This is a coding exercise used by Shipt for technical recruitment purposes. There are no restrictions around materials you can use. You may use any programming language you like for this exercise. Good luck!

Instructions

Please send a zip archive containing your code and any relevant materials in to coding@shipt.com. Include a readme file explaining your assumptions, providing any necessary assumptions, and stating what you would accomplish with more time.

The purpose of this test is to showcase your abilities, so this is the time to show everything you know that is applicable and relevant.

Read through the exercise background, complete as much as you can.

Finally, please note that even if you have questions about the test we will not answer them, do what you think is best.

Thank you for taking the time to complete this assessment - we look forward to reviewing your solutions!

Exercise background

Create a very basic API application, where a customer can have an order that is made up of products.

Tasks

Please implement the following stories.

1. A product belongs to many categories. A category has many products.

2. A customer can have many orders. An order is comprised of many products. An order has a status stating if the order is waiting for delivery, on its way, or delivered.

3. Write a SQL query to return the results as display below:

Example

customer_id | customer_first_name | category_id | category_name | number_purchased
--- | --- | --- | --- | --- | ---
1 |John | 1 | Bouquets | 15

4. Include the previous result as part of a function in the application. If you are using an ORM, please write the query in your ORM's DSL. Leave the original SQL in a separate file.

5. An API end point that accepts a date range and a day, week, or month and returns a breakdown of products sold by quantity per day/week/month

6. An API end point that returns the orders for a customer.

Additional questions
No coding necessary, explain the concept or sketch your thoughts.

- We want to give customers the ability to create lists of products for one-click ordering of bulk items. How would you design the tables, what are the pros and cons of your approach?

- If Shipt knew exact inventory of stores, and when facing a high traffic and limited supply of particular item, how do you distribute the inventory among customers checking out?