SE 575 – Final Project Deliverable

The Blockchain Simulator

**Project Team Members:**

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**Video Demo Link:** <Insert Link>

**Description:**

The project demonstrates a stand-alone blockchain simulator and is not intended to be a comprehensive blockchain. Rather, the simulator aims to showcase and introduce several novel features in order to demonstrate good design and architectural practices when building real world applications.

Some of the features of the simulator are:

1. Standalone modern front-end application built using Vue's progressive framework showcasing modern web design
2. Simple Hashcash Proof-of-Work implemented into the back-end
3. Java API based solver implemented for hashing, double spending prevention, and tamper prevention.
4. Blockchain simulator packaged and deployed via Docker services that utilize a virtual operating system to run the blockchain software without the need to worry about conflicting software versions on the host machine (front-end and back-end packaged into two separate Docker containers).

**Project Code Location:** <https://github.com/ameerj/SE575-Blockchain-Project>

**Project Build Information:**

To setup and run the project at the previously mentioned location, have:

Docker – Installed from Web

And use the following commands:

*Docker build*

*Docker run*

If not using Docker, see the "readme" sections from the GitHub repository: <https://github.com/ameerj/SE575-Blockchain-Project>

Front-End "readme": <https://github.com/ameerj/SE575-Blockchain-Project/tree/main/frontend>

Back-End "readme": <https://github.com/ameerj/SE575-Blockchain-Project/tree/main/Crypto-Backend>

**High Level Design Overview:**

