

## ReCustom Dev Challenge

Here at ReCustom, we have thousands of users who create, edit, and view content in the form of PDFs. We like to be able to manage our users and understand their behavior by tracking metrics of what they create, edit, and view. This problem seeks to test your knowledge of a similar process.

This challenge should take you no more than 4 hours. Please use **any tools, libraries, or environments you would like**, including chatGPT.

When complete, please send us

1. A video of your application working or a link to a Github Page
2. A link to the github repo

### Problem Description:

Create a simple **User Metrics Dashboard** that allows:

1. Managing a list of users.
2. Generating and downloading a PDF report for each user.
3. Tracking user activity metrics (e.g., number of logins, downloads).

### Technologies:

Frontend - Typescript + React, UI framework of your choice

Backend - Postgres, ORM of your choice (Django, TypeORM, etc..), NestJS

### Requirements:

#### Frontend (React):

1. **User Management:**
  - Display a table of users fetched from the backend.
  - Allow adding a new user with fields: **name**, **email**, and **role** (e.g., "Admin", "User").
  - Create, edit, or delete existing users.
2. **PDF Download:**
  - Provide a button for each user to download a personalized PDF report (e.g., "User Activity Summary").

- Include user details and activity metrics (fetched from the backend) in the PDF.
- 3. **Activity Metrics Display:**
  - Show basic metrics for each user (e.g., total logins, PDFs downloaded) in the user table.
  - Optionally, visualize overall metrics (e.g., a bar chart of total downloads per user).

## **Backend (PostgreSQL + API):**

1. **Endpoints:**
  - **Users:**
    - GET: Fetch all users.
    - POST: Add a new user.
    - PUT: Edit a user.
    - DELETE: Delete a user.
  - **Activity Logs:**
    - GET:: Fetch activity logs for a user.
  - **PDF Generation:**
    - GET: Generate and return a downloadable PDF for the user.
2. **Pre-seeded Data:**
  - Populate the database with 5–10 users and activity logs.

## **PDF Generation:**

- PDF content should include:
  - User's name, email, and role.
  - Total logins and downloads.
  - A simple table summarizing recent activity.

## **Testing:**

- Write 2-3 unit tests for the React components (e.g., adding/editing a user).

## **Extra Credit (optional):**

1. Authentication and role-based permissions.
2. Metrics visualizations (e.g., using Chart.js).
3. Advanced testing.