



Senior backend developer home assignment

Welcome to Lvble,

In the next few hours you will be designing and developing a nice piece of software related to the US rental market. The exam is built out of 3 parts:

1. Rental market research
2. Coding part: Design and development
3. Wrapping up your code in a docker file

1. Rental market research

Please answer the following questions in this file:

1. What is a property manager company and what is their role? Please provide the names of 3 property management companies.
2. What is a property management software company? Please provide the names of 3 property management software companies.
3. What is greystar? How many apartments do they manage? Tell us something interesting about them that we might not know. Do they use property management software? If so, which one? How did you get to that answer?

2. Technical exam: Design and development

Please use python for the assignment

Now that you know what a property management software is, we will build some code that interacts with them.

The objective: Build an extendable piece of software that retrieves information from tenant portals and saves the data into a database. We want to get the following information:

- Address where the tenant lives at
- Property management company that manages the apartment (Ocean Prime)
- Tenant email
- Tenant phone number

We want a program that gets 3 parameters and retrieves the data into the database.

For example:

```
./tenant_portal_data_retriever <tenant_portal> <username> <password>  
./tenant_portal_data_retriever click_pay micael.lasry@gmail.com Micael123
```

After running this, a table in the db will contain the information described above.

For now we know we want to support click pay, activebuilding and rentcafe.

For this exam you will **only** implement the clickpay support.

Feel free to access clickpay with the credentials provided in the example. You can explore the portal but DON'T do any payments or remove any units.

Regarding the DB part, please use sqlite as a file since it's probably the most simple way. Output the file into a db folder.

Please reach out to Lvble for any questions you have. (Please don't use selenium or puppeteer or alike)

3. Wrapping up your code in a docker file

Before doing this part of the exam, please contact Lvble.

You will finalise this exam by wrapping your code in a docker so I can easily run your code. The program parameters will be passed from the docker arguments. For example:

```
docker run tenant_portal_reader -v db:/app/db click_pay micael.lasry@gmail.com  
Micael123
```