Secure Software Development Team Project

Meeting Notes

SecureSpace

Date: 21/05/2023
Time: 02:00 PM BST
Location: Online, Google Meet

Attendees:

- Bradley Graham
- Rachel Doherty
- Tomas Mestanza
- Michael Sammueller

Research, Data & Brainstorming

The team discussed their research and data gathered throughout the week, features of the software product, as well as security concerns and external libraries.

- Hashlib vs bcrypt - The team discussed both libraries and decided to use the bcrypt library.
- The team discussed assumptions that will have to be mentioned within the design document (astronaut training, etc.).
- The team discussed threading and concurrency, potentially in the form of a timed cognition check.
- The team discussed databases.
- The team discussed how to interrupt Python “input()” statements.
- The team discussed implementing a voting system to ensure changes are agreed upon.
- The team discussed security vulnerabilities, concerns, and features.
- The team discussed distributed systems.

Concurrency & Threading

The team discussed concurrency and threading and how to implement them.

- Timed inputs
- Cognition checks
- User logging
- A process running in the background that logs out the user if idle for too long.
- Download manager that continuously checks if files have been updated.

Databases

The team discussed databases and database features.

- SQLite3
- JSON files
- Distributed databases and local repositories
- Backup databases
- Storing files or file paths in the database rather than raw text
- Logging user activity
- Separate database for passwords
- Limiting storage in the database
- Deleting data after a certain period of time or once a mission has ended
- “SELECT … FOR UPDATE” statement in SQL to lock a row

Decisions

The team agreed to the following:

- The system will use SQLite to store data.
- The system will use bcrypt, as recommended by OWASP, to encrypt passwords.
- The team will follow an object-oriented programming paradigm.
- The program will run on a central terminal rather than a network. Astronauts will have to download data and send it to mission control.

Actions

The team agreed to the following action(s). These actions shall be completed in preparation for the next meeting.

- The team will collaborate on objects and methods for a UML Class diagram on Google Sheets.

Next Meeting: The next meeting is scheduled for the 28th of May at 02:00 PM BST.