Software Design Course

Universidad Distrital Francisco José de Caldas

UNIVERSIDAD DISTRITAL
FRANCISCO JOSÉ DE CALDAS

Partial project delivery

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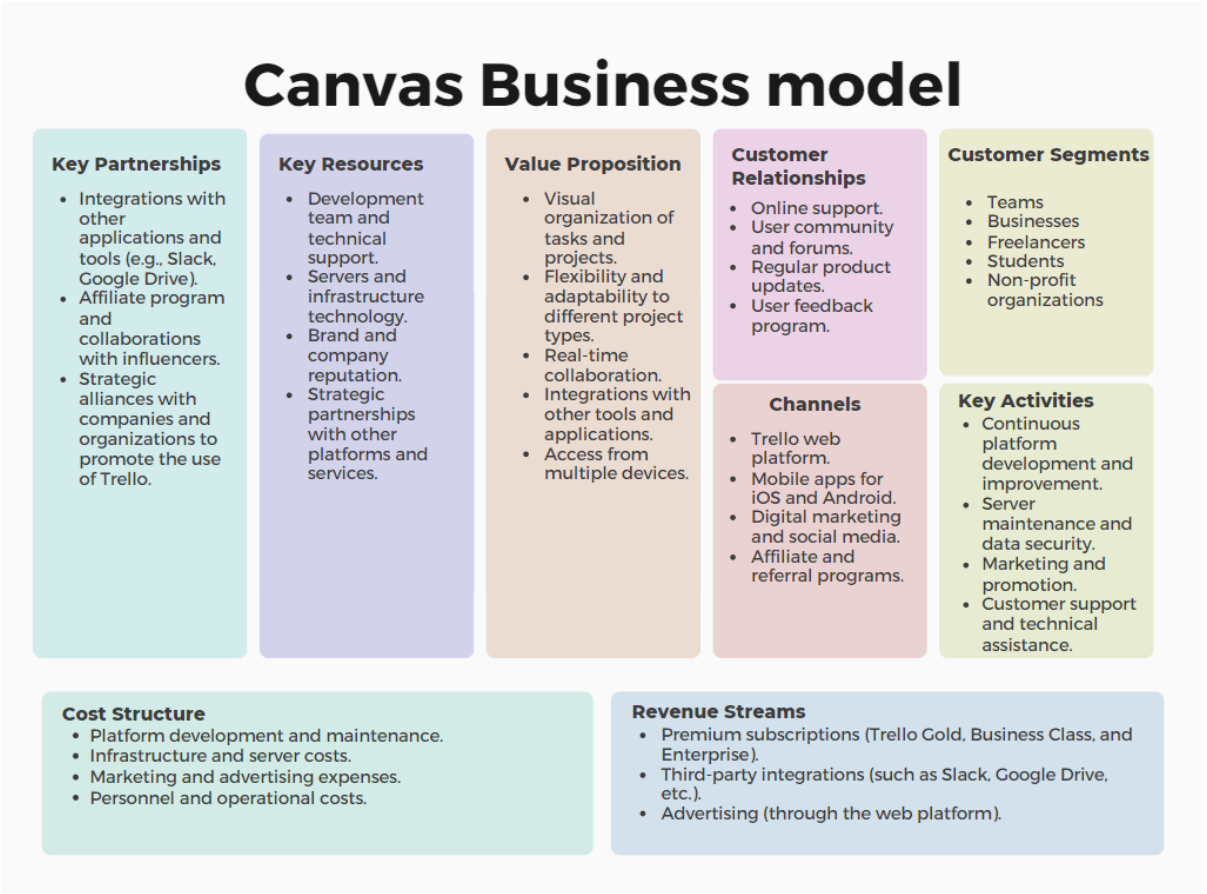
Description:

The project aims to develop a web-based task management application similar to Trello. The application will allow users to create boards for different projects or work areas, add tasks to these boards, assign descriptions and due dates to tasks, move tasks between different columns (e.g., "To Do", "In Progress", "Completed"), and collaborate with team members by assigning tasks and leaving comments. The project will focus on providing a user-friendly interface, real-time collaboration features, and scalability to accommodate various project sizes.

Stakeholders

- End Users: They are the primary beneficiaries of the "Trello"-type task management system. They can be individuals looking to organize their personal tasks or teams needing a collaborative platform to manage projects.
- System Administrators: They are responsible for configuring and maintaining the system, as well as managing users and access permissions.
- Project Developers: They are the team tasked with designing, developing, testing, and maintaining the system.
- External Stakeholders:They are the clients or sponsors of the project.



