This Week's Project Update Team 3

This week we made progress laying the groundwork for our message board application:

- Divided responsibilities into four clear modules: Setup & Authentication; Boards & Threads; Posts, Comments & Likes; and Polish, Security & Testing.
- Initialized the GitHub repository and committed the initial project skeleton.
- Created and configured Docker Compose for the app, database, and Redis containers.
- Verified all containers start successfully and established the development environment.

Message Board Project Breakdown & Responsibilities

This document outlines how we will split the message board project into four equal parts. Each part includes a concise description of the responsibilities and tasks to be owned by each team member.

Chunk 1: Setup & Authentication

- Initialize the Git repository and Docker Compose setup (app, database, Redis).
- Create and configure environment variables and .gitignore.
- Design and implement the User model (id, email, password_hash, etc.).
- Develop registration and login API routes and associated UI forms.
- Integrate bcrypt (or Argon2) for secure password hashing.
- Set up session management using express-session with Redis or JWT with refresh tokens.

Chunk 2: Boards & Threads

- Define the Board model (id, name, description) and Thread model (id, board_id, user_id, title, created_at).
- Implement CRUD API endpoints for boards and threads.
- Create service layer functions and authentication middleware for these endpoints.
- Build basic UI pages: home page listing boards and board view showing threads.

Chunk 3: Posts, Comments & Likes

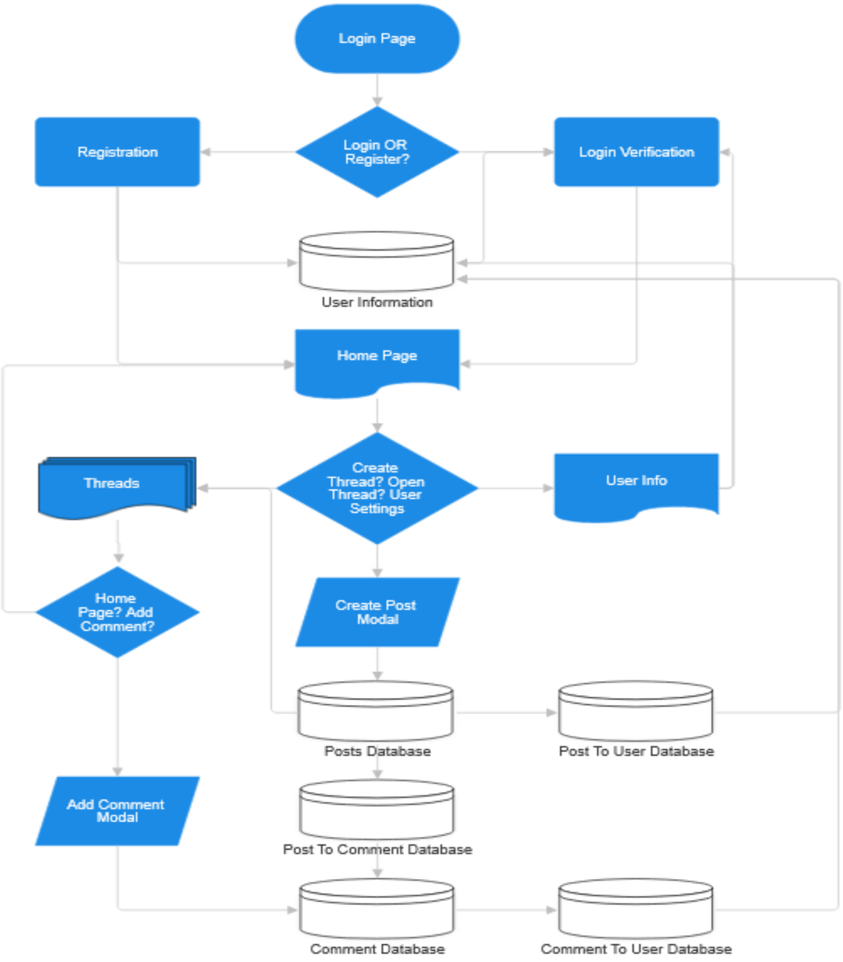
- Design the Post model (id, thread_id, user_id, body, created_at) and Comment model (id, post_id, user_id, body, created_at).

- Implement CRUD API endpoints for posts and comments.
- Create endpoints for like and unlike functionality and define the like data model.
- Develop UI components for the thread view: display posts, comments, reply form, and like buttons.

Chunk 4: Polish, Security & Testing

- Add input validation and sanitization middleware to prevent XSS and SQL injection.
- Implement rate-limiting using Redis and enforce role-based access control (user vs. admin).
- Finalize UI styling for responsive design and build an optional user profile page.
- Write unit and integration tests, perform bug fixes, and update project documentation.

Project Workflow Diagram


Login Page
Registration
Login OR Register?
Login Verification
User Information
Home Page
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Create Thread? Open Thread? User Settings
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