Forma AI SQL Challenge **Sohail Shaikh**

1. Find the current active segment for each customer sorted by the segment update date. The output should contain three columns: `cust_id`, `seg_name`, `updated_at`.

SQL:

```
SELECT DISTINCT cust_id, seg_name, update_at
FROM segments
WHERE active_flag == 'Y'
ORDER BY update_at ASC;
```

2. For each product purchased between Jan 2016 and May 2016 (inclusive), find the number of distinct transactions. The output should contain `prod_id`, `prod_name` and distinct transaction columns.

SQL:

```
SELECT products.prod_id, products.prod_name, COUNT( transactions.trans_id) AS no_of_transactions
FROM products
JOIN transactions
ON transactions.prod_id = products.prod_id
WHERE transactions.trans_dt BETWEEN '2015-12-31' AND '2016-06-01'
GROUP BY transactions.prod_id;
```

3. Find the most recent segment of each customer as of 2016-03-01.

Hint: You cannot simply use `active_flag` since that is as of the current date *not* 2016-03-01. The output should contain the `cust_id`, `seg_name` and `update_at` columns and should have at most one row per customer.

SQL:

```
SELECT cust_id, seg_name, update_at
FROM segments
WHERE update_at >= '2016-03-01'
GROUP BY cust_id
ORDER BY update_at ASC;
```

4. Find the most popular category (by revenue) for each active segment.

Hint: The current (most up to date) active segment is specified by `active_flag = 'Y'` column in the segments table.

SQL:

```
SELECT segments.seg_name, products.category, TOTAL(transactions.item_price) AS revenue
FROM transactions
JOIN products
ON transactions.prod_id = products.prod_id
JOIN segments
ON transactions.cust_id = segments.cust_id
WHERE segments.active_flag = 'Y'
```

```
GROUP BY products.prod_id
ORDER BY revenue DESC
LIMIT 1;
```