#### **Assignment**

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# **Assignment**

#### Build a REST API for an e-commerce marketplace.

You will be building a set of REST API endpoints that enable the following functionality

- Buyers and sellers can register and login to the system
- Sellers can build a catalog of items, with each item having a name and price
- Buyers can **GET** a list of sellers
- Buyers can **GET** a specific seller's **catalog** (list of items)
- Buyers can create an **Order** that contains a list of items from the seller's catalog
- Sellers can **GET** a list of all **orders** they've received

### **Entities**

Following are the different entities in the system:

- 1. Users
  - Two types: buyers and sellers
  - o A user can sign up as a buyer or as a seller
- 2. Catalogs
  - A catalog belongs to a seller
  - One seller can have one catalog
  - A catalog consists of **Products**

- 3. Products
  - o A product has a name and a price
- 4. Orders
  - o An order can be created by a **buyer** to purchase items from a **seller's** catalog
  - o An order consists of a list of products

### **APIs**

Following are a few examples of the API endpoints you should expose.

### **Auth APIs**

POST /api/auth/register

• Register a user (accept username, password, type of user - buyer/seller)

POST /api/auth/login

• Let a previously registered user log in (e.g. retrieve authentication token)

# **APIs for buyers**

GET /api/buyer/list-of-sellers

· Get a list of all sellers

GET /api/buyer/seller-catalog/:seller\_id

Get the catalog of a seller by seller\_id

POST /api/buyer/create-order/:seller\_id

• Send a list of items to create an order for seller with id = seller\_id

#### **APIs for sellers**

POST /api/seller/create-catalog

• Send a list of items to create a catalog for a seller

GET /api/seller/orders

Retrieve the list of orders received by a seller

## Instructions

- Use **Node.js** along with any necessary libraries to complete the assignment
- You can store data in either a **SQL** or **NoSQL** database your choice.
- Create a public git repository (e.g. on **GitHub**) and try to make frequent small commits as you work through the problem.
- Take as much or as little time as you need. There is no deadline, however most candidates respond within 1-3 days.
- Once you are done, **share the link** to the git repository. Ensure that you've also added any **instructions** needed for building and running the project.
- No need to host the live project on a server, simply provide instructions for running it on localhost
- No need to create any UI, only API endpoints are required
- If you find any instructions missing, feel free to use your best judgement and **fill in the blanks yourself** as to what the functionality of the APIs should be like.
- If there's anything you'd like to clarify, you can **reply to the email** directly

# Our philosophy

- This assignment is designed to not only test your skills, but also to give you a taste of what working at UnityLabs.ai is like
- We do not believe in testing candidates for data structures or algorithms, but only for real world applications

# Next steps

- 1. Once you've completed the assignment, **reply to the email** with a link to the git repository hosting the project
- 2. After that, we will schedule a **screen share** call with you to have a technical discussion around the project
- 3. This is the **final round**. Upon successfully completing the above, you will receive an offer from UnityLabs.ai within 24 hours

Happy coding!