# STRANDS INTERVIEW TEST

**Aleix Ventura Nasarre**

16th of July, 2021

# 1  Query A

Get the total number of transactions in 2013 of a specific category ('15') and user ('356789').

```
1   SELECT
2       COUNT(*) as num_trx
3   FROM
4       USER as u, ACCOUNT as a, TRANSACTION as t
5   WHERE
6       u.ID = '356789'
7       AND u.ID = a.USER_ID
8       AND a.ID = t.ACCOUNT_ID
9       AND year(t.POSTED_DATE) = '2013'
10      AND t.CATEGORY_ID = '15';
```

# 2  Query B

Get transactions of a user filtering by account and current month.

I assumed the same user as in the first query and a made up account of ID '1' for the sake of simplicity.

```
1   SELECT t.*
2   FROM
3       USER as u, ACCOUNT as a, TRANSACTION as t
4   WHERE
5       u.ID = '356789'
6       AND u.ID = a.USER_ID
7       AND a.ID = '1'
8       AND a.ID = t.ACCOUNT_ID
9       AND year(t.POSTED_DATE) = year(NOW())
10      AND month(t.POSTED_DATE) = month(NOW());
```

# 3 Query C

Get income categories of a user for the current month. A category is considered IN-COME when the amount of the transaction is positive.

In this query I assumed, again, the same user as in the first query.

```
1    SELECT c.id, SUM(t.amount)
2    FROM USER as u, ACCOUNT as a, TRANSACTION as T, CATEGORY as c
3    WHERE
4      u.ID = '356789'
5      AND u.ID = a.USER_ID
6      AND a.ID = t.ACCOUNT_ID
7      AND year(t.POSTED_DATE) = year(NOW())
8      AND month(t.POSTED_DATE) = month(NOW())
9      AND t.CATEGORY_ID = c.ID
10   GROUP BY c.id
11   HAVING SUM(t.amount) > 0;
```