Tools to use:

- Frontend:
    - Language: JavaScript
    - Framework: React.js
    - Hyper text marking: HTML5
    - Styles: CSS

- Backend:
    - Language: Python
    - Framework: Django

- Databases: MongoDB

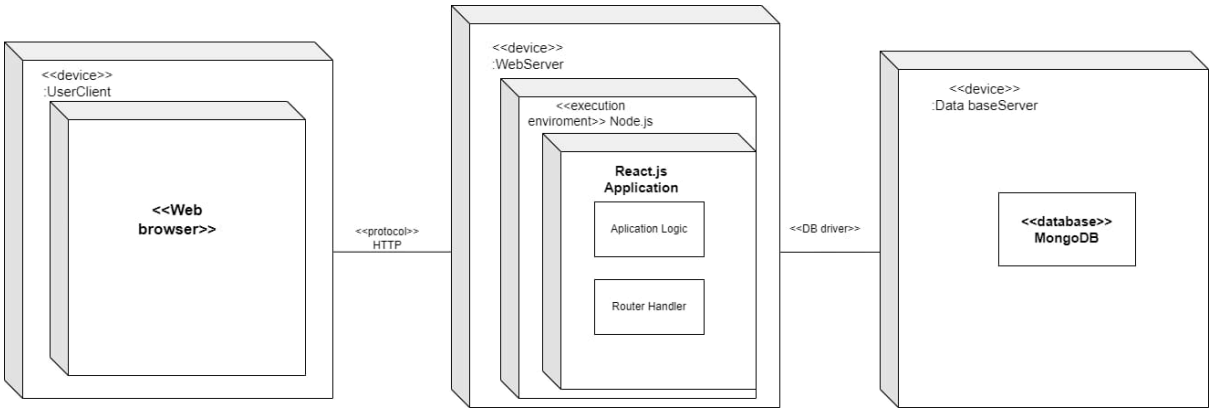
User stories

- As a _ <New user>, *I want*_ <to register an account in the system>_, so what_<access all its features>_.
- As a _<user>, I want_<to log in to my account>_, so what_<access my task board>.

