



IT 309 SOFTWARE ENGINEERING

PROJECT DOCUMENTATION

Fitness Tracker App - Software Engineering Project

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1. Introduction

1.1 About the project

Describe the project/application you were working on in a few sentences and provide *a link* to where it is deployed.

1.2. High-Level Plan

Development Approach: Agile

We will follow an **Agile Development Process** with at least **two releases**. The plan consists of a **Product Roadmap** and a **Release Plan**.

Product Roadmap

Phase	Features & Milestones	Estimated Completion
Phase 1	Project planning, gathering requirements, creating UML diagrams	April 2nd
Phase 2	Core backend development (User authentication, data storage)	April 15th
Phase 3	Core frontend development (Basic UI, User Dashboard)	April 30th
Phase 4	First Release: Basic working version (Login, CRUD tracking)	May 11th
Phase 5	Implement advanced features (Workout plans, progress tracking)	May 25th
Phase 6	Add notification and gamification features (Achievements, badges, notifications)	June 5th
Phase 7	Final Release: Testing, deployment, and final documentation	June 15th

Release Plan

Release 1 (May 11th)

- User Authentication (Login, Registration, Profile Setup)
- Basic Workout & Activity Tracking (Add, Edit, Delete logs)
- Dashboard to view workouts

Release 2 (June 15th)

- Goal setting and tracking
- Notifications and reminders
- Unit testing & deployment

1.3. Functional and Non-Functional Requirements (User Stories)

Functional Requirements

User Authentication & Account Management

1. As a user, I want to create an account so that I can log in securely.
2. As a user, I want to log in using my email and password.
3. As a user, I want to be able to change my password
4. As a user, I want to log out of my account securely.
5. As a user, I want to delete my account if I no longer wish to use the app.

Workout Tracking

6. As a user, I want to log my daily workouts.
7. As a user, I want to categorize workouts (e.g., cardio, strength, flexibility).
8. As a user, I want to track calories burned per workout.
9. As a user, I want to view my workout history.
10. As a user, I want to edit or delete a logged workout.

Goal Setting & Progress Tracking

11. As a user, I want to set fitness goals (e.g., weight loss, muscle gain).
12. As a user, I want to track my body measurements (weight, BMI, muscle mass, etc.).
13. As a user, I want to track my progress toward my goals.

Gamification Features

14. As a user, I want to earn achievements for reaching milestones.
15. As a user, I want to receive notifications about challenges and progress.
16. As a user, I want to receive badges for consistency streaks (e.g., 7-day streak).

