Project Lifecycle

The lifecycle method chosen for the execution of the project is Agile methodology. The reason for the same is:

- Agile supports incremental development and continuous feedback, which is necessary for SeaSky's evolving logistics and transport requirements.
- It allows flexibility to integrate new features
- Continuous improvement through sprint retrospectives
- Enables frequent collaboration through scrum meetings
- Facilitates better team collaboration and communication

Plan for implementation using Agile:

1. Project Initiation

First, identify all the features needed for the project with reference to the SRS document and create a product backlog. Prioritize them based on business value and dependencies.

2. Sprint Execution

Hold meetings to discuss progress, plan and blockers. Develop features incrementally and continuously test them. Sprint will be for a duration of 1 week.

3. Reviews and Retrospection

At the end of each sprint, we can demonstrate the completed work and we get a set of reviewers to try the interface and provide reviews We reflect on the sprint to discuss what went well, what challenges were faced, and how the next sprint can be improved.

4. Backlog Refinement and Iterative Deployment

Based on feedback, the product backlog is updated. New features of enhancements are reprioritized. Continue to work on the project and make a potential finished product at the end of each sprint.

5. Final release and continuous improvement

Once the core functionalities are stable and tested, the system can be released. Post release maintenance can be facilitated.

Tools Selection

- **Planning Tool:** Jira
- **Design Tool:** LucidChart
- **Version Control:** GitHub
- **Bug Tracking:** Jira
- **Development Tool:** VSCode (primary IDE)
- **Testing Tools:** Postman (for API testing), Selenium (for web testing), Pytest (for Unit testing)

