

LAPORAN PRAKTIKUM MBD A2 KELOMPOK 4

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A. CREATE VIEW

1. View `v_customer_all` menampilkan semua isi tabel `customers`.

The screenshot shows the SQL Server Enterprise Manager interface. The top pane displays the SQL script for creating the view `v_customer_all`:

```
CREATE VIEW v_customer_all AS
SELECT * FROM customers;

SELECT * FROM v_customer_all;
```

The bottom pane shows the results of the query, displaying a table with columns: `customer_id`, `first_name`, `last_name`, `email`, `phone_number`, `address`, and `created_at`. The table contains 50 rows of customer data.

customer_id	first_name	last_name	email	phone_number	address	created_at
1	Sergeant	Math	sergeant.math@aol.com	(512) 551-9311	11221 Bertwood Lane, Austin, Texas, United States, ...	2024-04-25 21:26:38.000
2	Shaine	Matic	shaine.matic@hotmail.com	(904) 114-8620	2563 Bladewood Court, Jacksonville, Florida, United ...	2024-04-25 19:31:13.000
3	Buddie	Sandison	buddie.sandison@yahoo.co.uk	(205) 075-5889	8159 Peterson Place, Birmingham, Alabama, United ...	2024-04-25 21:49:02.000
4	Stephanus	Frear	stephanus.frear@hotmail.com	(228) 427-9642	5521 Lancaster Lane, Gulfport, Mississippi, United Sta...	2024-04-25 23:38:56.000
5	Corette	Vicent	corette.vicent@hotmail.com	(850) 119-3127	12466 Usher Place, Hartford, Connecticut, United Stat...	2024-04-25 19:18:38.000
6	Devon	McQuode	devon.mcquode@laposte.net	(415) 371-6505	7668 Rainbow Blvd., San Francisco, California, Unite...	2024-04-25 18:42:16.000
7	Jacquenette	Hildrup	jacquenette.hildrup@gmail.com	(504) 592-9557	2042 Jongul Place, New Orleans, Louisiana, United ...	2024-04-25 22:40:40.000
8	Bobette	Shambrooke	bobette.shambrooke@hotmail.fr	(269) 629-9553	6747 Orgrovan Avenue, Kalamazoo, Michigan, United ...	2024-04-25 22:38:27.000
9	Donnajean	Amerighi	donnajean.amerighi@yahoo.de	(559) 566-8407	10301 Viking Place, Fresno, California, United States, ...	2024-04-25 20:37:09.000
10	Barbara	Swires	barbara.swires@hotmail.com	(570) 979-3301	6755 Inconvaia Way, Wilkes Barre, Pennsylvania, Unit...	2024-04-26 01:02:12.000
11	Sandro	Alten	sandro.alten@yahoo.com.br	(719) 485-8050	11759 Panigoni Avenue, Colorado Springs, Colorado...	2024-04-25 16:58:10.000
12	Nester	Nicolls	nester.nicolls@hotmail.com	(864) 745-5159	234 Parish Place, Spartanburg, South Carolina, Unite...	2024-04-25 20:18:28.000
13	Rebekah	Conkie	rebekah.conkie@yahoo.co.jp	(407) 279-4605	6619 Nueva Place, Kissimmee, Florida, United States, ...	2024-04-26 00:45:35.000
14	Sidonie	Marks	sidonie.marks@gmail.com	(866) 999-5783	8993 Gallanos Place, Amarillo, Texas, United States, ...	2024-04-25 22:57:32.000
