Fetch Rewards Coding Exercise - Data Analytics Internship

In this exercise you will:

Demonstrate how you reason about data and how you communicate your understanding of a specific data set to others.

What are the requirements?

1. Review CSV data and diagram a new structured relational data model
2. Generate a query that answers a predetermined business question(s)
3. Choose something noteworthy to share with a non-technical stakeholder

Please let us know which SQL dialect you are using and include any code, notes, etc.. that helped you develop your answers. Showing your work can only help you!

First: Review Existing Data and Diagram a New Structured Relational Data Model

Review the 4 sample data files provided below. Develop a simplified, structured, relational diagram to represent how you would model the data in a data warehouse. The diagram should show each table's fields and the joinable keys. You can use pencil and paper, readme, or any digital drawing or diagramming tool with which you are familiar. If you can upload the text, image, or diagram into a git repository and we can read it, we will review it!

Second: Write a query that directly answers question(s) from a business stakeholder

Write a SQL query(s) against your new structured relational data model that answers **at least one** of the following questions below. Commit it to the git repository along with the rest of the exercise.

Note: When creating your data model be mindful of the other requests being made by the business stakeholder. If you can capture more than one bullet point in your model while keeping it clean, efficient, and performant, that benefits you as well as your team.

- Which brand saw the most dollars spent in the month of June?
- Which user spent the most money in the month of August?
- What user bought the most expensive item?
- What is the name of the most expensive item purchased?
- How many users scanned in each month?

Third: Choose something noteworthy about the data and share with a non-technical stakeholder

After examining the dataset, choose something noteworthy to share with a non-technical stakeholder. This can be anything. Examples are anything you've noticed about the quality of the data, an interesting correlation or change in the data over time, etc. Feel free to include visual aids or additional materials that help illustrate your noteworthy observation.

Commit your code and findings to the git repository along with the rest of the exercise.

The Data

https://fetch-hiring.s3.amazonaws.com/data-analytics-intern/Takehome_Data_January_2023.zip

How do I submit my exercise?

Provide a link to a public repository, such as GitHub or BitBucket, that contains your code to the provided link through Greenhouse.

FAQs

How will this exercise be evaluated?

A team member will review the code and documentation you submit. At a minimum ER diagrams should be legible and SQL must be runnable. While your solution does not need to be fully production ready, you are being evaluated so put your best foot forward!

I have questions about the problem statement.

For any requirements not specified above, use your best judgement to determine expected result. You can elaborate on your decisions via the documentation you provide in your repo.

Can I provide a private repository?

If at all possible, we prefer a public repository because we do not know which team member will be evaluating your submission. Providing a public repository ensures a speedy review of your submission. If you are still uncomfortable providing a public repository, you can work with your recruiter to provide access to the reviewing team member.

Is the exercise timed?

There is no time limit for the exercise. Out of respect for your time, we designed this exercise with the intent that it should take you a few hours. Please take as much time as you need to complete the work, as long as we receive it before the submission deadline.