**F22-3738 | F22-3661**

SQE

Assignment03

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# **1. Introduction**

* **Overview of the Project’s Purpose**: This section should articulate the core objectives and goals of the project. Explain the problem it solves or the need it addresses. **High-level Features and Functionality**: Provide an overview of the key features and functionalities of the project. This might include the main operations, user interactions, or automated tasks the project performs.

# **2. Technologies Used**

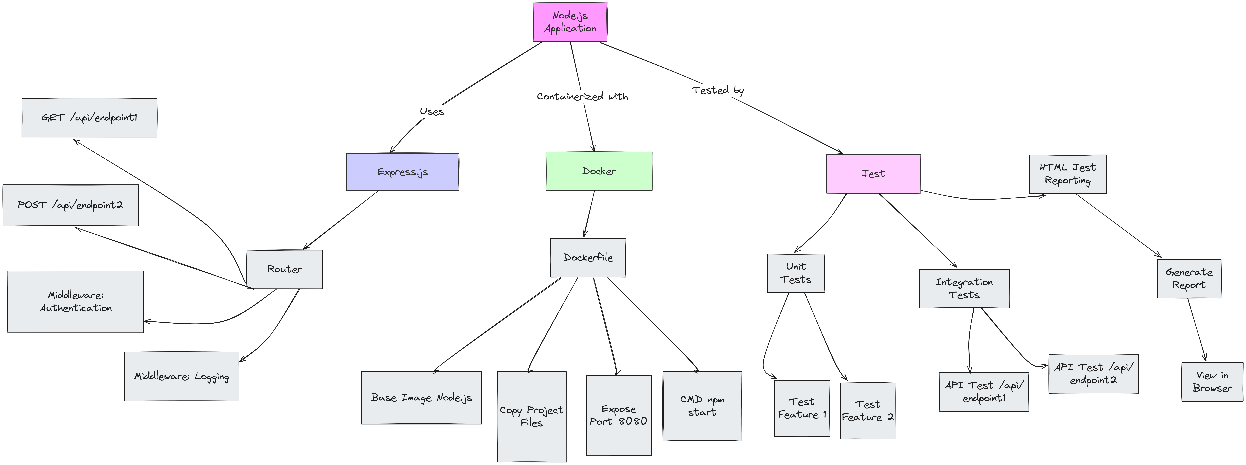
* **Node.js**: Mention the version of Node.js used and its role in the project as the runtime environment.
* **Jest for Testing**: Describe how Jest is utilized for testing the application’s functionalities.
* **Docker for Containerization**: If Docker is used, explain its role in ensuring that the application runs consistently across different environments.

# **3. Functionalities Implemented**

* **Detailed Description of Each Main Feature**: Enumerate and explain each main feature of the application. Describe how these features interact with the user or other systems.
* **Interaction Between Components**: If applicable, describe how different parts of the application interact with each other. This could include data flow, API interactions, or internal service communication.

# **4. File Structure**

* **Brief Description of Each Directory and Its Contents**: Describe what each directory contains and its role in the project. For instance, src might contain the source code, tests the test files, and node\_modules the dependencies.



# **5. Project Setup**

* **Step-by-step Instructions**: Guide the user through setting up the project environment after cloning the repository.
* **Prerequisites**: List prerequisites such as Node.js version, any global packages that need to be installed beforehand.
* **Installation of Dependencies**: Provide commands to install necessary dependencies:

npm install

# **6. Running the Application**

* **Commands to Start the Application**: Provide the exact command to start the application, usually:

npm start

* **Environment Configuration Needed**: Discuss any environment setups, such as setting up environment variables or config files.

# **7. Docker Setup**

* **Instructions on Building and Running the Project Using Docker**:
  + **Dockerfile Explanation**: Explain the purpose of each instruction in the Dockerfile.
  + **Commands**:
  + docker build -t your-app-name .
  + docker run -p chosen\_port:app\_port your-app-name
  + **Accessing the Application**: Instructions on how to access the application running inside a Docker container.

# **8. Testing**

* **How to Run Tests Using Jest**: Provide the command to run the tests:

npx jest or npm test

* **Description of What Each Test Suite Covers**: Explain the purpose of each test file or test suite.
* **HTML Jest Reporting**: Guide on how to generate and view HTML reports from Jest testing.