Non-Functional Requirements

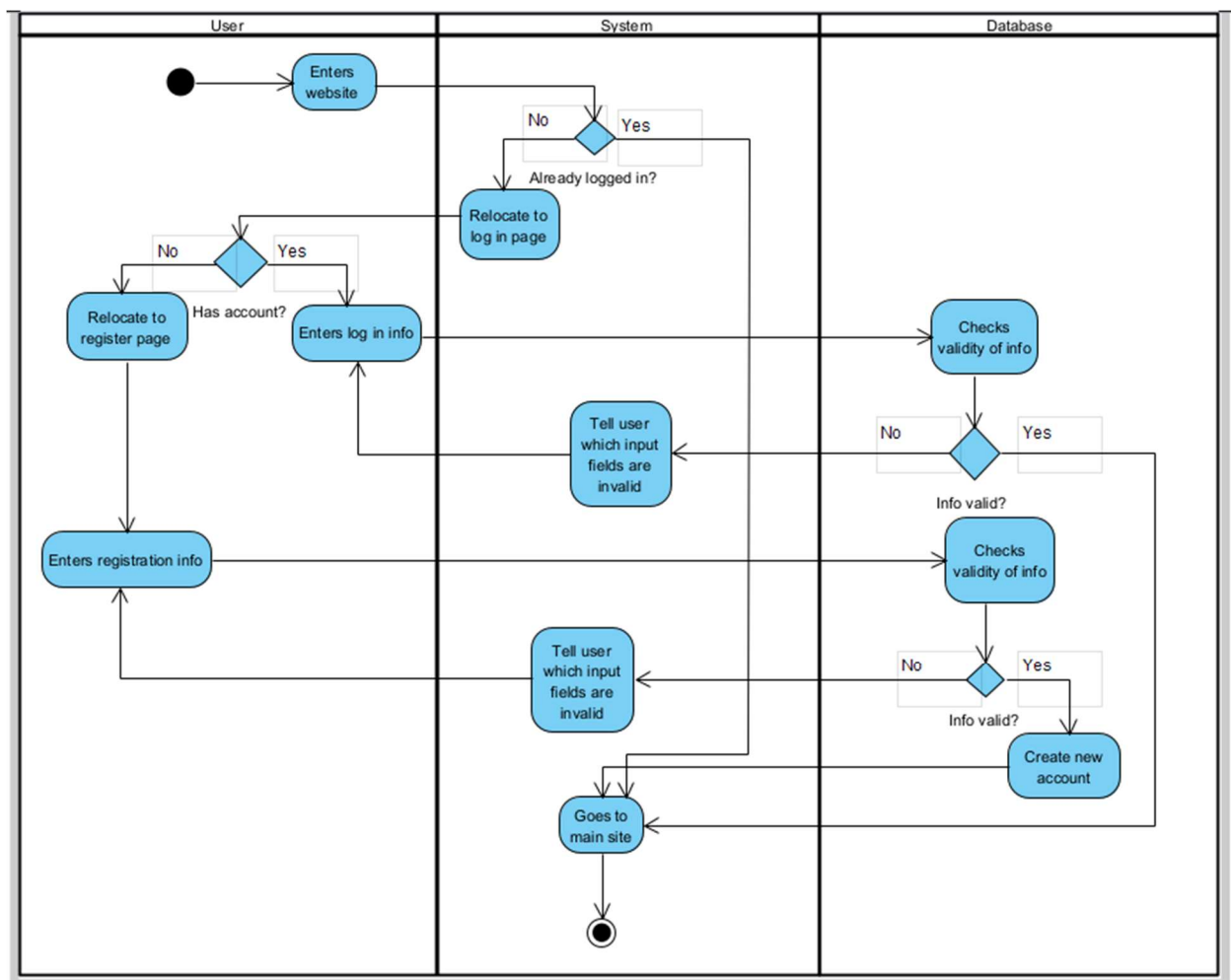
17. The system should be able to handle at least 100 concurrent users.
18. The system should encrypt user data to ensure security.

19. The mobile app should be responsive and work on both Android and iOS.
20. The application should load within 3 seconds.
21. The backend should use RESTful API architecture for communication.
22. The app should support dark mode.
23. The system should have a help and support section for users.

