CS673 Software Engineering
Team 2: Health Management
Meeting Minutes

Meeting 1 – Minutes

Date and Time: 09/11/2025, 9:45 – 10:45 PM

Place: Zoom / Discord (online meeting)

Participants: Y. Chen, Michael, Zhiyao Song, Haopeng, Mark, Hanxiao

Minutes taker: Michael

Timekeeper: Y. Chen

Purpose: Kickoff meeting for the Health Management System project, review PRD draft, assign responsibilities, and confirm development direction.

Agenda

1. Review project overview and objectives
2. Discuss related work and differentiation
3. Confirm high-level requirements (essential vs desirable vs optional)
4. Risk management and timeline planning
5. Assign roles and next steps

Discussions

- Overview & Scope: The system will be a web-based health management platform focusing on login/registration, AI assistant, personal data upload, health evaluation, and exercise knowledge.
- Related Work: Compared to Fitbit/MyFitnessPal/Apple Health, our system is simpler, more AI-focused, and does not rely on wearables.

- Requirements:
    - *Essential*: Login, AI Chat, Data Upload, Health Evaluation, Exercise Knowledge.
    - *Desirable*: Dashboard (basic exists), Conversational AI (future), Notifications.
    - *Optional*: Wearable integration, Gamification, Community support.
- Nonfunctional Needs: Security, scalability, reliability. Current scope is local/dev environment, future scale to cloud.
- Management Plan: Prioritize essential features → deliver a working core system first.
- Risk Management: AI accuracy, data privacy, time limitation. Strategy: keep AI advice general, secure DB, focus on essentials.
- Timeline:
    - Iteration 1: Authentication + Data upload
    - Iteration 2: AI features + Dashboard
    - Iteration 3: Advanced AI + Notifications + Wearables + Community
- Tools: GitHub, IntelliJ, VS Code, Spring Boot 3, Vue 3, MySQL, Docker, GitHub Actions.
- QA: Metrics set (code quality, defects, testing, productivity). Unit tests by developers, integration by QA leader.
- AI Usage: PRD drafted using ChatGPT (Michael), reviewed by the team.

Key Decisions

- Confirmed project scope: focus on 5 essential features first.
- Adopt a timeline with 3 iterations.
- PRD will be a living document; updates allowed after each iteration.
- Each leader (Requirement, Design, QA, Security, Configuration) extends their section

from the PRD.

- Tools and workflow confirmed: GitHub + feature branches + PR review.

Action Items

- Michael – Responsible for the SPPP document and Meeting Minutes.
- Victor S – Responsible for writing the Progress Report and presenting it in tomorrow's meeting.
- Alistair Whx – Responsible for the Risk Management section.
- Y. Chen – Responsible for preparing the Presentation PPT and presenting tomorrow.
- Mark Pimpa – Responsible for updating the markdown files on GitHub.

Meeting 2 – Minutes

Date and Time: 09/18/2025, 9:00 – 10:00 PM

Place: Zoom / Discord (online meeting)

Participants: Y. Chen, Michael, Zhiyao Song, Haopeng, Mark, Hanxiao

Minutes taker: Zhiyao Song

Timekeeper: Haopeng

Purpose: To review the final Iteration 0 presentation, confirm the proposed technology stack, and outline the initial tasks for Iteration 1.

Agenda

1. Review of "MYHealth" Project Presentation
2. Confirmation of Core Functionalities and Project Goals
3. Finalizing the Technology Stack
4. Discussion of Major Non-Technical Challenges
5. Assignment of Tasks for Iteration 1

Discussions

- **Project Presentation Review:** Y. Chen led a review of the presentation prepared for the Iteration 0 submission. The team is aligned with the project's goal to create an accessible web app that provides users with actionable insights based on their health data.
- **Core Functionalities:**

  The team reconfirmed the main functions for the web app. These include:

  A secure portal for users to upload personal health data, including medical reports.

An intelligent system for parsing and extracting key information from the uploaded data.

AI-powered analysis to evaluate health status, identify risks, and offer tailored recommendations.

An interactive dashboard with charts and graphs for data visualization and trend tracking.

Technology Stack: Zhiyao Song, the Design and Implementation Leader, presented the proposed tech stack. The team confirmed the primary tools.

Backend: Java with Spring Boot 3 , using an H2 memory database for initial development. RESTful APIs will be used for communication.

Frontend: Vue3 with Typescript, selected for team familiarity.

Configuration & Version Control: Docker will be used for microservices to ensure consistency , and GitHub will be used for version control.

Non-Technical Challenges: Hanxiao, the Security Leader, highlighted the major non-technical challenge of data de-identification and anonymization to protect user privacy. Methods like end-to-end encryption or differential privacy were mentioned as potential areas for research.

Key Decisions

The Iteration 0 Presentation is approved and finalized.

The core technology stack (Java/Spring Boot, Vue3, H2, Docker, GitHub) is officially adopted.

