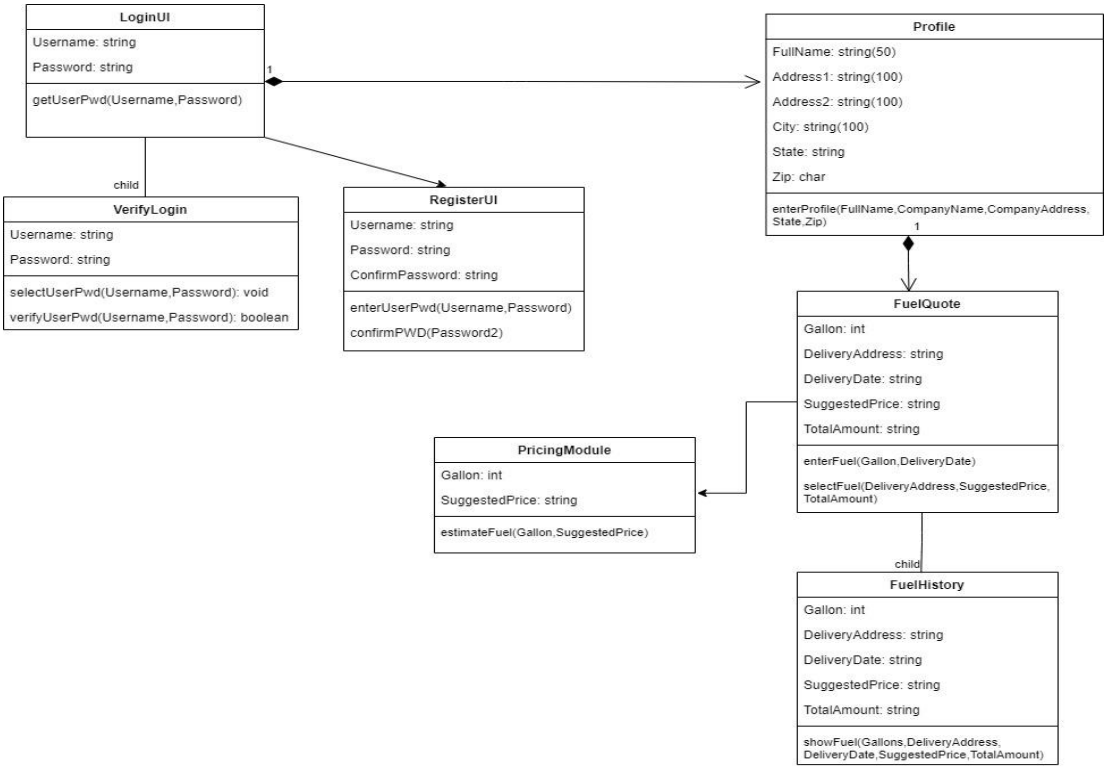
We think of a Website to have this application, as an high level design of a web application as below:



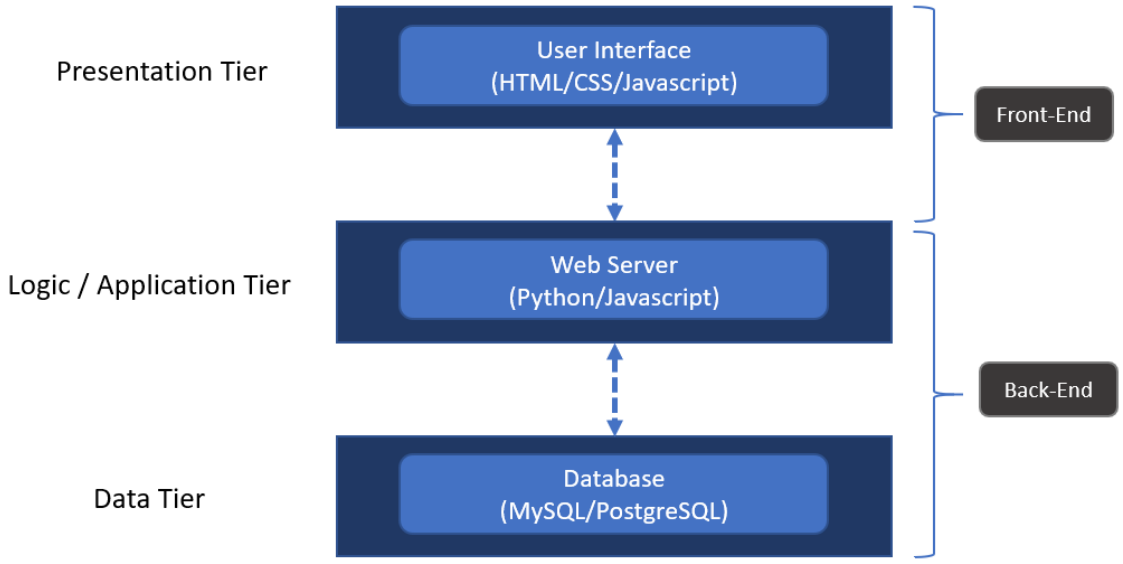


We have used UML diagrams to model the system architecture:

CLASS DIAGRAM UML:



Proposed Software Architecture



Advantages and Disadvantages of Multi-Tier Architectures

ADVANTAGES	DISADVANTAGES
• Scalability	• Increase in Effort
• Data Integrity	• Increase in Complexity
• Reusability	
• Reduced Distribution	
• Improved Security	
• Improved Availability	