**Group 23**

GitHub: [JordMiles064/COSC-4353---Assignment-1 (github.com)](https://github.com/JordMiles064/COSC-4353---Assignment-1)

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Our initial thoughts on development vary between creating a web application through some markup language like HTML and scripting with JavaScript or desktop application in Java. Two group members have very little experience in web development, but most are familiar with JavaScript. Learning simple web development for the project would be a small upset at most, at least compared with the task of creating a database, or databases, for storing login and fuel data. Whatever the case, the group is confident in its ability to learn the necessary technology, whether it be for web development or database management, and equally confident in its ability to complete the assignment’s goals with whichever direction they decide to take the project.

An Agile development methodology was unanimously chosen among group members for its efficacy, being historically successful among most groups who use this methodology, its resistance to change, and for allowing the group to develop and test the group’s application in a collaborative manner quickly and effectively. Although it’s mostly used in high-intensity management for larger software development groups, we believe a simple adherence to some of Agile’s principles can lead to a better software development workflow in the group.

High level design of the project is described on the following page.

* User is presented a screen with email and password fields, and ”login” and “sign up” buttons.
* If the user presses the “sign up” button
  + User is presented a screen with a email, password, and confirm password fields, with “back” and “sign up” buttons.
  + If the user presses the “sign up” button
    - If the user has entered an e-mail which is already in the database
      * The user is told the e-mail already exists and prompted to go to the login page
    - Otherwise, If the “password” and “re-enter password” fields are not identical
      * The user is prompted to enter a matching password and try again
    - Otherwise
      * The data is stored in the database and the user is redirected to the login screen.
* If the user presses the “login” button
  + If the user enters an e-mail which does not exist in the database
    - The user is told no account exists with that e-mail and prompted to sign up.
  + Otherwise, If the user enters a password which does not match the e-mail in the database
    - The user is told they have entered an incorrect password, and prompted to try again.
  + Otherwise, the user is shown their complete profile with data filled in from the database. There exists side-tabs called “fuel quote form” and “fuel quote history”
  + If the user presses the “fuel quote form” side tab:
    - The user is presented with the fuel quote form, with client location dropdown menu with 2 in-state and out-of-state options, client history dropdown menu with 2 existing customer and new customer options, and two fields that accept floating point values for gallons requested and company profit margin respectively. A “submit” button exists to submit the form.
    - If the user presses the “submit” button:
      * If any field is empty, the user is prompted to fill in that field by having red text labels appear on top of every empty field.
    - Otherwise:
      * The user is shown their quote, and this data is saved to the database for displaying their fuel quote history later.
  + If the user presses the “fuel quote history” tab
    - The user is presented with the fuel quote history page, with data filled in from the database.