| In this assignment you will build the back end for the web application that you designed in assignment 1.  Remember, we are only building back end in this assignment.  **Description:**  Same as assignment 1.  **Back end must include following components/modules:**  - Login module  - Client Profile Management module  - Fuel Quote module, includes list of quote history for a client.  - Pricing module. Only create a class. You will implement this in last assignment.  **Important deliverables:**  - You should have validations in place for required fields, field types, and field lengths in backend code as well.  - All backend code should be covered by unit tests. Code coverage should be grater than 80%.  - Research how to run the code coverage reports. Each IDE has plugins to generate reports. **Here are few pointers.** [**https://stackify.com/code-coverage-tools/**](https://stackify.com/code-coverage-tools/)  - All front end should be connected to back end. Form data should be populated from backend. Backend should receive data from front end, validate, and prepare it to persist to DB.  - WE ARE NOT IMPLEMENTING DB yet. For this assignment you can hard code the values.  **NOTE:** Only provide a word / pdf doc. You should use GitHub for your group collaboration and code.  **Answer these questions:**  1. Provide link to GitHub repository for TAs to view the code. Code should include unit tests.(5 points)  2. List what backend technologies you are using and why? (2 points)  **3. IMPORTANT: list who did what within the group. TAs should be able to validate in GitHub, otherwise team members who didn't contribute will receive a ZERO.**  **What to turn in:** - Only soft copy uploaded to BlackBoard before due date.  - **DO NOT SUBMIT CODE to BlackBoard.**  - Only one submission per group.  - No extensions.  **- All group members must contribute equally.** |
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1. Provide link to GitHub repository for TAs to view the code. Code should include unit tests.(5 points)   
    [**https://github.com/Rawbethy/COSC4353Group42**](https://github.com/Rawbethy/COSC4353Group42)
2. List what backend technologies you are using and why? (2 points)

For our web app’s backend development we will be using Node.js as it is one of the world’s most popular backend development platforms. Node.js is such a popular choice due to its performance, flexibility, and scalability. Due to its large and active community of developers, our group found it beneficial for our future careers to have good knowledge on the platform through the skills we gain in this project. Nonetheless, for our project at hand we chose Node.js as it was deemed most practical for the purpose of this project.

On the other hand, to conduct unit tests we opted to take advantage of the easily accessible JEST framework for JavaScript which is designed to make testing not only easy but also fast. We found the setup for JEST to be particularly simple and it was quick to start adding checks to our project's codebase. JEST also runs its tests in parallel which is proven to speed up testing significantly when your web app becomes more complex. Overall, there were many different options for unit testing frameworks we could have chosen, but JEST was the all around best option for our project due to a number of factors.

| Group Member Name | What is your contribution? | Discussion Notes |
| --- | --- | --- |
| Saim Ali | Created pricingModule class, answered document questions | Created a basic class to store our pricing module we will build in the future assignment parts. |
| Robert Duque | Created quote history module with list sorting, Unit testing for mongoDB connection | Handle all communication between frontend and backend for profile management module and quote history |
| Muhaimin Badar | Unit testing | Endpoint & functional units where possible. Most of our code is using mongoose enforced data validation so model tests cover those. |
| Vy Nguyen | just tried getting familiar with node.js and jest |  |