BlueCargo Challenges

Senior Full-Stack Challenge #1

CONTEXT

We are an independent trucking company that delivers products across the United States. When products are damaged, we have to return them to any of the warehouses where our clients store their products.

Our contracts say that we can return products to two warehouses: WHCorp and AmericanStorage. Each warehouse has different opening hours displayed on its website. At a given time, a warehouse can be fully accessible, open upon request (appointment), or closed.

These opening hours change every week and can be updated anytime without being alerted. It has become more and more time consuming to check two websites manually.

Websites:

1. WHCorp website: https://bluecargo.julink.fr/site1/index.html
2. AmericanStorage website: https://bluecargo.julink.fr/site2/index.html

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CHALLENGE

In Python, write a tool that scrapes both websites and prints out the weekly schedule in the following format (JSON response):

Example (of course - websites can change anytime)

```
{
       "Week 27": {
              "WHCorp": [
              {
                     "Weekday": "Monday",
                     "Shift": "Morning",
                     "Opening hours": "10am - 2pm"
                     "Availability": "Appointment required”
              },
              {...},
              ],

}
```

Requirements:

- The project must be written in Python 3
- Please provide a README with the procedure to run and test your application
- Try to design and implement your solution as you would do for real production code: clean, maintainable & tested. The idea is to build something we would be happy to contribute to

Senior Full-Stack Challenge #2

CONTEXT

Our trucking company is growing rapidly. For auditing purposes, we need to start tracking when we return our products. Specifically, we need to keep track of the product being returned, the driver that returned the product, the warehouse where the product is being returned, and the time the product was returned.

This is becoming a process for our office to do manually, so we'd like to create a web application for our drivers to use to track the returns themselves.

We would need a platform that they can log into, see their existing returns, and log a new return. We'd also like our office to be able to login and see all returns.

CHALLENGE

As the first engineer on this project, help us plan out how we would build this application. Specifically, answer the following questions:

- What language would this application be written in? Why is this your choice? (Note: any language is fine, we want to see your thought process here)
- Where would this application be hosted? What cloud technologies (if any) would you use, and why?
- Given the above requirements, define a database schema (or write out a model file in a popular ORM in your language) that defines the tables and relationships between them. **Note: we also need to store the results from the warehouse scraping above, so please include this in your schema.**
- List out which API endpoints or routes this application will need
- What pieces of this code (if any) would you test? What type of tests would you write (unit, integration, e2e) and why?