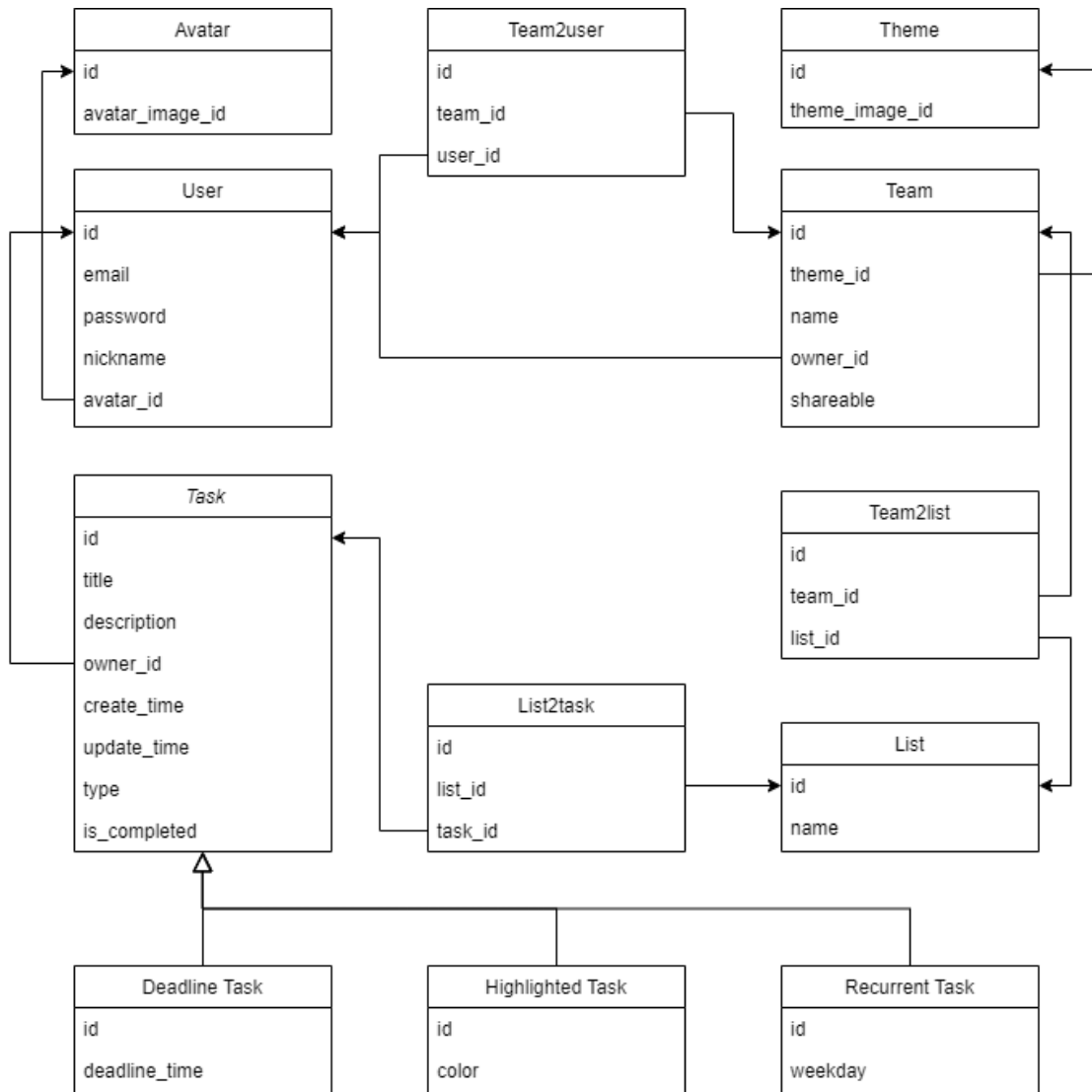## Application description:

The proposed functional requirements for this application encompass three key aspects: user authentication, CRUD (Create, Read, Update, Delete) operations for to-do list tasks, and enabling user collaboration through teams for shared tasks.

- User Authentication: user authentication is a fundamental feature to ensure the security and privacy of user data. It involves allowing users to register, log in, and securely manage their accounts. This process typically includes features like password hashing for data protection and password recovery mechanisms to assist users who forget their credentials.

- CRUD for To-Do-List Tasks: CRUD functionality is pivotal for managing tasks effectively. Users should be able to Create new tasks, Read existing ones, Update task details (such as due dates or descriptions), and Delete tasks when they are completed or no longer needed. Additionally, sorting and filtering options can enhance the user experience by helping users organize their tasks efficiently.

- User Collaboration via Teams: enabling collaboration through teams extends the application's functionality. Users can create or join teams, invite team members, and share tasks within these teams. Shared tasks should maintain visibility and accessibility to team members, allowing for seamless coordination on group projects or shared responsibilities. Additionally, features like task assignments, comments, and notifications can facilitate effective team collaboration.

ER diagram:

User interaction:

User logs in and sees their avatar and username. They can create a new team or choose an existing one. User creates a team named "Project X"with a "Blue Sky"theme. User goes to the "Project X"dashboard. There are 4 types of tasks, user can create:

- Regular: task with title and description. Can be completed by user by clicking the complete task button.

- With deadline: tasks with additional due date field. Task is marked as failed if it was not completed by the specified date.

- Highlighted: task with custom looks (different background color)

- Recurrent: task with the specified weekday. When marked as completed, the task will be automatically unmarked.

User adds a "Submit Project Report"task with a Friday due date. User can assign tasks to teams and communicate with team members. User personalizes their account, changing avatar and username. User logs out when finished.