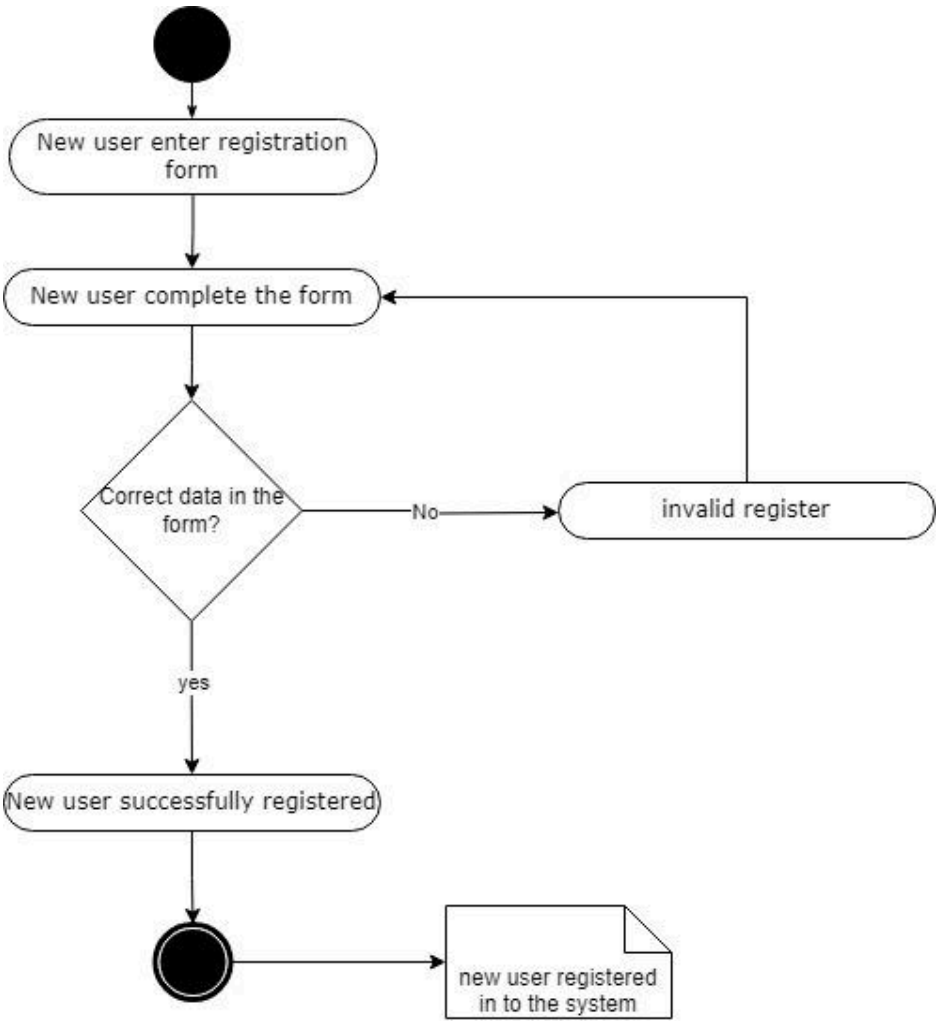
- As a _<user>_, I want_<to move tasks between different columns on my dashboard, such as "To Do", "In Progress", and "Completed">_, so what_<track the progress of my tasks>_.
- As a _<user>_, I want _<to add comments to tasks>_, so what_ <provide more information or relevant context>_.
- As a _<product manager>, I want_<to add new tasks to my board, assign them a description, and set a due date>_, so what_<manage my tasks effectively>_.
- As a _<product manager>_, I want_<to assign tasks to other users and receive notifications when they are completed>_, so what_<collaborate with others and stay updated>_.
- As a_<system administrator>_, I want_<to manage users, their access permissions, and general system settings>_, so what_<ensure the smooth operation of the system>_.
- As a _<scrum master>, I want_<to create a new board>_, so what_<organize my different projects or work areas>.
- As a_<scrum master>_, I want_<to assign boards to users>_, so what_<map users into a project, synchronizing the team>_.
- As a_ <scrum master>_, I want_<to cancel activities>_,so what_<foresee unexpected changes in requirements >_.
- As a_ <scrum master>_, I want_<to initialize sprints once the current is over>_,<keep adding value to the project, sticking to the agile framework>_.

