WEEK 4 CHALLENGE SOLUTIONS

Below are suggested answers. Note, in some cases, there's more than one way of getting the correct answer so check to see if your codes will produce the same results as the codes below

1. a. **Which store (1 or 2) generated more revenue?** Show the store ID and total revenue generated for each store.
    b. Modify your code a little bit to check: **Which staff (1 or 2) generated more revenue?**

    a) SELECT store_id, SUM(amount) AS revenue
    FROM customer c
    JOIN payment p
    ON c.customer_id = p.customer_id
    GROUP BY 1
    ORDER BY 2 DESC;

    b) SELECT staff_id, SUM(amount) AS revenue
    FROM customer c
    JOIN payment p
    ON c.customer_id = p.customer_id
    GROUP BY 1
    ORDER BY 2 DESC;

2. **Show the monthly average number of unique film rentals per month.** The average number of unique film rentals can be obtained by dividing the number of all rentals by the number of unique films

```
SELECT DATE_TRUNC('month', rental_date),
     COUNT(rental_id) AS total_amount,
     COUNT(DISTINCT(film_id)) AS unique_films,
     COUNT(rental_id) / COUNT(DISTINCT film_id) AS "Average
Number of Unique Film Rentals"
FROM inventory i
JOIN rental r
ON i.inventory_id = r.inventory_id
GROUP BY 1;
```

3. The company is partnering with a bank to offer a platinum credit card to customers who had at least 36 payment transactions.

   Show the customer ID, first name, last name as well as total number of payment transactions of customers who are eligible for the platinum credit card. Sort the results by total number of transaction payments (highest one on top).

   Note: The total **_number_** of transaction payments is different from the total **_amount_** of transaction payments.

```
SELECT c.customer_id, first_name, last_name,
       COUNT(amount) AS total_transactions
FROM customer c
JOIN payment p
ON c.customer_id = p.customer_id
GROUP BY 1
HAVING COUNT(amount) >=36
ORDER BY 4 DESC;
```

4. **Who are the company's lifelong customers?** A group of analysts and researchers within the company noted that those customers

who rented at least five times per month tend to be *lifelong* customers*.*

Provide a list of these *lifelong* customers. Show the customer ID, first name, last name, month and number of rentals in the table. Rename attributes as needed.

Hint: You need to come up with each customer's rental count per month.

```
SELECT c.customer_id, first_name, last_name,
      DATE_TRUNC('month', rental_date) AS month,
      COUNT(rental_id) AS rental_count
FROM customer c
JOIN rental r
ON c.customer_id = r.customer_id
GROUP BY 1,4
HAVING COUNT(rental_id) >= 5
ORDER BY 1,4;
```

5. Which are the **top 5 countries** where most customers come from? *Show the country ID, country name and number of customers per country.*

```
SELECT co.country_id, country, COUNT(customer_id)
FROM customer c
JOIN address a
ON c.address_id = a.address_id
JOIN city ci
ON a.city_id = ci.city_id
JOIN country co
```

```
ON ci.country_id = co.country_id
GROUP BY 1
ORDER BY 3 DESC
LIMIT 5;
```