

Kelompok 05 Lab A2

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Praktikum 5

1. Query untuk membuat view vw_account_card_transaction_detail yang menggabungkan data akun, kartu, dan transaksi yang terkait.

```
-- 3 VIEW vw_account_card_transaction_detail
CREATE VIEW vw_account_card_transaction_detail AS
SELECT
    a.account_id,
    a.account_number,
    a.account_type,
    a.balance,
    c.card_number,
    c.card_type,
    t.transaction_id,
    t.transaction_type_id,
    t.amount
FROM accounts a
LEFT JOIN cards c ON a.account_id = c.account_id
LEFT JOIN transactions t ON a.account_id = t.account_id;
```

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	account_id	account_number	account_type	balance	card_number	card_type	transaction_id	transaction_type_id	amount
1	0345E97A-8DEF-42FE-AB36-5124366D027A	9999999999	savings	1000.00	NULL	NULL	NULL	NULL	NULL
2	07a36a4b-7943-4634-b17a-7c7eb4407cd3	8346813622	savings	8573.55	615184939633015120	debit	df4db5e5-0987-48df-b954-6ba77c7bdf7e	1	79.10
3	0937445f-d5eb-4ef9-887f-4173fe662dd4	0925361770	credit	7584.47	611096215899557980	debit	063e014a-833b-4ed2-b3a3-510e528f961c	1	122.10
4	1118a259-aa7d-402b-91f1-72555ed15180	7713339428	savings	11518.16	374649129046768	debit	7c819ea2-da8d-4590-932e-de0037e89802	2	93.12
5	11d9d87-35d3-4ba3-bcca-a6b1e8f68519	4643651470	credit	9681.84	610258712558331588	debit	dc1bb493-0915-458c-90d9-ecff268fdda3	3	106.92
6	14f24b1b-6e86-4cb3-bbc4-0293bc90f756	6037525484	credit	11324.74	610055020487163113	credit	9143af85-5ffc-4704-bab4-61e9817ee2cc	3	115.39
7	15b082e5-92e7-4375-a7d9-7224d39ba13	2504168116	savings	9419.50	379063365347635	credit	11baa8a7-a180-47b0-9fed-583129ee66a0	3	101.20
8	15c1de08-94a5-482d-9db5-682a1581ed84	6264480743	current	11309.22	4010250561404	debit	daf27919-e34c-45cc-bd77-3201733aa2c6	1	124.13
9	17a9ed0a-5ed3-41d6-9e20-df434296c83d	1861310439	current	11644.05	613495382506603871	credit	5b01a515-b320-4411-bc4d-03057bc38c7d	2	79.90
10	1afc36b6-ae72-48ff-9d51-9f57ac653bc	9736407913	credit	9813.61	535933659985918	debit	14d252e4-30ea-473f-87cd-16d00e4e7415	3	121.22

2. Query untuk membuat procedure sp_get_transactions_report dengan parameter opsional @account_id, @date_from, @date_to. Jika parameter tidak diisi, gunakan default (misal 30 hari terakhir semua akun).

```
-- 4 procedure sp_get_transactions_report
CREATE PROCEDURE sp_get_transactions_report
    @account_id CHAR(36) = NULL,
    @date_from DATE = NULL,
    @date_to DATE = NULL
AS
BEGIN
    SET NOCOUNT ON;
    IF @date_from IS NULL
        SET @date_from = DATEADD(DAY, -30, GETDATE());
    IF @date_to IS NULL
        SET @date_to = GETDATE();
    SELECT
        t.transaction_id,
        t.account_id,
        a.account_number,
        t.transaction_type_id,
        t.amount,
        t.transaction_date,
        t.description,
        t.reference_account
    FROM transactions t
    JOIN accounts a ON t.account_id = a.account_id
    WHERE
        (@account_id IS NULL OR t.account_id = @account_id)
        AND t.transaction_date BETWEEN @date_from AND @date_to
    ORDER BY t.transaction_date DESC;
END;
```

```

-- coba 1
EXEC sp_get_transactions_report;
-- coba 2
EXEC sp_get_transactions_report @account_id = '9cd97ecb-58c9-4610-b4b1-d9f72bcae7f7';
-- coba 3
EXEC sp_get_transactions_report @date_from = '2024-04-01', @date_to = '2024-04-30';