The project will proceed with the timeline established in the first meeting, focusing on Authentication and Data Upload for Iteration 1.

A high priority is placed on researching and implementing robust data security and

privacy measures from the beginning.

Action Items

- Y. Chen – Submit the final Iteration 0 Presentation PPT.
- Michael – As Requirement Leader, refine the user stories and requirements for the Iteration 1 features: Authentication and Secure Data Upload.
- Zhiyao Song & Haopeng – As Design and Configuration Leaders, set up the initial project structure on GitHub, including boilerplate code for Spring Boot and Vue 3, and a basic Docker configuration.
- Hanxiao – As Security Leader, begin researching strategies for data de-identification and propose a preliminary security plan for user data.
- Mark Pimpa – As QA Leader, start drafting the quality assurance plan and initial test cases for the login and file upload functionalities planned for Iteration 1.

Meeting 3 – Minutes

Date and Time: 09/25/2025, 9:00 – 10:00 PM

Place: Zoom / Discord (online meeting)

Participants: Y. Chen, Michael, Zhiyao Song, Haopeng, Mark, Luke

Minutes taker: Y. Chen

Timekeeper: Zhiyao Song

Purpose: (Combined Weeks 2 & 3) To finalize the project's architecture and technology stack, report on initial technical experiments, and prepare the plan for the Iteration 0 presentation.

Agenda

1. Final confirmation of the project's technology stack.
2. Definition of the high-level system architecture and database schema.
3. Report on Docker experimentation for database deployment.
4. Brainstorming and task assignment for the Iteration 0 presentation.

Discussions

- After some debate, the team decided to stick with the existing Vue 2 + Element-UI template found in the repository. While Vue 3 is newer, using the existing template would significantly speed up development and allow the team to focus on features rather than setup.
- Zhiyao Song presented a draft of the core database schema, outlining the tables for `users`, `roles`, `permissions`, and the join tables for their relationships. The design was approved as the foundation for the backend development.
- Haopeng reported that he had successfully run a database in a Docker container.

However, to simplify the local development workflow for all members, the team decided to use a simple file-based SQLite database for Iteration 1. This postpones the complexity of Dockerization.

- The team collectively outlined the key points to be covered in the Iteration 0 presentation, including project goals, tech stack, architecture, and the plan for the first iteration.

Key Decisions

- **Final Technology Stack:** Backend: Spring Boot + MyBatis + SQLite. Frontend: Vue 2 + Element-UI.
- The initial database schema design is approved.
- Full Docker integration is postponed. The project will use a file-based SQLite database for initial development to ensure ease of setup.
- Haopeng is assigned the primary responsibility of creating the Iteration 0 presentation slides.

Action Items

- **Haopeng:** Prepare the draft slides for the Iteration 0 presentation.
- **Zhiyao Song:** Initialize the Spring Boot project repository with the approved data models and database schema configuration.
- **Frontend Team (Luke, Mark, Michael):** Clean up the Vue 2 admin template by removing unused modules and demo pages to prepare it for our project.
- **Y. Chen:** update SRS

Meeting 4 – Minutes

Date and Time: 10/01/2025, 9:30 – 10:15 PM

Place: Zoom / Discord (online meeting)

Participants: Y. Chen, Michael, Zhiyao Song, Haopeng, Mark, Luke

Minutes taker: Haopeng

Timekeeper: Y. Chen

Purpose: To review initial code implementation for Iteration 1 features and to finalize the documentation required for the Lab 1 submission.

Agenda

1. Review backend progress: data models, persistence, and basic controllers.
2. Review frontend progress: project setup, routing, and component structure.
3. Discuss and assign final tasks for Lab 1 documentation.
4. Confirm submission plan.

Discussions

- Zhiyao Song demonstrated the initial Spring Boot project structure. This included the JPA/MyBatis entities for User, Role, and Permission, and the schema.sql file for initializing the SQLite database on startup.
- The frontend team presented the cleaned-up Vue admin template. They have set up the basic page routing for login and a user dashboard and configured the Axios instance, though it still pointed to the template's default mock API.
- The team reviewed the requirements for the Lab 1 documentation. The content was divided up, covering the finalized architecture, tech stack, and key design decisions made over the last two weeks.

Key Decisions

- The backend team will proceed with implementing the core business logic for the AuthController and UserController.
- The frontend team will begin building the UI for the login page and user management table, using mock data until the API contract is finalized.
- Y. Chen will take responsibility for compiling all document sections and submitting the final Lab 1 package.

Action Items

- **Zhiyao Song:** Continue implementation of backend services, focusing on user registration and login logic.
- **Luke, Mark, Michael:** Develop the UI components for the login form and the user list display.
- **Y. Chen:** Compile all sections for the Lab 1 documentation and perform a final review before submission.
- **All Members:** Provide Y. Chen with any required diagrams or text for their respective areas of responsibility for the documentation.

