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Reliability

User Story:

As a user, I want the server to automatically preserve my data even if the system crashes so that I don't lose progress and can resume where I left off.

Acceptance Criteria:

Given a database restarts

When a session is interrupted, the server restores the last known valid state once the connection is re-established.

Then it automatically retries to log when a request to the database fails.

Reliability

User Story:

As a user, I want the system to handle unexpected errors so that I receive feedback instead of crashes.

Acceptance Criteria:

Given the system encounters an error

When a request fails

Then the user receives a clear error message instead of a crash.

Security

User Story:

As a user, I want to enable two-factor authentication so that my account is protected even if my password is compromised.

Acceptance Criteria:

Given a user has enabled 2FA

When they log in with correct credentials

Then the system requires a second verification code before granting access.

Security

User Story:

As a user, I want my session to automatically expire after inactivity so that unauthorized people cannot use my account if I forget to log out.

Acceptance Criteria:

Given a user is logged in

When they remain inactive for a set period (ex. 15 minutes)

Then the system automatically ends the session.

Cloud Server User Stories

User Story	Acceptance Criteria
As a system operator, I want all communications between endpoints, server, and clients to use **HTTPS or another encrypted protocol** so that data and credentials are secure.	**Given** an endpoint or client connects **When** data is transmitted **Then** it uses HTTPS/TLS (verified via inspection).
As a system operator, I want to **receive Wi-Fi scan data (MAC, RSSI, timestamp) from multiple endpoints in real time** so that it is available for queries and analysis later.	**Given** an endpoint sends scan data **When** the server is running **Then** the data is written to the database without loss.
As a system operator, I want the server to **track and expose the best-known status of all endpoints** (online, last scan) so that I can monitor fleet health.	**Given** endpoints send status messages **When** queried **Then** the server returns best-known status (online/offline, last timestamp).
As a client application developer, I want to query for the estimated locations of all people in a room so that I can visualize activity at the current time.	**Given** a query with a time range **When** the query is executed **Then** results include all matching scan records with correct timestamps.
As a client application developer, I want **to query for the estimated locations of people in a room** so that I can visualize activity at the current time.	**Given** a query for people's locations **When** the query is executed **Then** results include the coordinates of each person in the room.