# ErnieApp – Full Stack Assignment project

Your task is to build a small bus station web application. This webapp will give users/clients information about bus schedule and number of available seats for each bus.

User should also have possibility to reserve seat in some bus (if bus has available seats).

We must take care of our buses. All buses need to go on service each 6 months – we need to send email to admin which bus needs to go on service one month before service time.

### Backend:

For backend use Django (**Django REST Framework)** to server API endpoints.

All buses must have **driver, maximum seats** and **status**.

Admin users will have possibility to add new bus schedule on board using admin panel!

Create needed DB models - **use UUID for primary keys.**

* **Driver model:**
  + First name,
  + Last name,
  + Birth date,
  + Years of driving experience of driver,
  + Date driver start driving in this company.
* **Bus model:** 
  + Each bus needs to have a license plate - can be used for slug,
  + Each bus has a driver - so we need the driver's name,
  + Time of departure,
  + maximum number of seats in a bus,
  + number of available seats in a bus,
  + Starting station,
  + Final destination station,
  + Driver is a foreign key to the Driver object.
  + Status:
    - On platform
    - Arriving
    - Leaving
    - Left

**Example of DB models:**

class Driver:

pk: uuid

first\_name: str

last\_name: str

birth\_date: str | None

years\_of\_experience: str

date\_joined: datetime

class Bus:

pk: uuid

registration\_plate: str

driver: Driver

end\_destination: str

time\_of\_departure: str

create\_date: datetime

update\_date: datetime

max\_seats: int

seats\_available: int

status: int | str

**NOTE: be free to add more DB models if needed!**

**Endpoints:**

* Create needed endpoints: BusList, ReserveSeat, UnreserveSeat. (add more endpoints if needed)

**ADD TESTS** (Ideally using **pytest**).

### Client:

* Ideally this app will have just **one page** on Client side (you will have **one index.html** file).
* Programmatically create DOM elements to show Bus list with needed details using **Native/Pure JavaScript**.
* Manipulate DOM elements:
  + All seats taken – **disable** “reserve” button and set background color to **red** and change button text to “*No seats available*”.
  + If Bus has status of **Leaving** or **Left** – disable “reserve” button and set row background color to **blue**,
  + If Bus has status of **On platform** or **Arriving** – set row background color to **green**,
  + If less then 10 seats available – set row background color to **yellow**,
  + Else row default style.

**ADD TESTS for Client (JavaScript)!**

**NOTE:** It's not important how the UI looks like, just focus on functionality. Please feel free to add more pages and logic if you find it necessary.

**IMPORTANT:**

* Create public GitHub repository on your GitHub account and share it with us.
* **Add tests** for backend (Python - pytest) and frontend (JavaScript - mocha).
* Use **Docker** – docker compose for backend (PostgreSQL, Django, etc.).

You have **5 days** to work on this assignment. **It’s not important to complete whole assignment** just, make sure you **write at least some code in each section** so that your strategy for completing the task is **clearly understandable** by looking at the part you completed.

**Do your best and enjoy** ☺ **!**