Deliverables Categorization

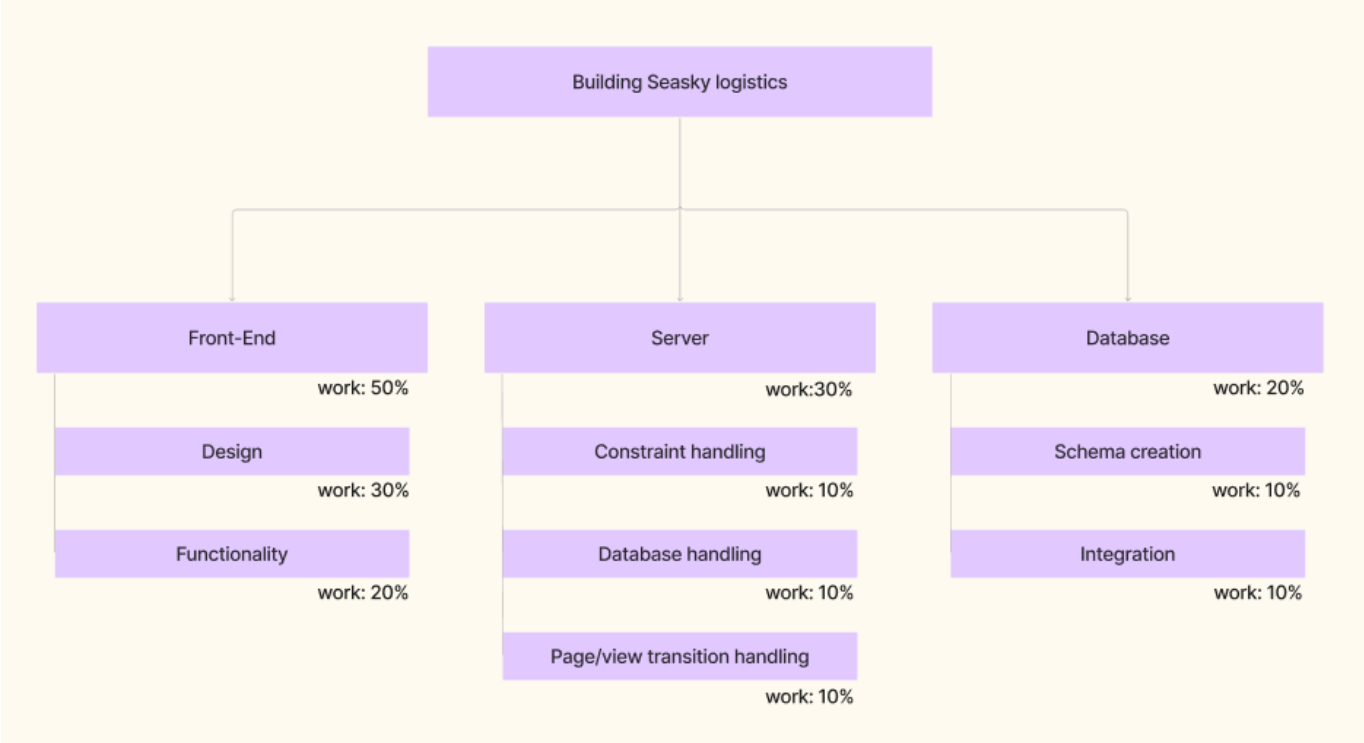
Reuse Components

- Database Management System (MySQL, Postgres)
- Authentication System

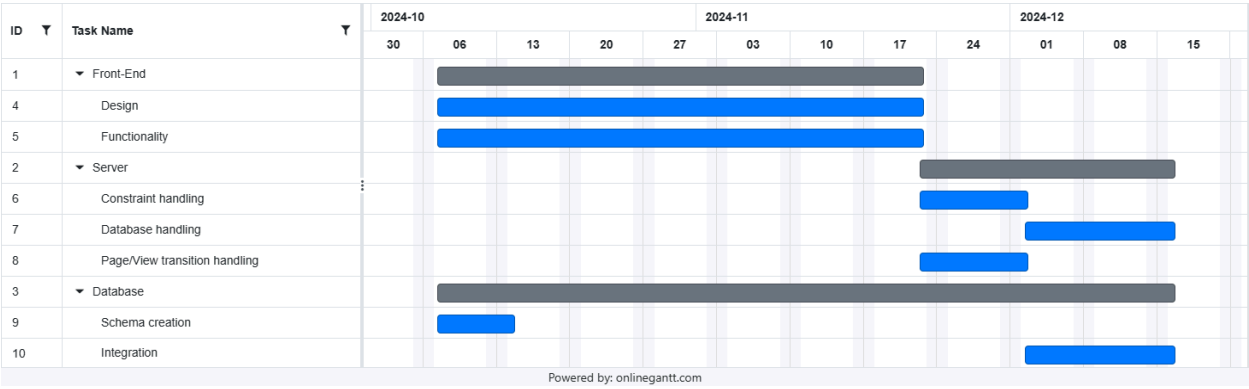
Build Components

- Travel Log Management Module
- Goods and Passenger Tracking System
- Goods Regulations Enforcement Module
- No-Fly List Management System
- Tax Calculation Module
- Order Status Tracking System
- User Management Interface
- Reporting and Analytics Dashboard