Diagrams

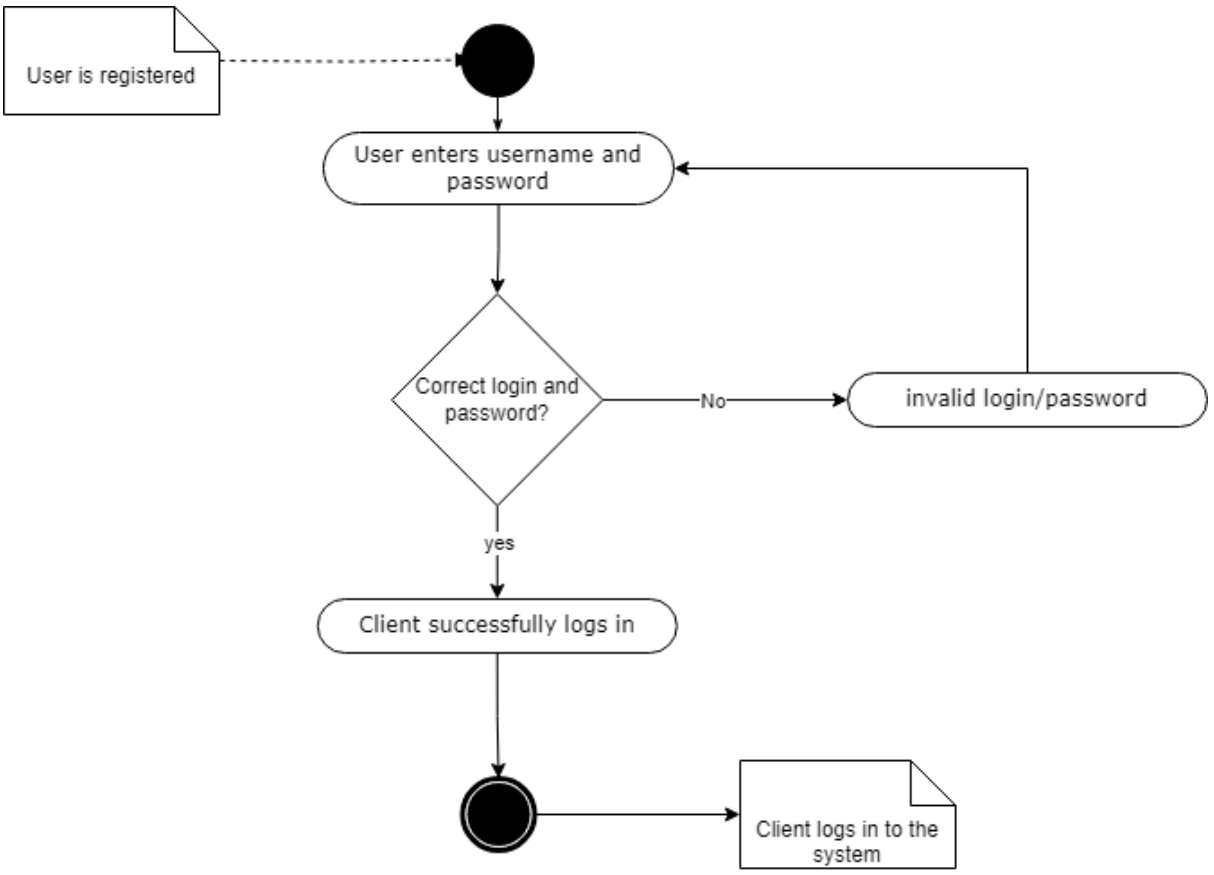
Deployment diagram



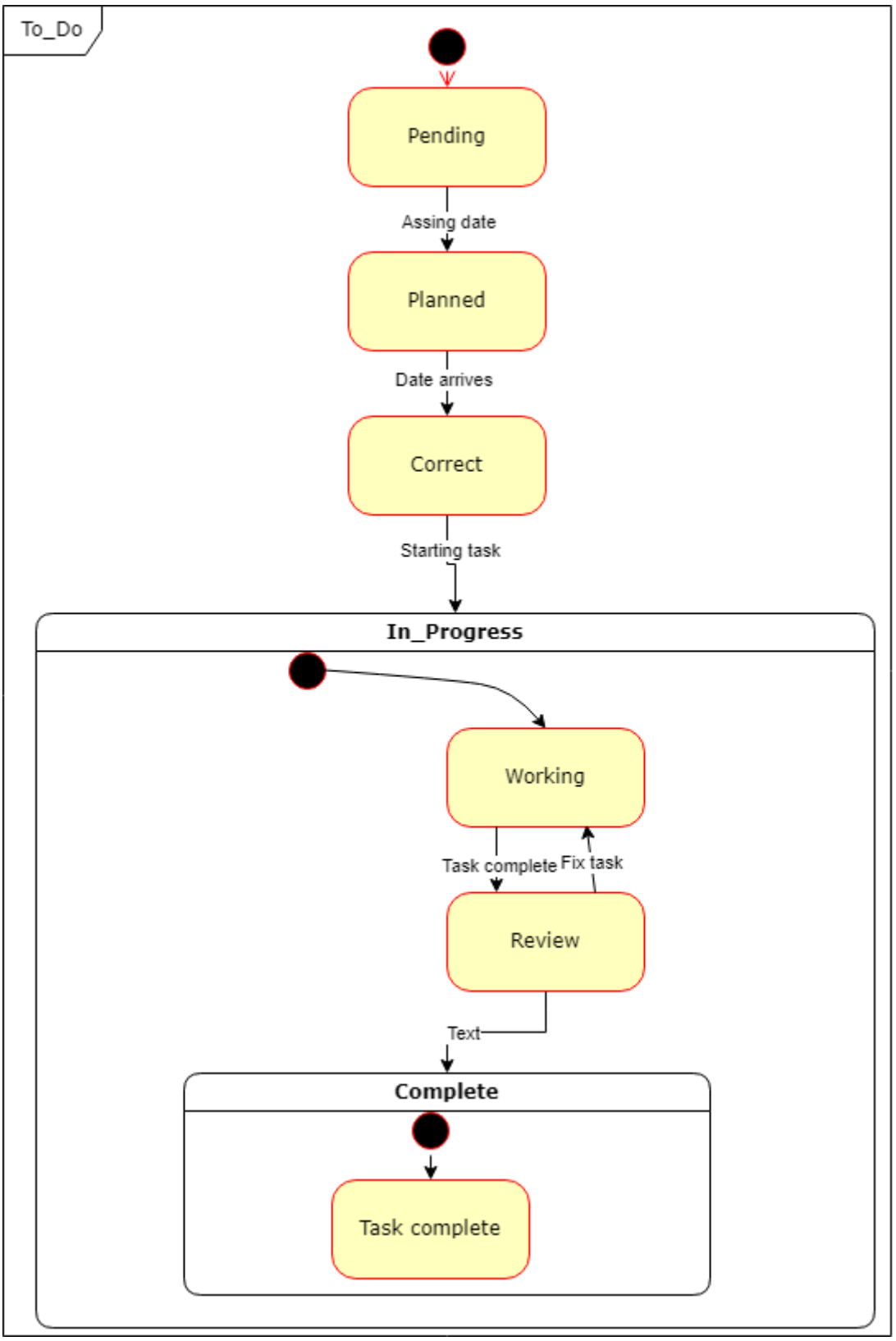
- New user registration


New user enter registration form
New user complete the form
Correct data in the form?
No