# **9. Additional Documentation and Resources**

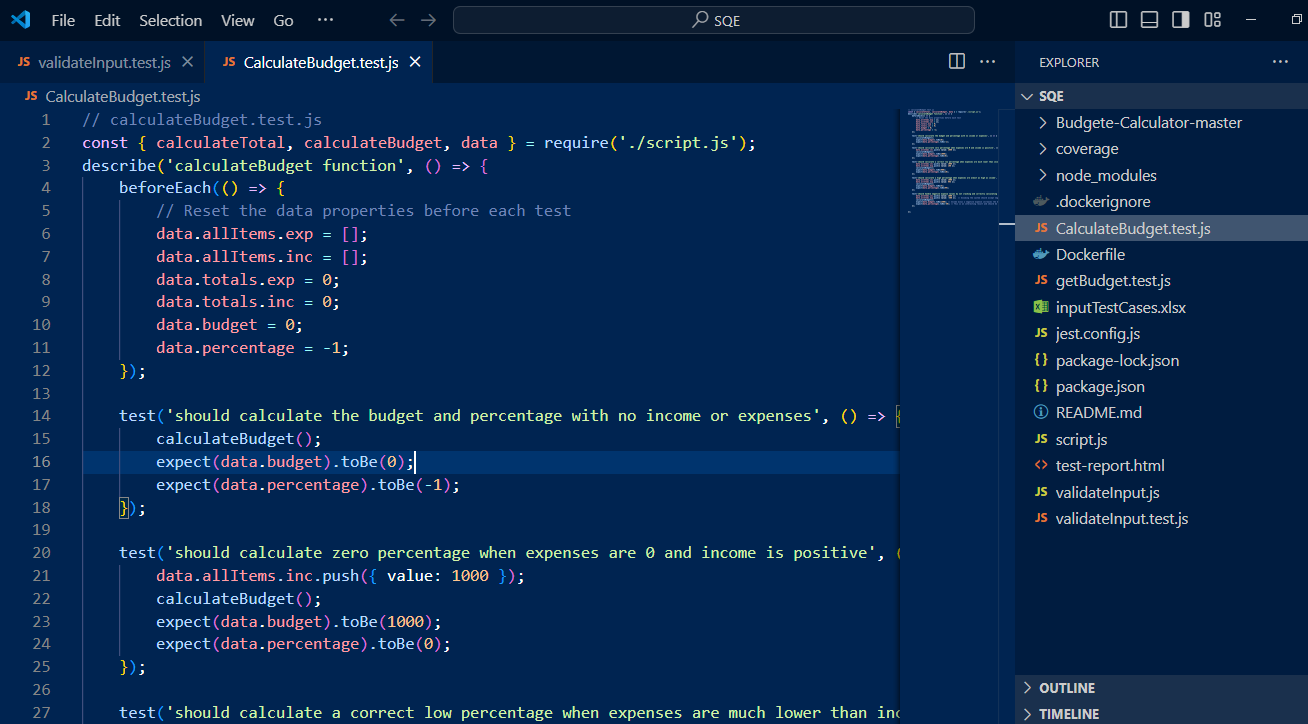
* **Links to External Documentation or Resources Used**: Provide URLs or references to documentation or resources that were utilized.
* **Any Scripts or Utilities Described**: If there are any utility scripts or tools, describe them here.

# **10. Conclusion**

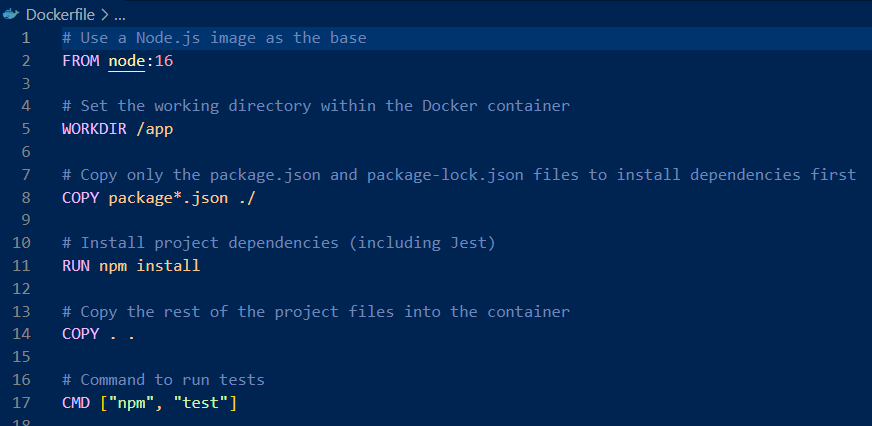
* **Summary of the Project**: Summarize the project’s purpose, features, and what was achieved.
* **Potential Future Work or Improvements**: Suggest areas for further development or additional features that could enhance the project.

# **Screenshots and Additional Content**

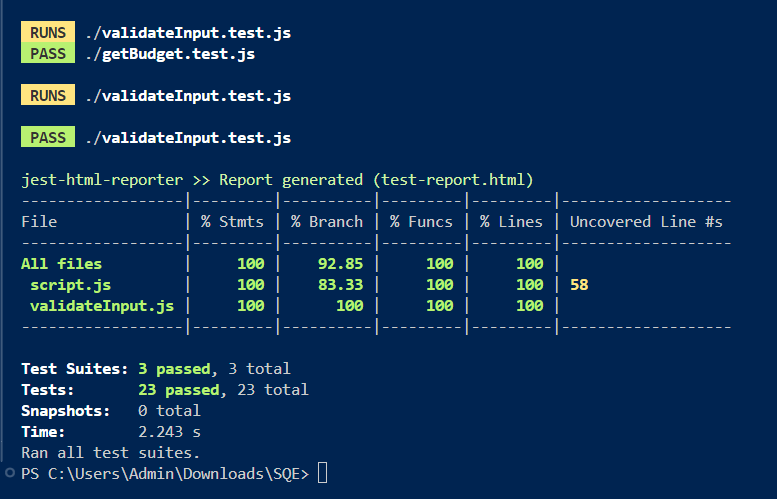
* **After “Introduction” and “Functionalities Implemented”**:



* **After “Project Setup:**
* **In the “Docker Setup” section**:



* **After the “Testing” section**:

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**Video and Extra Documentation**

* **Setup Video**:

