Software Requirements and Design Document

For

Group <7>

Version 2.0

Authors:
Alek Coupet
Bilal Taleb
Sayed Haidar Alhussaini

1. Overview (5 points)

We are developing a task management web application using the MERN stack. The application will enable users to manage personal and team tasks, collaborate within organizations, and track tasks via a calendar feature. It will include role-based permissions for administrators to manage users and tasks.

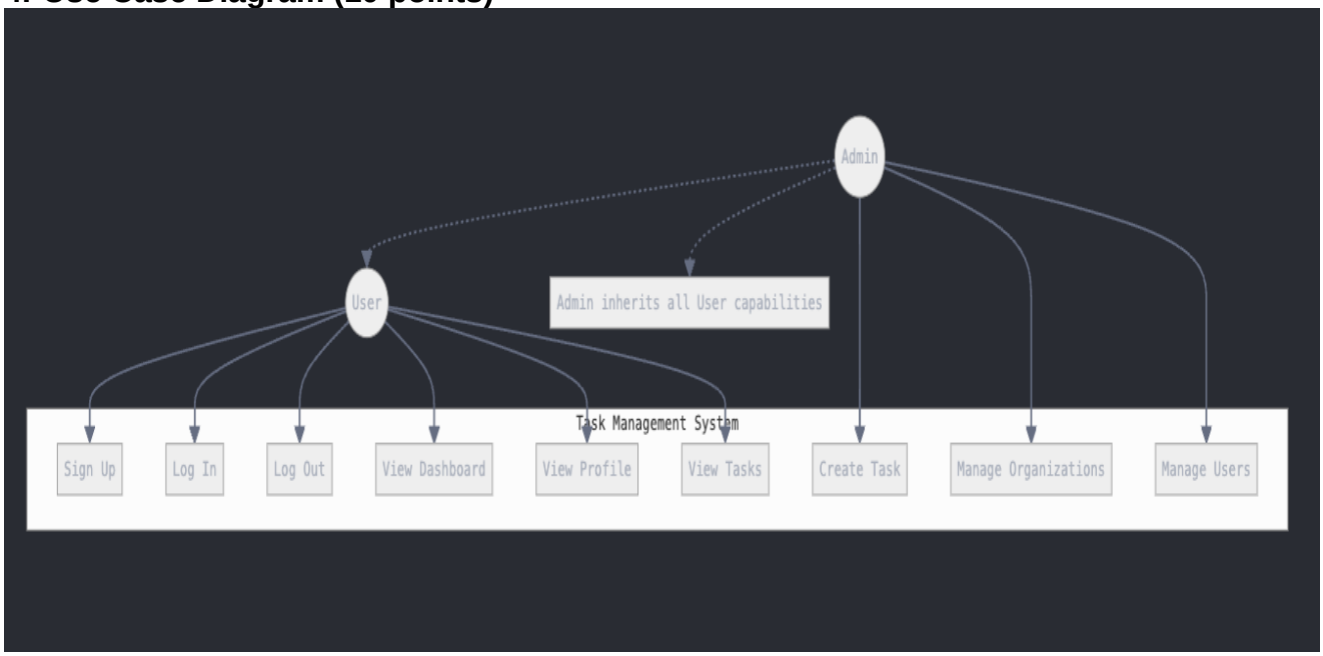
2. Functional Requirements (10 points)

1. User registration and login system – High priority
2. Task creation, editing, and deletion – High priority
3. Role-based access control for administrators and regular users – High priority
4. Calendar integration to track task deadlines – Medium priority
5. Ability for users to mark tasks as complete or incomplete – High priority

3. Non-functional Requirements (10 points)

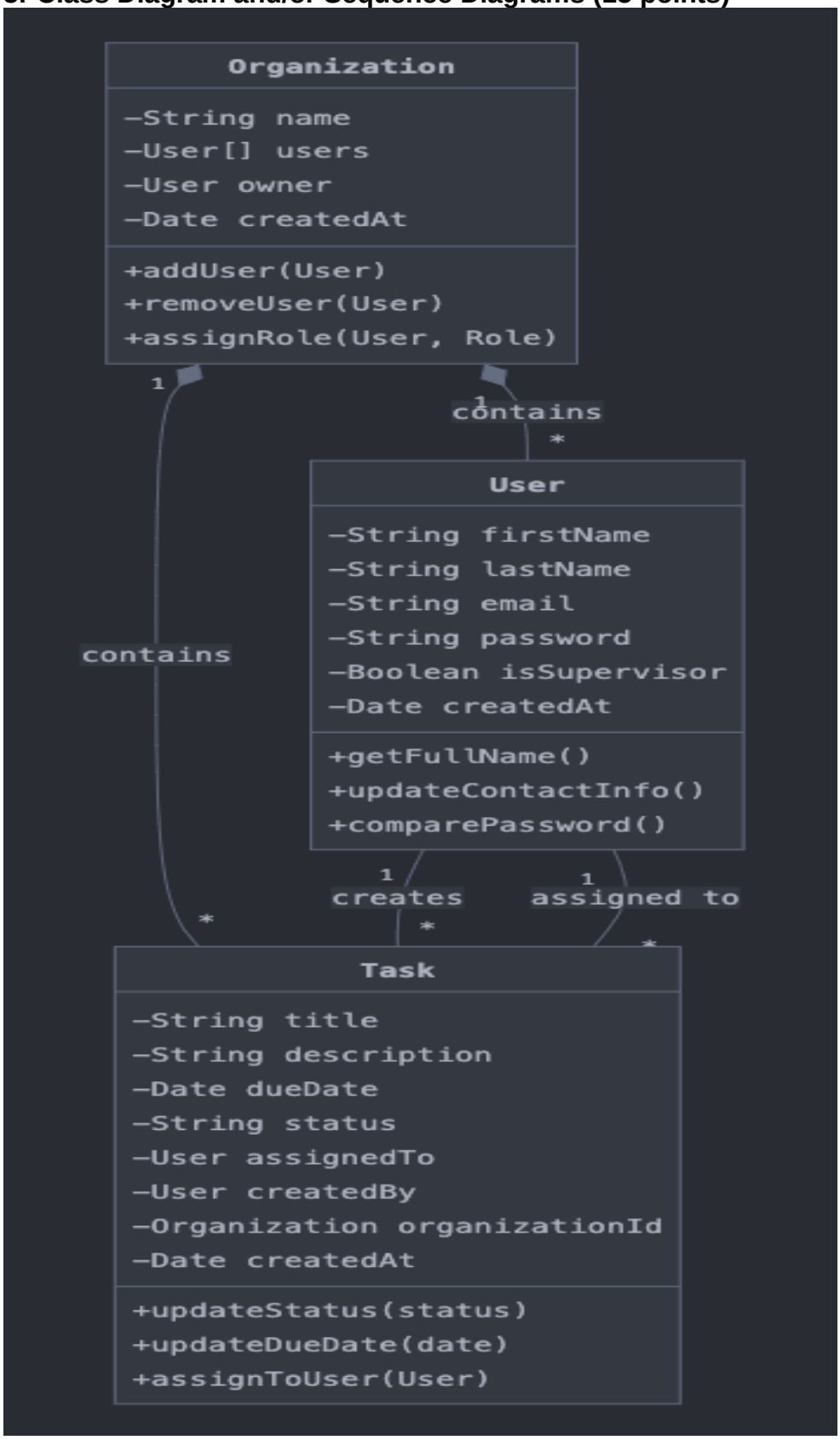
1. Application must be scalable; The system must support up to 1000 users per organization
2. Application must be responsive and work on multiple devices
3. User data must be secure with encrypted login credentials
4. The User interface must be simple and easy to interact with