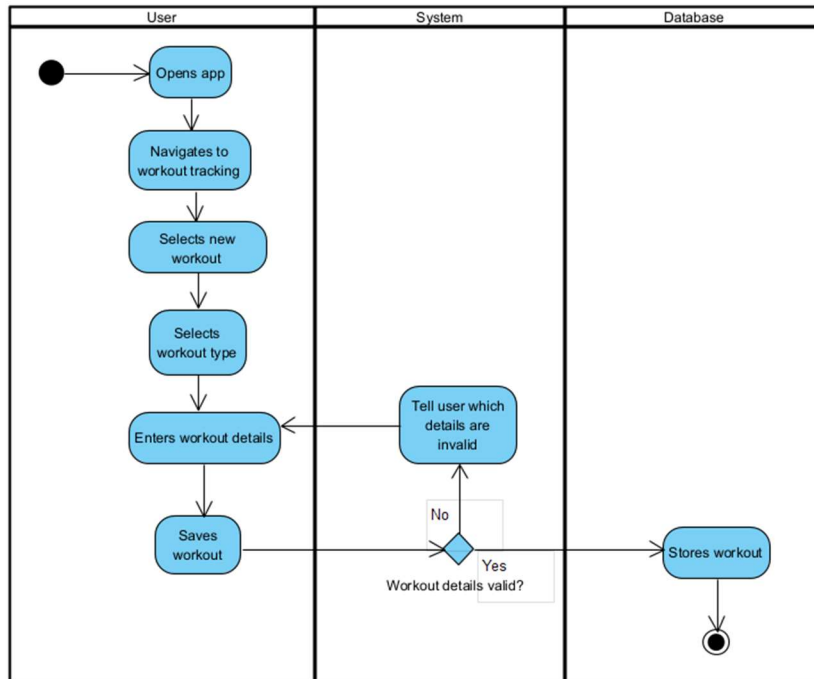
1.4. UML Diagrams

Activity diagrams

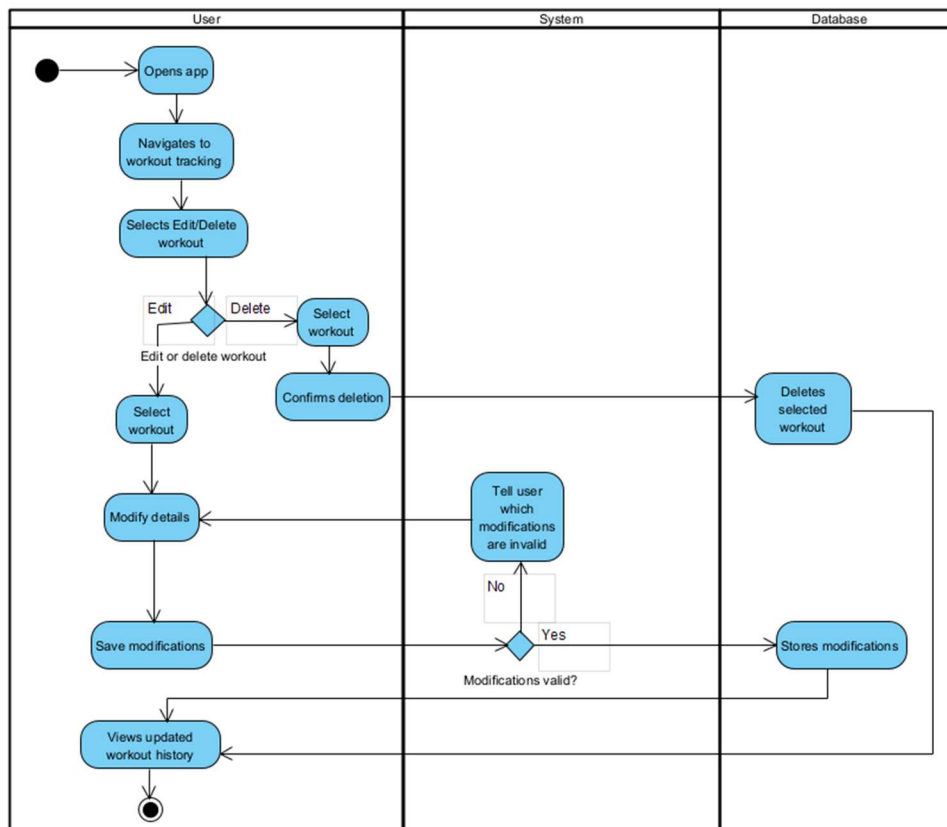