invalid register
yes
New user successfully registered
new user registered in to the system

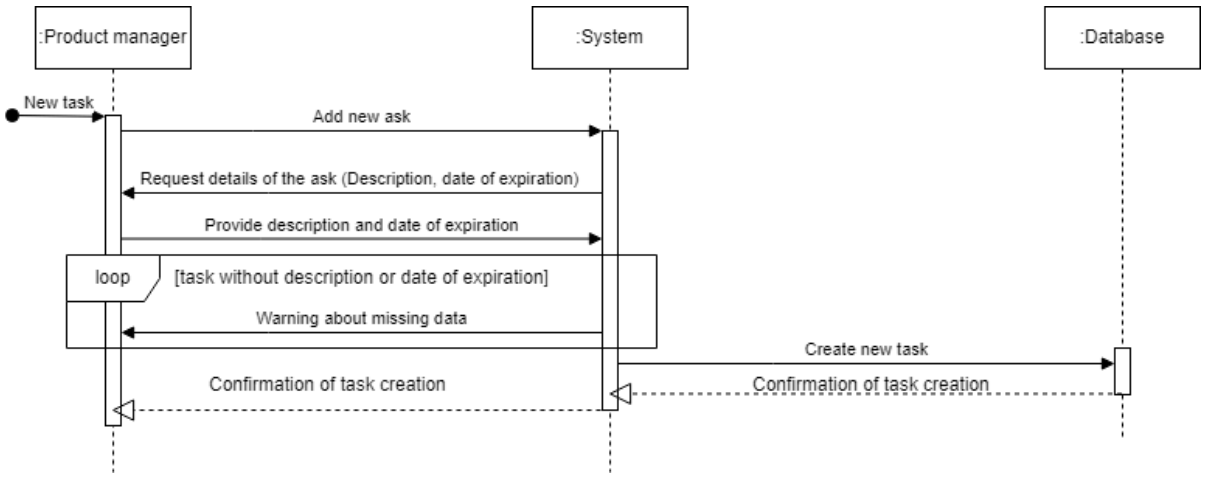
- User login



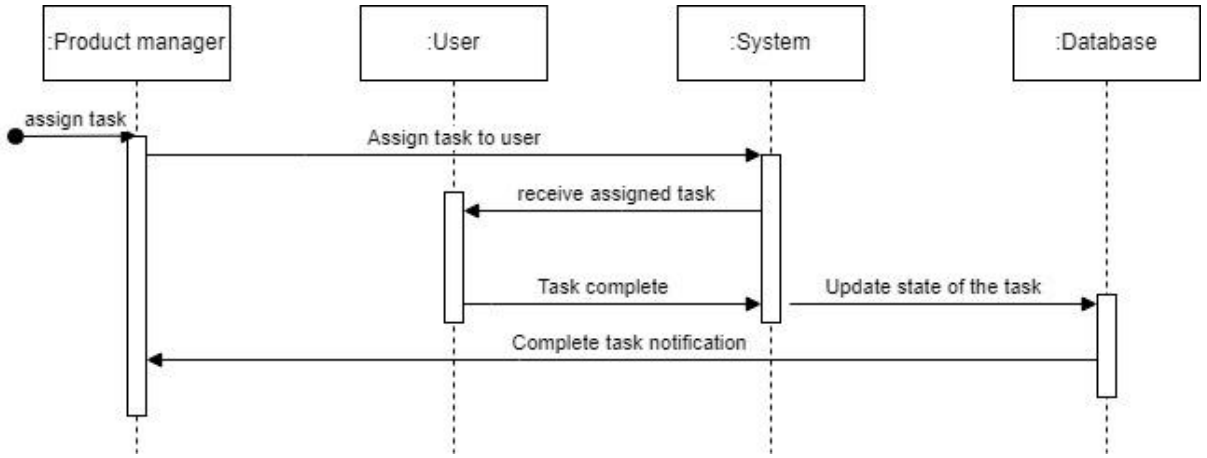
- Tasks between different columns on my dashboard