Meeting 5 – Minutes

Place: Zoom / Discord (online meeting) + F2F offline individual meeting

Participants: Y. Chen, Zhiyao Song, Haopeng, Mark, Luke

Minutes taker: Luke

Timekeeper: Haopeng

Purpose: To address the significant disconnect between the frontend and backend development tracks and to formulate a clear integration plan.

Agenda

1. Status update from the backend team.
2. Status update and demo from the frontend team.
3. Identification of key API, data structure, and authentication mismatches.
4. Brainstorming and discussion of solutions (Backend adapts vs. Frontend adapts).

Discussions

- **Backend Update:** Zhiyao presented the completed backend APIs for user/role/permission management. The endpoints were tested via Postman and functioned correctly, but returned raw JSON data directly from the services.
- **Frontend Update:** Luke and Mark demonstrated the frontend application, which was still running on the template's mock data. They showed that attempts to connect to the live backend failed due to two issues: CORS errors and an inability to parse the backend's response format, which caused the application's request interceptor to fail.
- **Core Conflict:** A key point of friction emerged. The frontend team felt blocked, waiting for APIs that matched the template's contract. The backend team had assumed the frontend could easily adapt to their more standard REST API responses. This highlighted a classic challenge in decoupled development: a lack of a clearly defined and agreed-upon API contract from the start.
- **Solution Brainstorm:** The team debated the "Plan A" (backend adapts to frontend) vs.

"Plan B" (frontend adapts to backend) scenarios. The consensus was that a pure "Plan A" would require significant refactoring on the backend, while a pure "Plan B" would discard much of the template's useful, built-in logic for state management and routing.

Key Decisions

- A dedicated sub-meeting will be scheduled for the backend lead (Zhiyao) and frontend developers (Luke, Mark) to negotiate a compromise on the API contract.
- To solve the immediate local development issue, the frontend team will configure a devServer proxy in vue.config.js to resolve the CORS errors.

Action Items

- **Luke & Mark:** Implement the devServer proxy in vue.config.js to forward /api requests to the local Spring Boot server.
- **Zhiyao, Luke, & Mark:** Meet before the next full team meeting to define a final, compromise API contract (paths, response bodies, auth).
- **All Members:** Review the code in both frontend and backend repositories to gain a better understanding of the integration gap.

Meeting 6 – Minutes

Date and Time: 10/16/2025, 8:30 – 10: 30 + F2F offline individual meeting

Place: Zoom / Discord (online meeting)

Participants: Y. Chen, Michael, Zhiyao Song, Haopeng, Luke

Minutes taker: Mark

Timekeeper: Michael

Purpose: To resolve critical integration blockers between frontend and backend, finalize the plan for the Iteration 1 demo, and assign final documentation tasks (STD/SDD).

Agenda

1. Review of current integration status and primary blockers.
2. Decision on the final API contract and authentication flow (Plan A vs. B).
3. Planning and preparation for the Iteration 1 live demo.
4. Assignment of final documentation updates (STD, SDD).
5. Outline of the Iteration 1 presentation structure.

Discussions

- The main issue identified was the mismatch in API response structure and authentication. The frontend, based on the template, expects a { code: 20000, data: ... } wrapper and an X-Token header, while the backend was returning direct JSON objects without a token.
- After reviewing the workload, the team agreed on a hybrid approach. Zhiyao (Backend) will implement a unified response wrapper and add JWT token generation/validation. This is more robust for the long term. In parallel, Luke and Mark (Frontend) will update the Axios instance to call the correct API paths (e.g., /api/auth/login) and handle the standard Authorization: Bearer <token> header, which is a minor adjustment to the template's logic.
- The team acknowledged the coordination challenges due to attendance issues last

week. Luke and Mark had to hold a separate meeting to sync up on frontend tasks, which initially slowed them down but they are now fully aligned on the path forward.
- Haopeng will begin creating the slides for the Iteration 1 presentation, focusing on the system architecture, backend logic, and the planned user flow for the demo.
- Y. Chen will take the lead on updating the Software Design Document (SDD) and Software Test Document (STD) to reflect the finalized API contracts and implementation details, as per the week's decisions.

Key Decisions

- Adopted a hybrid integration strategy: Backend will add a unified response model and JWT. Frontend will adapt to new API paths and standard Bearer token authentication.
- Set a firm internal deadline of this Friday for the end-to-end login and user info display to be functional.
- Y. Chen is officially responsible for the final updates to the SDD and STD.
- Haopeng is assigned to prepare the Iteration 1 presentation.

Action Items

- **Zhiyao Song:** Implement the unified API response wrapper and JWT generation on the /api/auth/login endpoint.
- **Luke & Mark:** Update the frontend API service (api/user.js) and Axios interceptors to match the new backend authentication contract.
- **Haopeng:** Create a draft of the Iteration 1 presentation slides.
- **Y. Chen:** Begin updating the SDD and STD documents with the new architectural decisions.
- **Michael:** Ensure user stories for Iteration 1 are updated to reflect the technical implementation.