4. Use Case Diagram (10 points)

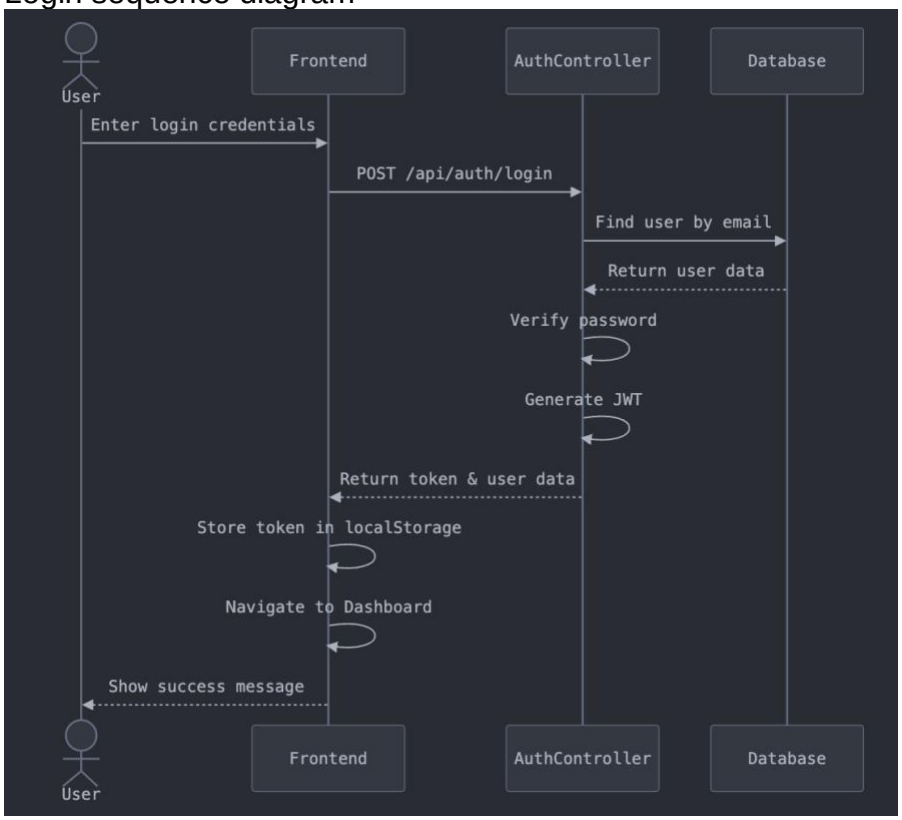


User can sign-up, login, and logout from the web app. They can check the dashboard including task list along with their profile.
Admin is a user that can create tasks, manage organizations, create teams, and manage users.

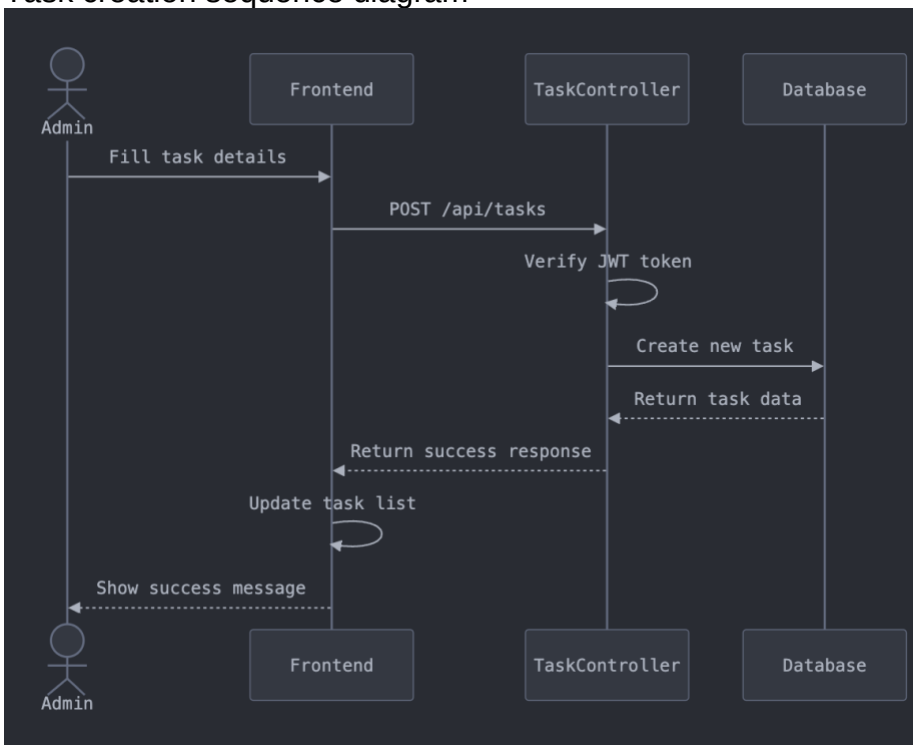
5. Class Diagram and/or Sequence Diagrams (15 points)