15	Niel	Yungstin	niel.yungstin@mail.ru	(615) 770-5635	11203 Wentworth Lane, Nashville, Tennessee, Unite...	2024-04-25 21:08:51.000
16	Spike	Sill	spike.sill@hotmail.com	(914) 513-6574	3253 Cedar Ridge Place, Mount Vernon, New York, ...	2024-04-25 22:35:52.000
17	Billye	Lyle	billye.lyle@gmail.com	(727) 018-6475	14303 Morton Lane, Tampa, Florida, United States, 3...	2024-04-25 23:32:50.000
18	Meggi	MacDermot	meggi.macdermot@yahoo.com	(702) 378-5984	8016 Mayberry Court, North Las Vegas, Nevada, Unit...	2024-04-25 15:52:54.000
19	Horst	Morecomb	horst.morecomb@mail.ru	(412) 835-1593	3520 Beacon Hill Court, Pittsburgh, Pennsylvania, Uni...	2024-04-25 23:23:46.000
20	Jyoti	Treanor	jyoti.treanor@yahoo.com	(253) 948-7342	633 Kilary Place, Tacoma, Washington, United State...	2024-04-25 21:10:29.000
21	Boy	Rowesby	boy.rowesby@rediffmail.com	(540) 195-3085	3062 Butler Court, Roanoke, Virginia, United States, 2...	2024-04-25 17:20:28.000
22	Galen	Biddy	galen.biddy@orange.fr	(859) 016-8839	14370 Ludlow Place, Lexington, Kentucky, United Sta...	2024-04-25 21:12:54.000
23	Olivia	Speedin	olivia.speedin@gmail.com	(202) 594-8821	12264 Quincy Court, Washington, District of Columbia...	2024-04-25 17:06:08.000
24	Jamie	Beirne	jamie.beirne@rediffmail.com	(602) 546-0995	9686 Brunel Street, Glendale, Arizona, United States, ...	2024-04-26 00:14:59.000
25	Anabella	Vaulkhard	anabella.vaulkhard@hotmail.c...	(770) 565-5195	8897 Indale Place, Lawrenceville, Georgia, United Sta...	2024-04-25 19:40:57.000
26	Zebedee	Goley	zebedee.goley@gmail.com	(757) 816-0102	9705 Madero Drive, Hampton, Virginia, United States...	2024-04-25 17:29:05.000
27	Rafe	Conwell	rafe.conwell@hotmail.com	(806) 635-2657	8919 Mcnair Terrace, Lubbock, Texas, United States, ...	2024-04-25 21:42:21.000
28	Arlina	Tofts	arlina.tofts@aol.com	(202) 150-2339	12561 Rhett Road, Washington, District of Columbia, ...	2024-04-25 21:56:23.000
29	Ikey	Le Fevre	ikey.lefevre@hotmail.com	(330) 883-4358	1160 Teakwood Lane, Akron, Ohio, United States, 44...	2024-04-25 20:20:35.000
30	Donny	Bamsey	danny.bamsey@aliceadsl.fr	(805) 328-1517	6314 Goldenrod Court, San Luis Obispo, California, U...	2024-04-26 00:30:15.000
31	Anjanette	Caif	anjanette.caif@hotmail.com	(212) 976-3463	644 Berwyn Way, New York City, New York, United St...	2024-04-25 19:01:32.000
32	Meade	McSkin	meade.mcskin@hotmail.com	(858) 654-8175	11810 Rose Croft Terrace, San Diego, California, Unit...	2024-04-25 16:00:25.000
33	Antonetta	Cavey	antonetta.cavey@yahoo.com	(304) 333-9094	173 Kingsfisher Court, Charleston, West Virginia, Unite...	2024-04-25 19:28:31.000

