Product Analysis

Log onto Mode Analytics and from the home page, create a new report by clicking on the green plus sign button in the upper right-hand corner. Enter the starter code where provided for each exercise. You may want to create a new tab for each exercise.

Please use the discussion forum for any questions and/or comments you might have. Once you have tried the exercises, feel free to watch the solutions video. Good luck with your practice!

Note: *When querying a table, remember to prepend dsv1069, which is the schema, or folder that contains the course data.*

Exercise 0: Count how many users we have

Starter Code:

```
SELECT * FROM dsv1069.users
LIMIT 100
```

Exercise 1: Find out how many users have ever ordered

Starter Code:

```
SELECT *
FROM
  dsv1069.users
```

Exercise 2:
--Goal find how many users have reordered the same item

Starter Code:

```
SELECT * FROM dsv1069.orders
```

Exercise 3:
--Do users even order more than once?

Starter Code:

```
SELECT * FROM dsv1069.orders
```

Exercise 4:
--Orders per item

Starter Code:

```
SELECT * FROM dsv1069.orders
```

Exercise 5:
--Orders per category

Starter Code:

```
SELECT * FROM dsv1069.orders
```

Exercise 6:
--Goal: Do user order multiple things from the same category?

Starter Code:

```
SELECT
  user_id,
  item_id,
  COUNT(line_item_id) as items_ordered
FROM
  dsv1069.orders
GROUP BY
  user_id,
  item_id
```

Exercise 7:
--Goal: Find the average time between orders
--Decide if this analysis is necessary

Starter Code:

```sql
SELECT
  first_orders.user_id,
  date(first_orders.paid_at)  AS first_order_date,
  date(second_orders.paid_at) AS second_order_date,
  date(second_orders.paid_at) -date(first_orders.paid_at)  AS date_diff
  -- ^ THIS WILL VARY DEPENDING ON YOUR FLAVOR OF SQL
FROM
(
SELECT
  user_id,
  invoice_id,
  paid_at,
  DENSE_RANK( ) OVER (PARTITION BY user_id ORDER BY paid_at ASC)
    AS order_num
FROM
  dsv1069.orders
) first_orders
JOIN
(
SELECT
  user_id,
  invoice_id,
  paid_at,
  DENSE_RANK( ) OVER (PARTITION BY user_id ORDER BY paid_at ASC)
    AS order_num
FROM
  dsv1069.orders
) second_orders
ON
  first_orders.user_id = second_orders.user_id
WHERE
  first_orders.order_num = 1
AND
 second_orders.order_num = 2
```