```

	transaction_id	account_id	account_number	transaction_type_id	amount	transaction_date	description	reference_id
1	66A507E6-9E20-49D2-8EC5-1852B837F8A4	e0c672d-8182-42b1-8a70-2138f223c47c	0500742994	1	500000.00	2025-05-20 20:17:35.403	Auto deposit from transfer	9cd97ecb-1
2	B68C1CCA-EA08-4C3B-A317-9B19163AF57E	9cd97ecb-58c9-4610-b4b1-d9f72bcae7f7	9885390599	2	500000.00	2025-05-20 20:17:35.397	Transfer ke akun B	e0c672d-8
3	6A70589D-16B8-48C1-8DEB-78A9ADDD4...	9cd97ecb-58c9-4610-b4b1-d9f72bcae7f7	9885390599	3	9000000...	2025-05-20 20:15:26.260	Penarikan berlebihan	NULL
4	9263E007-4C7A-4208-95C7-2A9809B18216	9cd97ecb-58c9-4610-b4b1-d9f72bcae7f7	9885390599	3	9000000...	2025-05-20 20:15:23.150	Penarikan berlebihan	NULL

- Query untuk membuat function yang mengembalikan statistik berikut dalam satu record: total akun, total saldo, rata-rata saldo untuk customer_id tertentu (gunakan RETURN table).

```

-- 6 FUNCTION fn_customer_balance_stats
CREATE FUNCTION fn_customer_balance_stats (@customer_id CHAR(36))
RETURNS @result TABLE (
    CustomerId CHAR(36),
    TotalAccounts INT,
    TotalBalance DECIMAL(18,2),
    AverageBalance DECIMAL(18,2)
)
AS
BEGIN
    INSERT INTO @result
    SELECT
        @customer_id AS CustomerId,
        COUNT(*) AS TotalAccounts,
        SUM(balance) AS TotalBalance,
        AVG(balance) AS AverageBalance
    FROM accounts
    WHERE customer_id = @customer_id;

    RETURN;
END;

SELECT * FROM fn_customer_balance_stats('5b3fb023-fd43-4cae-8783-ef1c98d11b38');

```

	CustomerId	TotalAccounts	TotalBalance	AverageBalance
1	5b3fb023-fd43-4cae-8783-ef1c98d11b38	3	15573.05	5191.02

4. Query untuk membuat cursor yang membaca semua akun credit, lalu kurangi saldo mereka 2% sebagai biaya bulanan.

```
-- 8 cursor
DECLARE @account_id CHAR(36);
DECLARE @balance DECIMAL(18, 2);

DECLARE cur_credit_accounts CURSOR FOR
SELECT account_id, balance
FROM accounts
WHERE account_type = 'credit';
OPEN cur_credit_accounts;
FETCH NEXT FROM cur_credit_accounts INTO @account_id, @balance;
WHILE @@FETCH_STATUS = 0
BEGIN
    UPDATE accounts
    SET balance = balance * 0.98
    WHERE account_id = @account_id;

    PRINT 'Saldo untuk akun ' + @account_id + ' telah dikurangi 2%';

    FETCH NEXT FROM cur_credit_accounts INTO @account_id, @balance;
END;
CLOSE cur_credit_accounts;
DEALLOCATE cur_credit_accounts;
```

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Messages

(1 row affected)
Saldo untuk akun 0937445f-d5eb-4ef9-897f-4173fe62dd4 telah dikurangi 2%

(1 row affected)
Saldo untuk akun 11d9d6f7-35d3-4ba3-bcca-a6be8f69519 telah dikurangi 2%

(1 row affected)
Saldo untuk akun 14f24b1b-6e86-4cb3-bbc4-0293bc90f756 telah dikurangi 2%

(1 row affected)
Saldo untuk akun 1afc36b6-ae72-48ff-9d51-5f57fac653bc telah dikurangi 2%

(1 row affected)
Saldo untuk akun 2b4fc69b-f926-4889-910b-634ad923efea telah dikurangi 2%

(1 row affected)
Saldo untuk akun 2fd706a-7187-470c-a1c3-f9e747b72f20 telah dikurangi 2%

(1 row affected)
Saldo untuk akun 318c43bf-9511-4030-bd13-81a47a4b8cac telah dikurangi 2%

(1 row affected)
Saldo untuk akun 34e9be76-4674-4d0f-b7c0-a39e43548747 telah dikurangi 2%

(1 row affected)
Saldo untuk akun 418fedb1-da8f-4c67-8073-4a14e2f5ded telah dikurangi 2%

(1 row affected)
Saldo untuk akun 441aa9d2-bdf2-4b65-a79f-c18e66de0e17 telah dikurangi 2%

(1 row affected)
Saldo untuk akun 45ff6d75-3e4b-43ab-9343-ba2e0de1069a telah dikurangi 2%