**Objective**

The purpose of this pre-work is to evaluate your database querying skills.

We expect you to:

1. Familiarize yourself with the data model given below
2. Complete the queries described below using your preferred RDBMS SQL syntax
3. Be prepared to explain your approach to the queries and the query itself
4. Be prepared to write new queries on this data model during the onsite interview

Feel free to bring your laptop to show the queries running.

**Schema**

This is written with PostgreSQL, but feel free to change to your preferred RDBMS and phrase answers with that SQL syntax.

CREATE TABLE orders

(

id CHARACTER VARYING(19) NOT NULL PRIMARY KEY,

email CHARACTER VARYING(255),

created\_at\_pacific\_timestamp TIMESTAMP WITHOUT TIME ZONE

);

CREATE TABLE skus

(

sku CHARACTER VARYING (50) NOT NULL PRIMARY KEY,

product\_type CHARACTER VARYING (255) NOT NULL, /\* "Runner" or

"Lounger" \*/

product\_name CHARACTER VARYING (255) NOT NULL,

size CHARACTER VARYING (50),

color\_name CHARACTER VARYING (255),

color\_hex CHARACTER VARYING (50)

);

CREATE TABLE order\_line\_items

(

order\_id CHARACTER VARYING(19) NOT NULL REFERENCES orders

ON DELETE CASCADE,

order\_line\_number INTEGER NOT NULL,

quantity INTEGER NOT NULL,

price DECIMAL(12,2) NOT NULL,

sku CHARACTER VARYING(20) NOT NULL REFERENCES skus

ON DELETE RESTRICT,

PRIMARY KEY (order\_id, order\_line\_number)

);

**Questions**

1. Report on quantity sold by month and product\_type. Order sale date is in the " created\_at\_pacific\_timestamp" column.
2. List email addresses of customers that ordered Runners before the first time they ordered Loungers.
3. List email addresses that ordered Runners twice before the first time they ordered Loungers.
4. How (if at all) would you change this schema to better support queries of this kind?