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Challenge Data Engineer

Welcome

You will implement a small project based on one of our current problems. You will create a mechanism to ingest data from one server to a postgres database and build a REST API to get the records from the database.

Description

The project consists to design the database based on the files attached, ingest the files attached into the postgres database and build a REST API to get the records from the database. At the end of this page, you will find docker-compose templates to get you started immediately with postgres and a centos instance where you can load the files. You can choose the programming language to develop the code.

The core functionality for this challenge is:

1. Design the E-R from the database and create the structure based on the files attached.
2. Ingest the data from the centos server to the postgres database.
3. At least the 'read' request must be supported for the API
4. The server where the API is going to be deployed must have access only to the postgres database. And the centos server must have access only to the postgres database as well.

Some optional functionalities you can implement:

1. Validate the column state has a length of 2 and only contains letters.
2. Your code could run on Docker as well.
3. Support more request than just 'read', like 'create or 'update'.
4. Unit test and coverage of your code
5. Implement CI/CD
6. Implement a mechanism to create or update the schema

Some of the things we will review from your challenge:

Working Software. We will first review if your application is working as it is specified in this challenge.

Code cleanness. We expect you to write clean code that is understandable and maintainable.

Low Maintenance. We do not believe in solutions that involve huge amounts of effort to maintain so if there is a change like adding new fields, new tables, the changes must be cheap.

Resources

docker-compose.yml

```
# Use postgres/example user/password credentials

version: '3.1'

services:

  db:

    image: postgres

    restart: always

    environment:

      POSTGRES_PASSWORD: example

    ports:

      - 5432:5432

    networks:

      - postgres

  centos:

    image: centos

    networks:

      - postgres

networks:

    postgres:

        driver: bridge
```

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Notes

We know 72 hours is not that much time, but we expect you to do your best, and remember that **you are the owner of what you deliver and you can decide what you want and do not want to deliver given the time constraints.**

Be sure that we will carefully review your challenge and get in touch with you as soon as possible. We thank you forehand to be applying at Xaldigital and we expect you will have fun doing this challenge!

We are a continuous improvement company, and we **want to listen your feedback.** Please share with us a few words about how did you like the challenge, or if there's something we can improve to provide a good experience to our candidates, and to see if we can do better!

Please consider that we will only review projects that are either in Github or GitLab.

If you have any questions about the challenge, you can send us an e-mail to manuel.vigueras@xaldigital.com

Good luck!