1. User log-in/registration



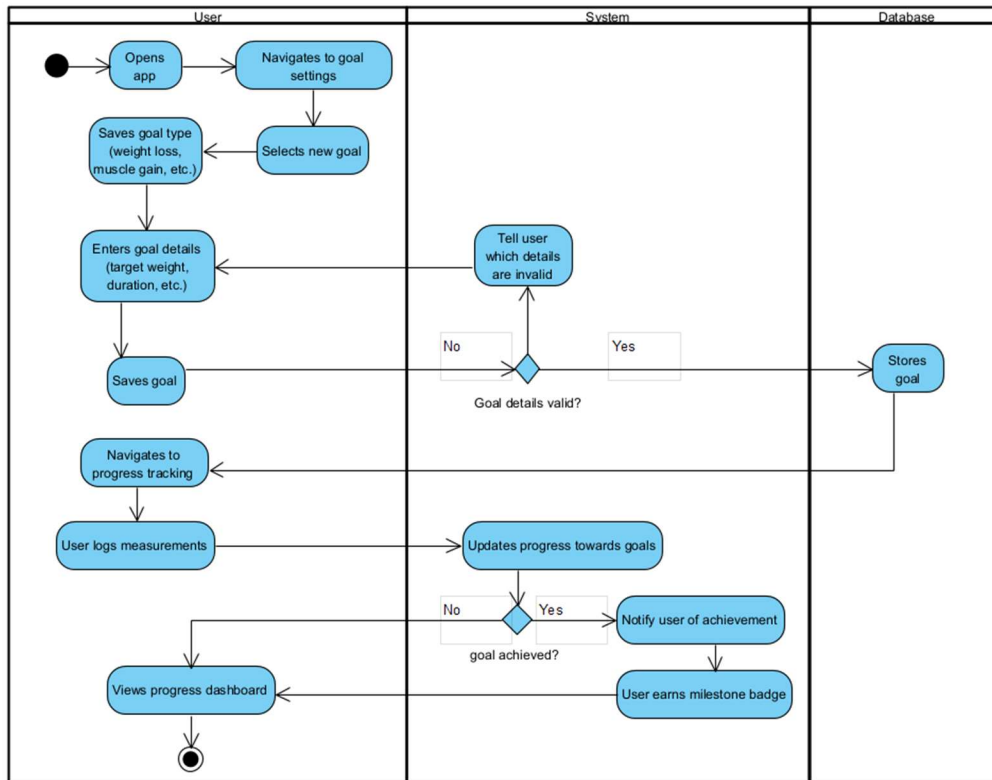
2. Creating new workout



