

-- MODULE 5

-- High-Value, Low-Engagement Customer Segmentation

-- Define “High Value”

-- Option A: Above-Average Balance

SELECT

```
AVG (balance) AS avg_account_balance  
FROM accounts;
```

avg_account_balance
---------------------

297325.363021
---------------

-- High value = total customer balance above average

-- Define “Low Engagement”

-- Low engagement = few transactions in the last 6 months

-- Customer Balance (Aggregation)

SELECT

```
customer_id,  
SUM (balance) AS total_customer_balance  
FROM accounts  
GROUP BY customer_id;
```

customer_id	total_customer_balance
8619	1118160.16
5936	1008963.25
9620	105043.07
8670	1469578.48
1955	351955.01
1057	30310.94
2641	328271.25
2915	366832.38
3532	119411.37
514	692980.11

```
-- Customer Transaction Count (Last 6 Months)
SELECT
    a. customer_id,
    COUNT(t.transaction_id) AS txn_count_last_6_months
FROM accounts a
LEFT JOIN transactions t
    ON a.account_id = t.account_id
    AND t.transaction_date >= DATE_SUB(
        (SELECT MAX(transaction_date) FROM transactions),
        INTERVAL 6 MONTH
    )
GROUP BY a.customer_id;
```

customer_id	txn_count_last_6_months
8670	3
1955	1
2641	2
3532	1
514	1
2912	2
3269	3
1278	2
5801	1
9899	3

```
-- FINAL SEGMENTATION QUERY (CORE DELIVERABLE)
SELECT
    b.customer_id,
    b.total_customer_balance,
    IFNULL(t.txn_count_last_6_months, 0) AS txn_count_last_6_months
FROM (
    SELECT
        customer_id,
        SUM(balance) AS total_customer_balance
    FROM accounts
    GROUP BY customer_id
) b
```

```

LEFT JOIN (
    SELECT
        a.customer_id,
        COUNT(t.transaction_id) AS txn_count_last_6_months
    FROM accounts a
    LEFT JOIN transactions t
        ON a.account_id = t.account_id
        AND t.transaction_date >= DATE_SUB(
            (SELECT MAX(transaction_date) FROM transactions),
            INTERVAL 6 MONTH
        )
    GROUP BY a.customer_id
)t
    ON b.customer_id = t.customer_id
WHERE b.total_customer_balance >(
    SELECT AVG(balance) FROM accounts
)
AND IFNULL(t.txn_count_last_6_months, 0) < 5
ORDER BY b.total_customer_balance DESC;

```

customer_id	total_customer_balance	txn_count_last_6_months
677	10667580.19	3
750	8273698.79	1
1671	7607343.09	0
1747	6255094.43	2
2339	5941912.40	1
9422	5828220.71	1
840	5520988.35	4
1972	5434674.30	3
168	5433965.62	0
6412	5303588.80	0
...	...	...