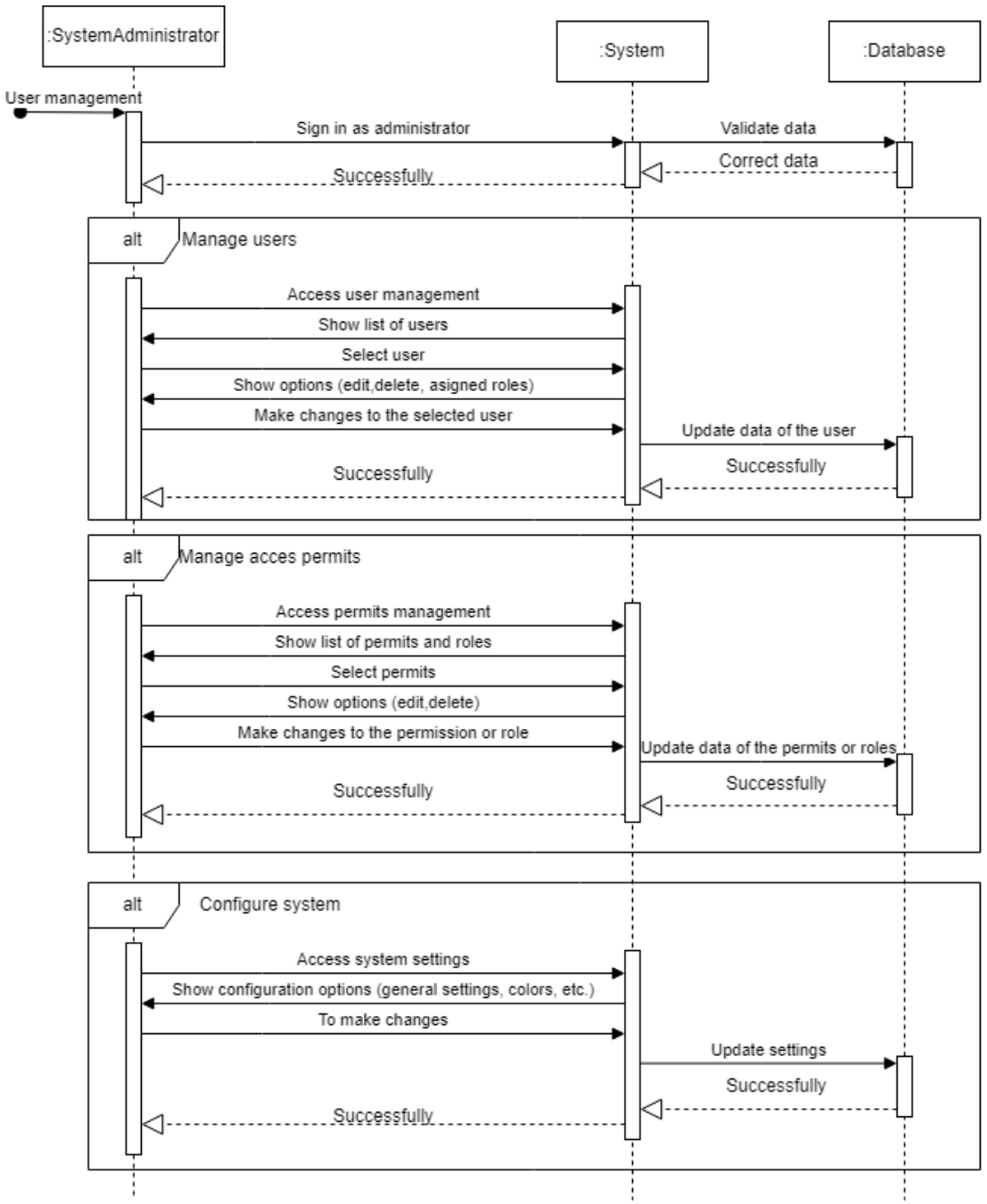
- Add new tasks to the board



- Assign tasks to other users



- Administrator management


:SystemAdministrator
:System
:Database
User management
Sign in as administrator
Validate data
Correct data
Successfully
alt
Manage users
Access user management
Show list of users
Select user
Show options (edit,delete, asigned roles)
Make changes to the selected user
Update data of the user
Successfully
Successfully
alt
Manage acces permits
Access permits management
Show list of permits and roles
Select permits
Show options (edit,delete)
Make changes to the permission or role
Update data of the permits or roles
Successfully
Successfully
alt
Configure system
