🌍 World Bank Dashboard

Project Description

This project is a **web-based interactive dashboard** that fetches global development data from the **World Bank Open Data API** and displays it in a visual format. The dashboard is designed for **data exploration** and provides dynamic filters to analyze population and GDP trends across multiple countries over time.

Key Features:

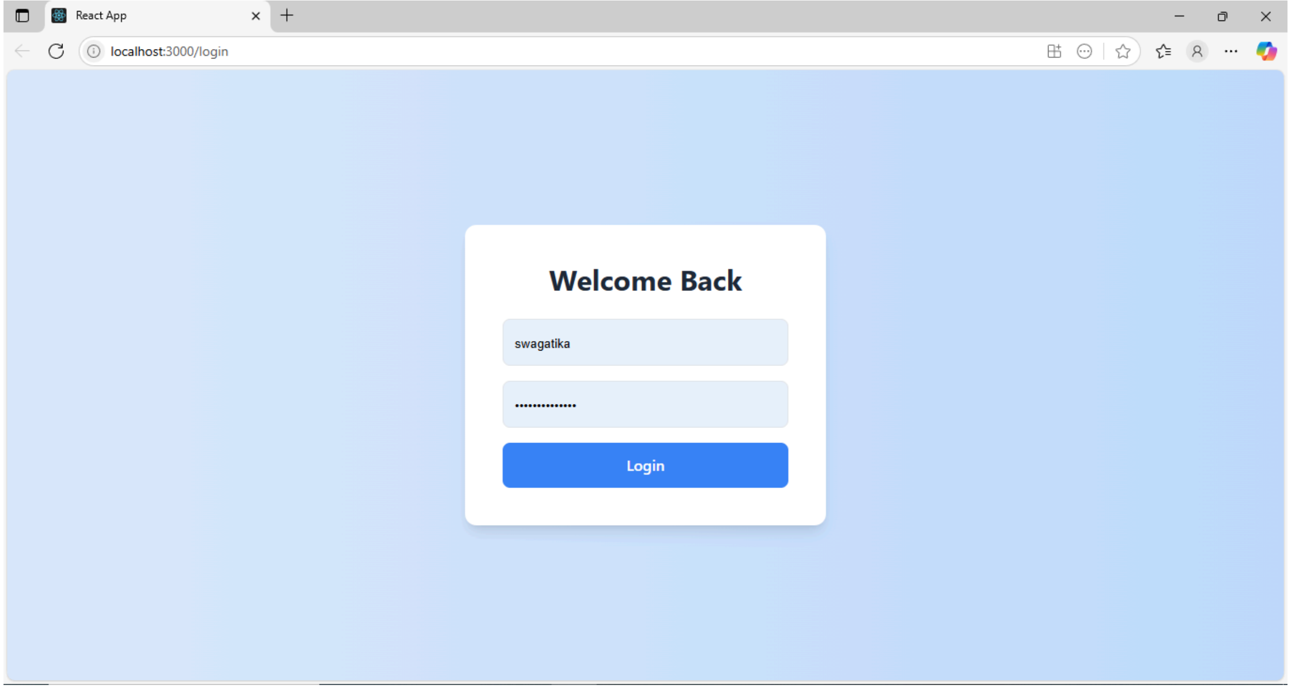
- **Interactive Charts:**
  - Population Data (Bar Chart)
  - GDP per Capita (Line Chart)
- **Dynamic Filters:**
  - Select multiple countries
  - Specify start and end years for analysis
- **Authentication:**
  - User login/logout using JWT
  - Dashboard is accessible only to authenticated users
- **Data Source:**
  - World Bank Open Data

Tech Stack

- **Backend:** Django + Django REST Framework + SimpleJWT for authentication
- **Frontend:** React + Tailwind CSS + Chart.js
- **API Integration:** World Bank Open Data API

Screenshot:

Login page:



Welcome Back

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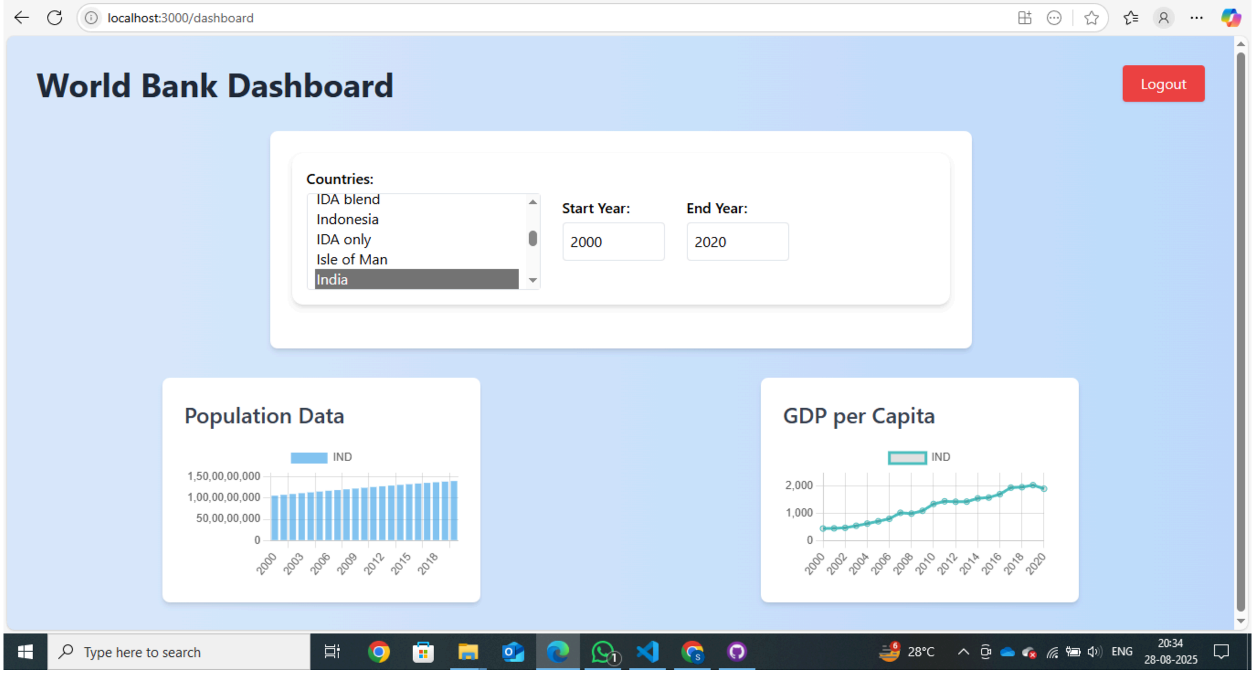
Dashboard page:



localhost:3000/dashboard

World Bank Dashboard

Logout

Countries:
IDA blend
Indonesia
IDA only
Isle of Man
India

Start Year: 2000

End Year: 2020

Population Data

GDP per Capita

Project Structure

```
           # Django backend
  ├─ api/          # Django app with API endpoints
  ├─ backend/      # Project settings
dashboard-frontend/          # React frontend
  ├─ src/
      ├─ Dashboard.js
      ├─ Filters.js
      ├─ Login.js
```

Setup & Running the Project

1. Backend (Django)

Navigate to backend directory:

Create and activate a virtual environment:

```
 python -m venv venv
# Windows
venv\Scripts\activate
# macOS/Linux
source venv/bin/activate
```

1. Install dependencies:

   ```
   pip install -r requirements.txt
   ```

2. Apply migrations and create superuser:

   ```
   python manage.py migrate

   python manage.py createsuperuser
   ```

3. Start the server:

   ```
   python manage.py runserver
   ```

4. Backend runs at: `http://127.0.0.1:8000/`

2. Frontend (React)

Navigate to frontend directory:

```
cd dashboard-frontend
```

1. Install dependencies:

   ```
   npm install
   ```
2. Start the frontend server:

   ```
   npm start
   ```
3. Frontend runs at: `http://localhost:3000/`

3. Usage

1. Open `http://localhost:3000` in your browser.

2. Log in with the credentials created via Django superuser.

3. On the dashboard:

   - Use filters to select countries and date range

   - View interactive Population and GDP charts

   - Click **Logout** to end the session

4. API Endpoints

Endpoint	Method	Description
`/api/login/`	POST	Authenticate user & get JWT
`/api/token/refresh/`	POST	Refresh JWT access token
`/api/population/`	GET	Fetch population data
`/api/gdp/`	GET	Fetch GDP per capita data
`/api/countries/`	GET	Fetch list of available countries

5. Notes

- Ensure both backend and frontend are running simultaneously.
- Dashboard data is fetched dynamically from the World Bank API.
- Tailwind CSS is used for styling; Chart.js is used for interactive charts.