

## Assignment: Vessel Hire & Market Dashboard with Login

### Objective

Build a **mini full-stack app** with **Django (backend)**, **MS SQL Server (database)**, and **React (frontend)**. The app should:

1. Support **user login** (basic authentication).
  2. A window for admin to put data .
  3. Display **hire & market rates for vessels** on a graph after login.
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### Requirements

#### 1. Backend (Django + MS SQL Server)

- Connect Django to **MS SQL Server**.
  - Implement authentication using Django's built-in **User model**:
    - POST /api/login/ → returns an auth token (JWT or session-based).
    - Protect all data endpoints (require login).
  - Define a table vessel\_data with:
  - id (int, PK, auto)
  - vessel\_name (varchar)
  - date (date)
  - hire\_rate (int)
  - market\_rate (int)
  - Seed at least **3 vessels** with **30 days of data**.
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#### 2. Frontend (React)

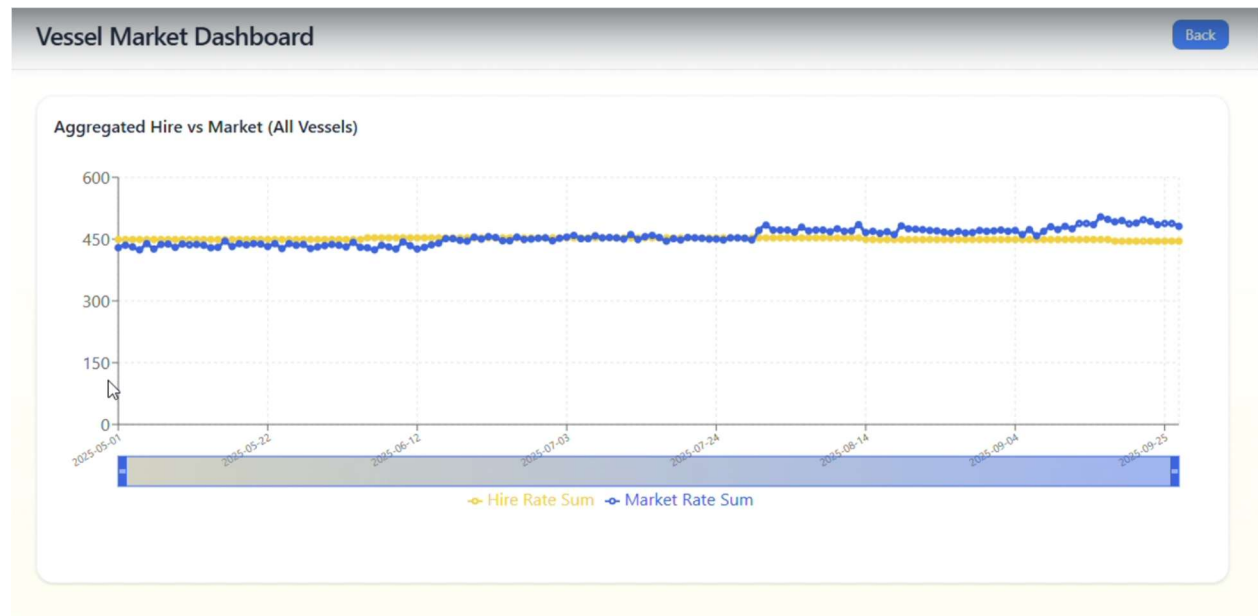
- Create a login form (username + password).
  - On success, store the token/session in localStorage.
  - Redirect user to the dashboard.

- Dashboard features:
  - Dropdown to select **vessel** and **date range**.
  - Fetch data from Django API using the stored token.
  - Display line chart (Recharts):
    - X-axis: Dates
    - Y-axis: Hire Rate (yellow line), Market Rate (blue line).
    - Tooltip on hover showing exact values.

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### 3. Bonus (Optional)

- Add an **Admin-only view** with aggregated graph (sum of hire & market rates across all vessels per day).
- Deploy using **Docker Compose** (Django + React + MS SQL containers).
- Add role-based access (e.g., Admin vs. User).





Hire vs Market Rate (Hover to see HS Code)

Legend: Hire Rate (yellow line), Market Rate (blue line)

Dashboard		
User		