3. Editing/Deleting workout

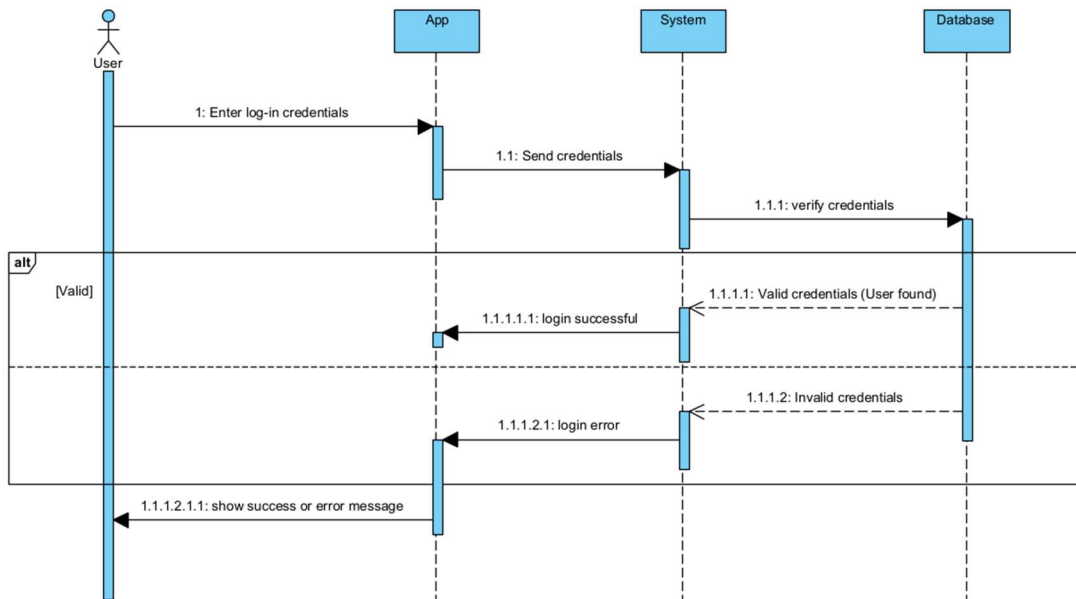
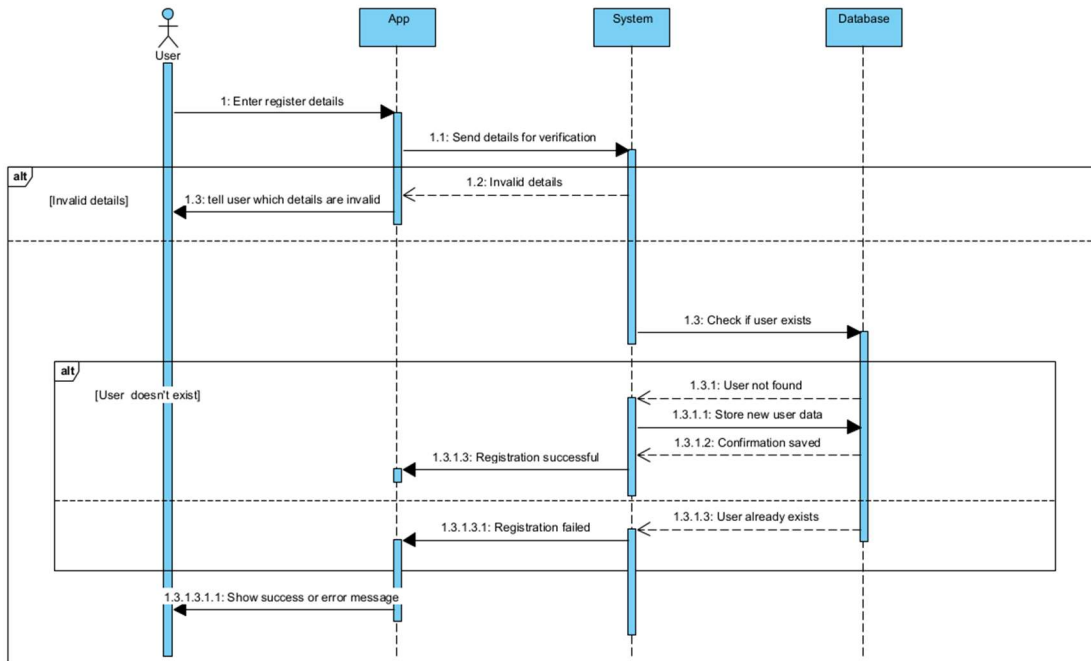