Work Breakdown Structure

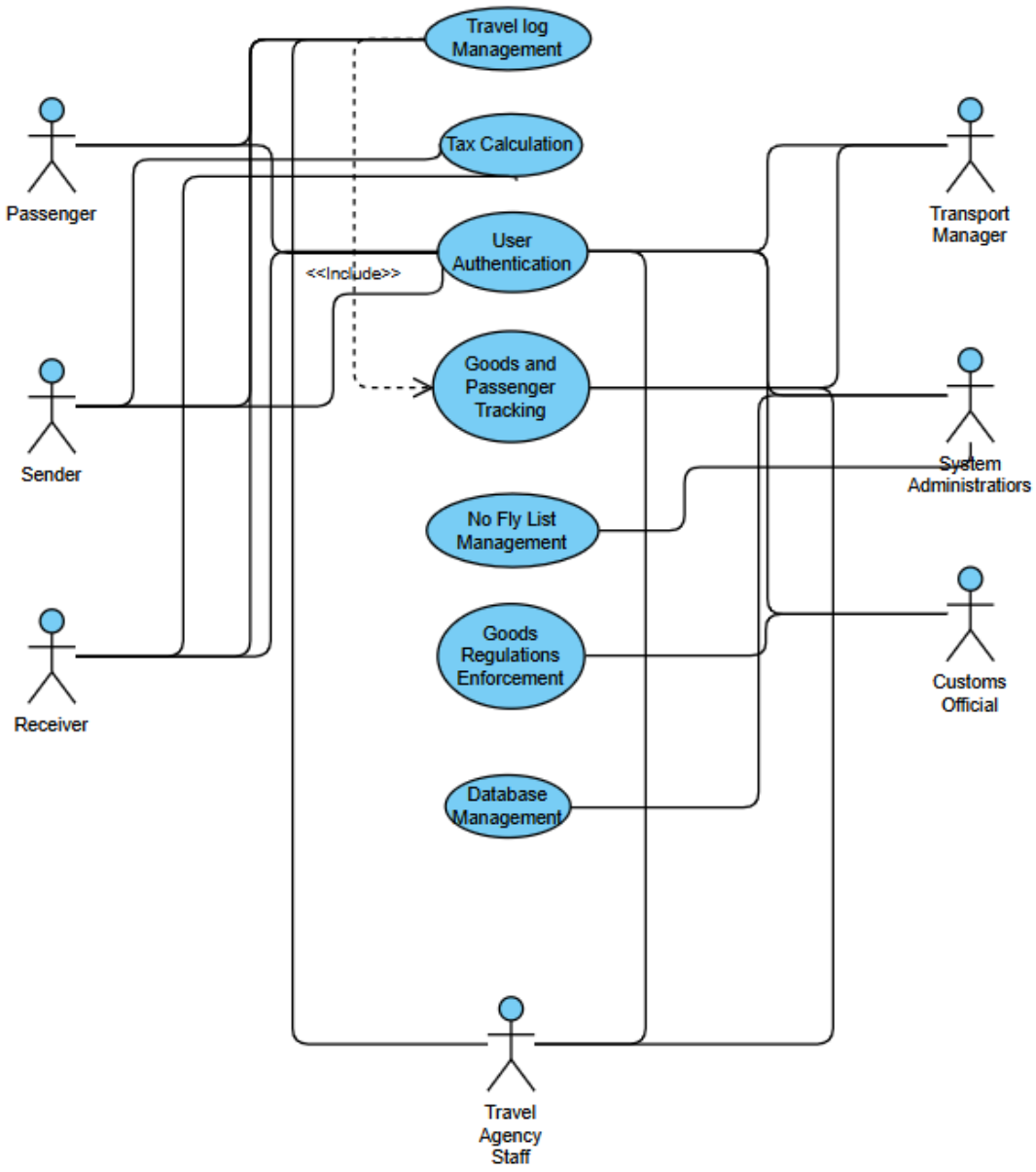


Gantt Chart

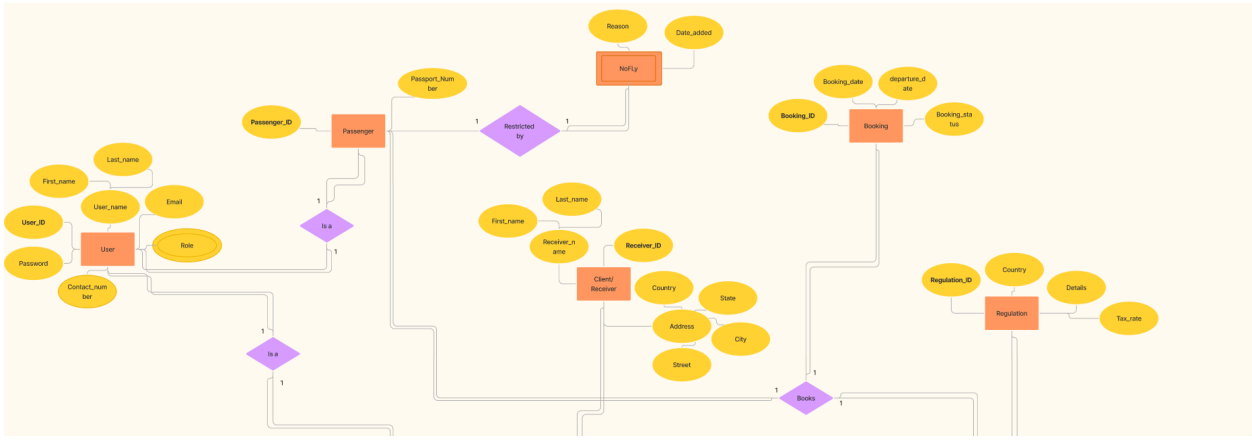


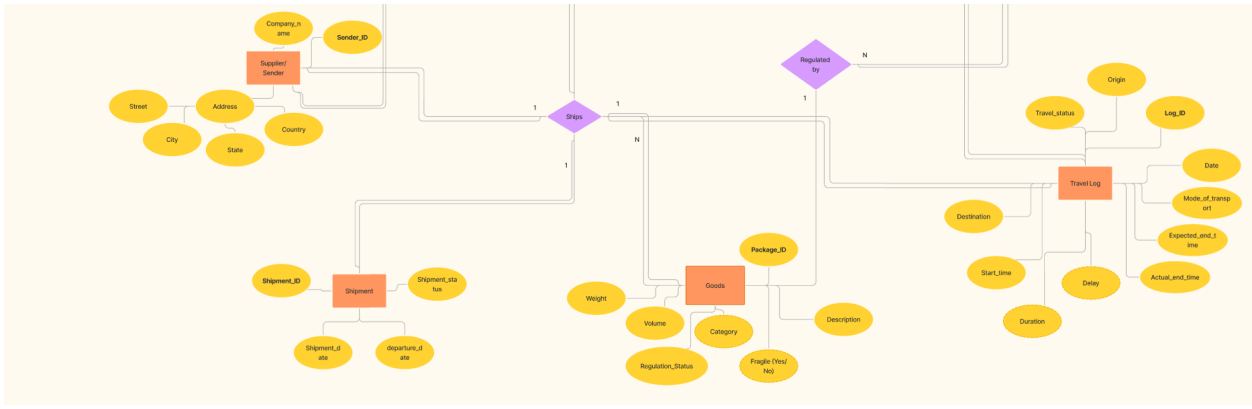
UML Diagram

a. Use Case Diagram



b. Class Diagram


Reason
Date_added
NoFLy
Passport_Number
Passenger_ID
Passenger
Restricted by
1
1
Booking_date
departure_date
Booking_ID
Booking
Booking_status
Last_name
First_name
User_name
Email
User_ID
User
Role
Password
Contact_number
1
Is a
1
Last_name
First_name
Receiver_name
Receiver_ID
Client/ Receiver
Country
State
Address
City
Street
Regulation_ID
Country
Details
Regulation
Tax_rate
1
Is a
1
1
Books
1


Company_name
Sender_ID
Supplier/ Sender
Street
Address
City
State
Country
1
Ships
1
N
1
Regulated by
N
1
Origin
Travel_status
Log_ID
Travel Log
Date
Mode_of_transport
Destination
Expected_end_time
Start_time
Delay
Actual_end_time
Duration
Shipment_ID
Shipment
Shipment_status
Shipment_date
departure_date
Package_ID
Goods
Weight
Volume
Category
Description
Regulation_Status
Fragile (Yes/ No)