Access system settings
Show configuration options (general settings, colors, etc.)
To make changes
Update settings
Successfully
Successfully

- New board

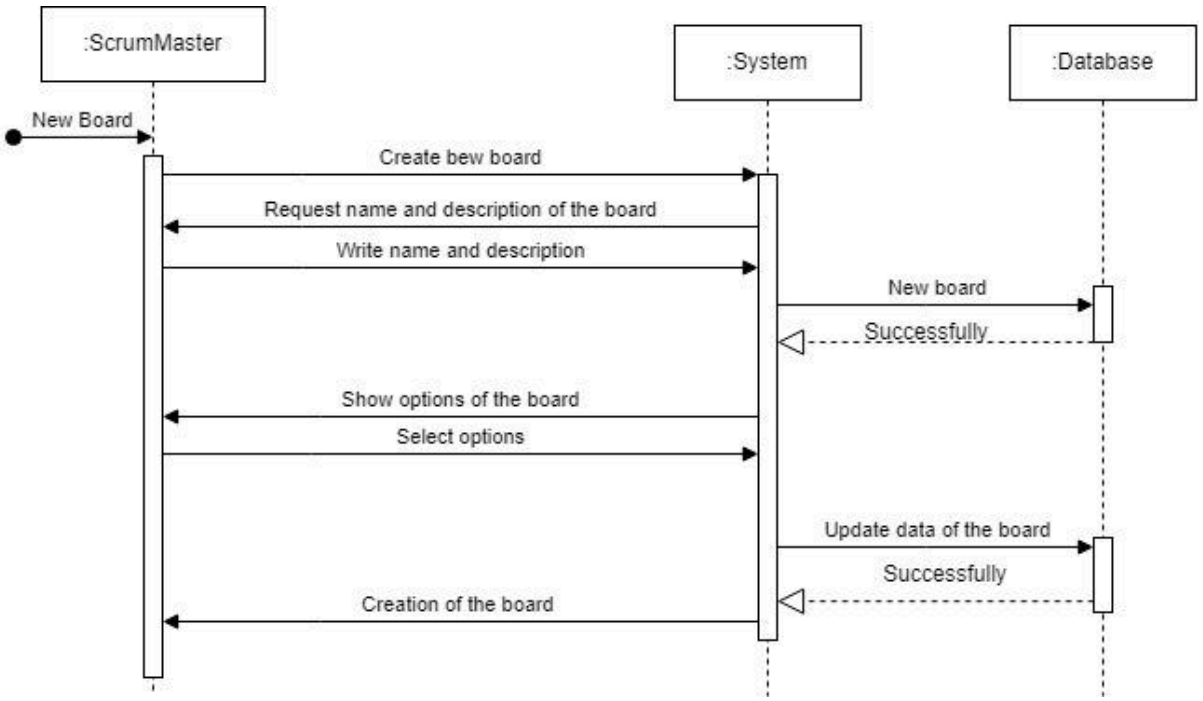
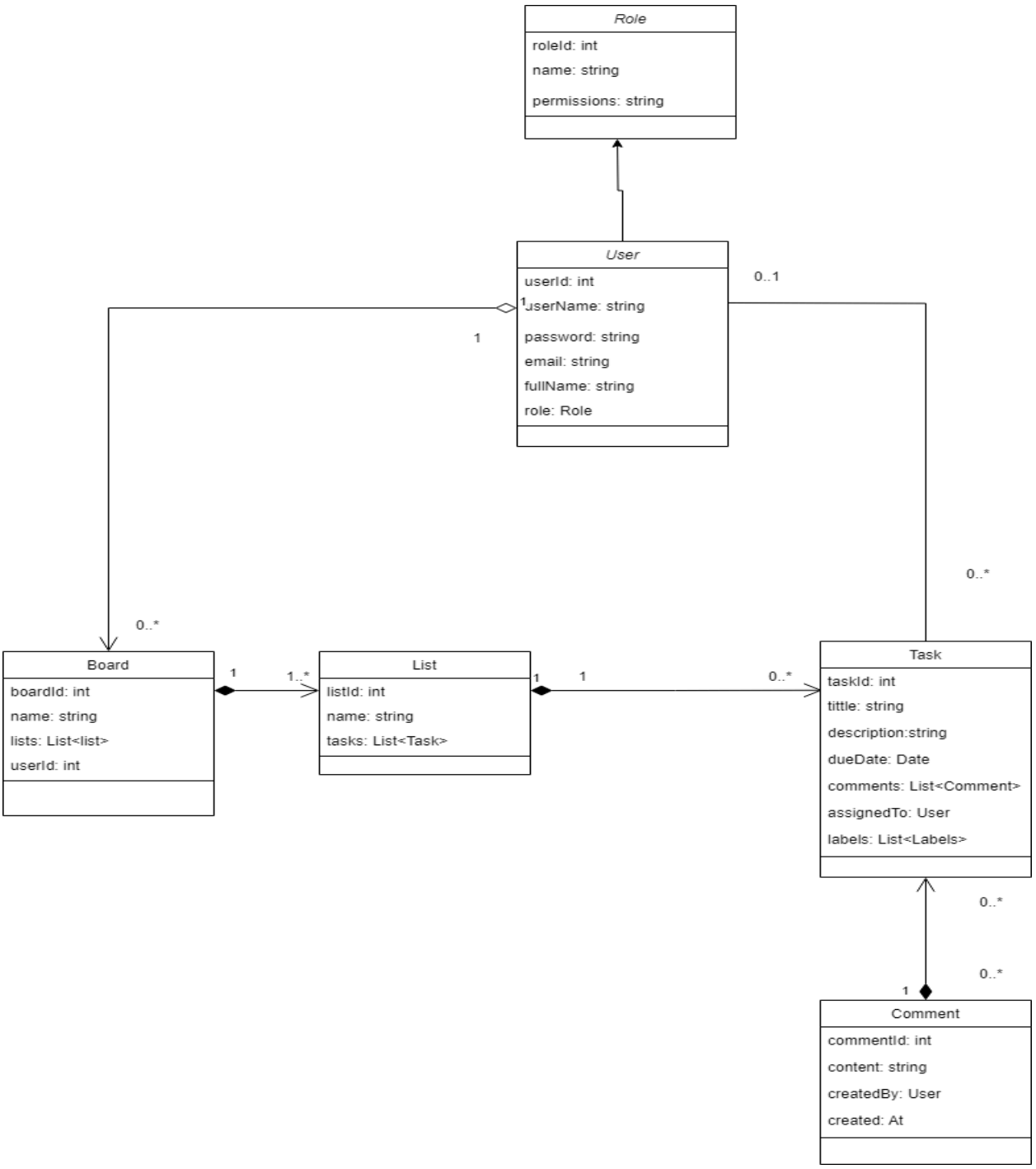


Diagrama de clases



By default, the application will retain certain information in its database to facilitate testing whether it processes all CRUDs in the tables.

User Information:

- Usernames

- Email addresses
- Encrypted passwords
- User roles or permissions

Task Information:

- Task titles
- Descriptions
- Due dates
- Labels or categories
- Task statuses (e.g., to-do, in progress, done)
- Assigned users
- Attachments (if applicable)
- Comments or activity logs

Board Information:

- Board titles
- Descriptions
- Lists of tasks (e.g., to-do, in progress, done)
- Board members (users assigned to the board)
- Board settings (privacy settings, permissions, etc.)

Activity Logs:

- Timestamps for when tasks are created, updated, or completed
- User IDs associated with each activity
- Details of the activity (e.g., "Task X was moved to the 'Done' list by User Y")

Testing Data:

- Sample data generated using Faker library or manually created for various scenarios
- Data specifically designed to test edge cases, error conditions, and system boundaries
- Data to simulate real-world usage scenarios to validate system behavior