4. Creating new goal and progress tracking

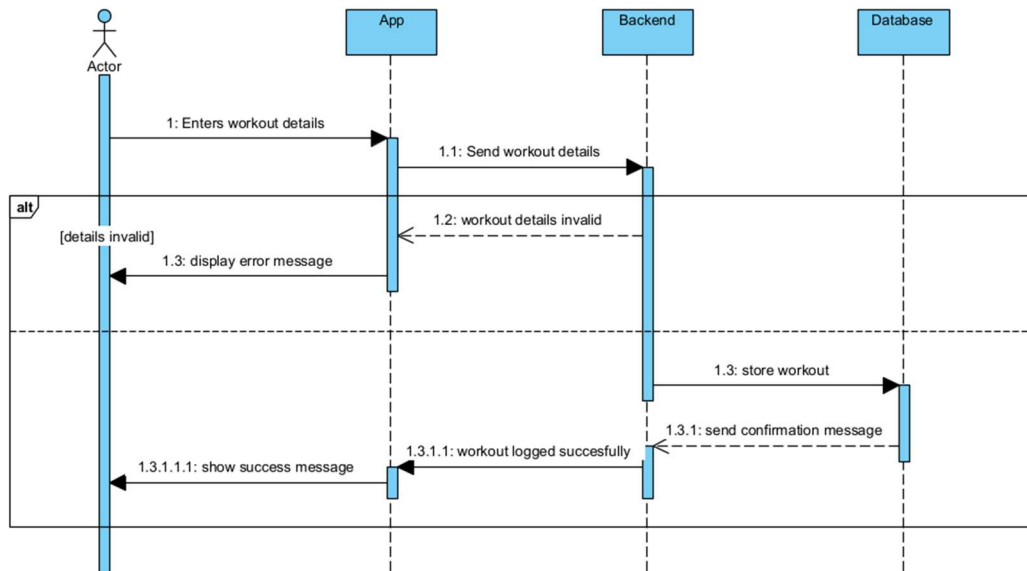


Sequence UML diagrams

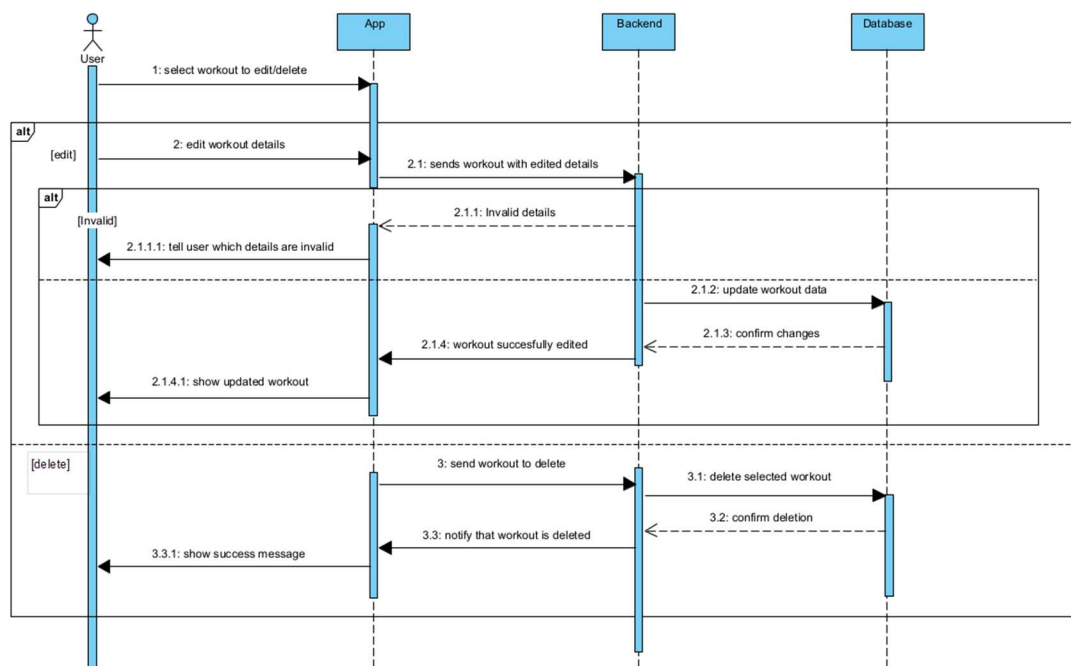
1. Register and login



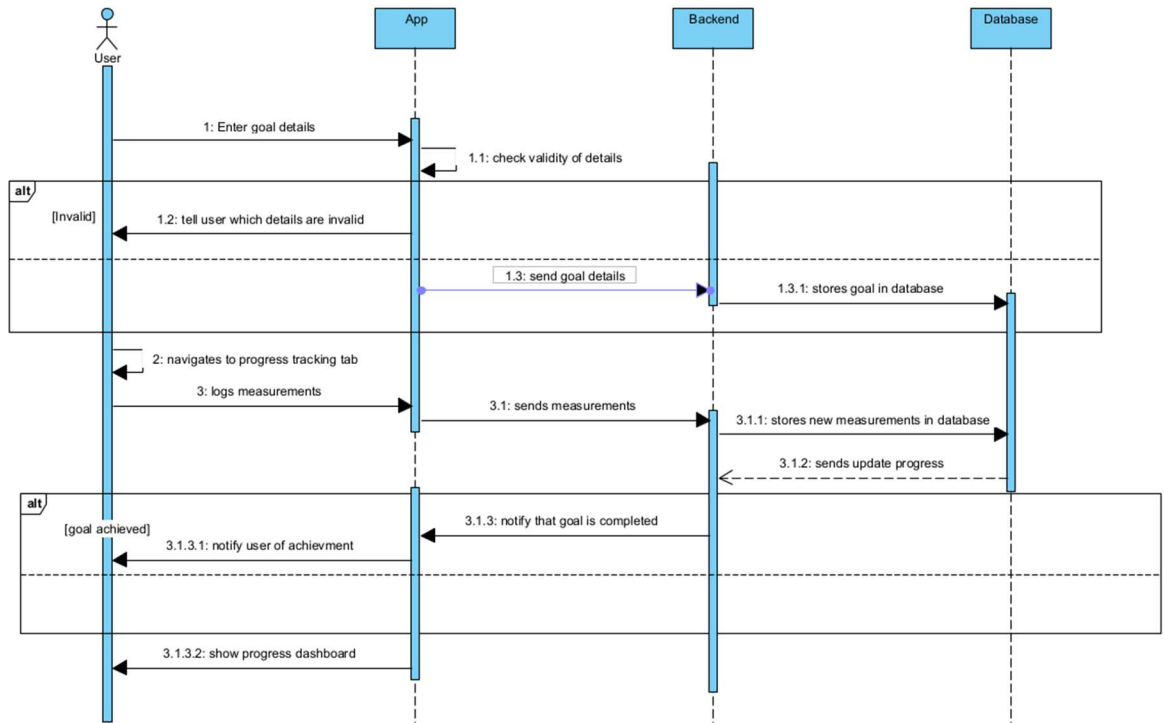
2. Workout logging and edit/delete workout
- Workout log



- Workout edit/delete



3. Goal setting and progress making



Class diagram