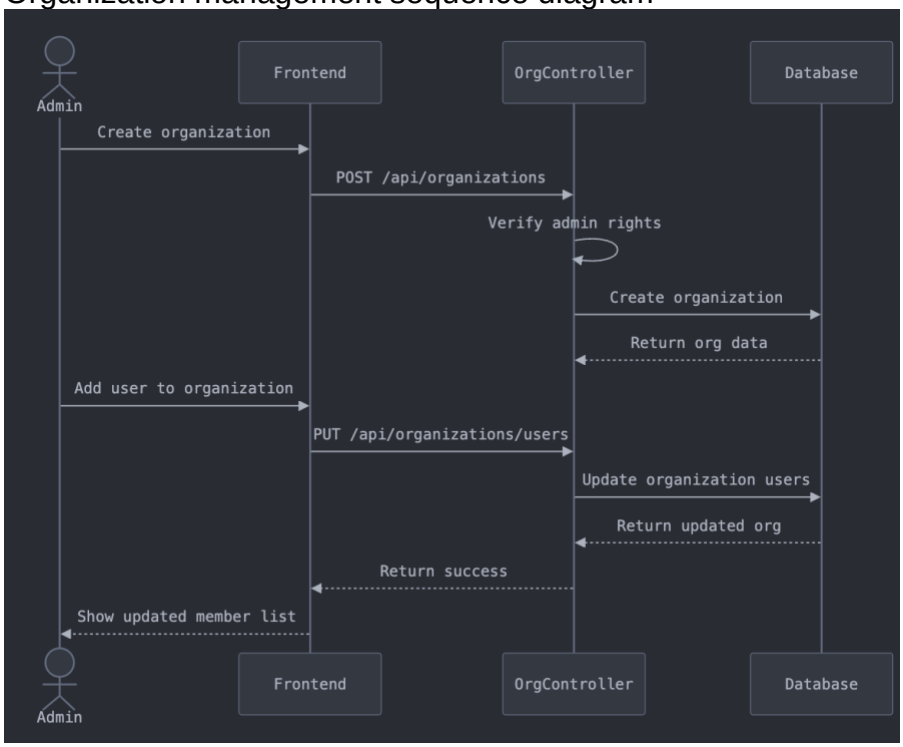
Login sequence diagram



Task creation sequence diagram



Organization management sequence diagram



6. Operating Environment (5 points)

The software will operate on web browsers and mobile devices. It will be built using React (frontend) and Node.js (backend) on MongoDB Atlas (cloud-based).

7. Assumptions and Dependencies (5 points)

● We assume that MongoDB Atlas will be reliable and scalable.
● We depend on third-party libraries for features like authentication (JWT) and calendar integration (FullCalendar).
● We depend on third-party libraries for front-end implementations (NPM modules).