SQL Engineering Exercise

Congratulations on getting this far!

This is a real-world SQL exercise that gives you a flavour of the type of queries we write.

This is designed to take no longer than 30 minutes. Please return it within 5 days of receiving it. If life is hectic right now and you need more time just let us know. This is an open-book exercise, you may search the web and use online resources. All we ask is that you complete this on your own and that this is your own work.

Prerequisites

To complete this exercise you'll need the following installed on your machine:

- Git version control - https://git-scm.com/
- Docker - https://www.docker.com/get-started
- Docker Compose - https://docs.docker.com/compose/
- DBeaver Community - https://dbeaver.io/

Getting Started

Along with this document you should have received a bundle file which you can unpack using the following command:

```
git clone payd-exercise-sql-focus.bundle
```

Once unpacked you'll see this repository holds a docker script for running a Postgres database and some sample data files. There's also a makefile that contains helpful commands to get you going quickly.

If you want to connect into the database using DBeaver you'll need to add a new connection:

- Host: localhost
- Port: 5118
- Database: sql-ex
- Username: userGood
- Password: passGood

Notes

- Limit your time on this to a maximum of 30 minutes (excludes time to setup system). If you are familiar with the tools and tech already it should take significantly less time.

- All necessary commands are stored in the Makefile, simply run make to view the available commands and associated documentation.

- Please ensure you commit your queries and answers as you go along.

- Troubles with the database? You may need to change the Postgres port in the yml file if you're also running a postgres database locally.

Tasks

For this exercise we would like you to write a query and the result set in the answers directory, for the following:

1. How many days since each company was defined on the system.
2. How many pay periods are defined for each company.
3. Using the `accrual_stop_at` column, how many days until the pay period runs out for each company.

Completion

When you're ready run the following command, replacing {your-name}.

```
git bundle create ExerciseComplete-SQL-Focus-{your-name}.bundle --all
```

Return this bundle file to us and we'll take a look and get back to you soon.