2. View `v_deposit_transaction` menampilkan semua transaksi deposit.

The screenshot shows the SQL Server Enterprise Manager interface. The top pane displays the SQL script for creating the view `v_deposit_transaction` and a stored procedure `sp_CreateAccount`:

```
USE BANKDBCACA;

CREATE VIEW v_deposit_transaction AS
SELECT *
FROM transactions
WHERE transaction_type_id = 1;

SELECT * FROM v_deposit_transaction;

CREATE PROCEDURE sp_CreateAccount
    @p_customer_id INT,
    @p_account_number VARCHAR(20),
    @p_account_type VARCHAR(20),
    @p_balance DECIMAL(15,2)
AS
BEGIN
    -- Validasi apakah customer_id ada di tabel customers
    IF EXISTS (SELECT 1 FROM customers WHERE customer_id = @p_customer_id)
    BEGIN
        INSERT INTO accounts (account_number, customer_id, account_type, balance)
        VALUES (@p_account_number, @p_customer_id, @p_account_type, @p_balance);
    END
END
```

The bottom pane shows the results of the query, displaying a table with columns: `transaction_id`, `account_id`, `transaction_type_id`, `amount`, `transaction_date`, `description`, and `reference_account`. The table contains 5 rows of transaction data.

transaction_id	account_id	transaction_type_id	amount	transaction_date	description	reference_account
1	d27c8cc4-d52d-46cd-8256-d49f39f3e0c0	1	112.34	2024-07-18 13:04:35.000	Explicitat, et, ut modo docui, cognitionis regula et ...	NULL
2	049513be-3725-44ee-b7e77ea152625e	1	89.76	2025-02-06 03:42:17.000	Numquid tibi videtur de voluptatibus suis.	NULL
3	063e014a-833b-4ed2-b3a3-510e528961c	1	122.10	2025-03-05 00:22:17.000	Conspicuum aum venire vetuit, numquid tibi videt...	NULL
4	06ae34b6-1723-4b44-baf9-a889489723	1	87.25	2025-01-09 09:05:38.000	Unquam improbe parta minuit, sed potius inflamma...	NULL
5	0db693d2-610c-44cd-b9fa-2e3f50051d09	1	124.05	2024-08-28 00:48:45.000	Voluptates expetendam et insipientiam propter mol...	NULL

3. View v_transfer_transaction menampilkan semua transaksi transfer.

```

CREATE VIEW v_transfer_transaction AS
SELECT
    t.transaction_id AS IdTransaksi,
    t.account_id AS IdAkun,
    t.amount AS Jumlah,
    t.transaction_type_id AS IDJenisTransaksi
FROM dbo.transactions t
JOIN dbo.transaction_types tt ON t.transaction_type_id = tt.transaction_type_id
WHERE t.transaction_type_id = 2;

SELECT*FROM v_transfer_transaction;

```

	IdTransaksi	IdAkun	Jumlah	IDJenisTransaksi
1	0096cba5-4e9c-49f4-b1df-4955a76275e4	802b2efe-e1d1-465b-940f-5cf573a2c985	80.72	2
2	01e6c965-00a0-41c8-8fc6-320a25e171e2	f75c87e7-70a8-4fbd-8ad6-9d5e9cefc314	112.54	2
3	0e5ccf7d-0803-476b-8405-23e0b5091c08	d094e634-9744-478d-b73b-1a73149b198b	98.25	2
4	13706eb5-aabb-467b-86ca-b1c9999dc7dc	57620a31-a1ee-4dbc-9a72-09bc5bb72b7d	96.05	2
5	189574d3-bf80-449b-a8e6-e0ef42d0a096	3f494e04-a406-4692-a584-19db622e48ac	123.90	2
6	1bc0bec8-97de-4720-8278-a18d7538c308	a448f319-9dc4-4c02-b016-e1eab2b49629	91.54	2
7	2ae8fb1c-1844-4602-aa0a-5a13a6507874	ac35eddd-0fb1-4711-9bb8-1985fc566b52	79.15	2
8	34608f20-08ad-42b2-8ac9-6a450b4788b9	c73f146f-aef6-415f-bc17-8bf06ba9819e	86.91	2
9	3f30d441-419d-4b4c-ae6a-8528cba6862c	5d8f91d2-881d-46c9-9d1f-19d33516897f	112.03	2
10	488f3a0c-a01c-4e6d-a46a-c9d4b04620f0	441aa9d2-bdf2-4b65-a79f-c18e66de0e17	116.77	2
11	50c0a6f3-faba-4031-bb3b-e30a1bab1c5c	da3b43bc-55d1-4f0b-80d1-494ccfc9acc5	102.44	2
12	54efc385-e6b7-4ce4-9be8-f2cc29398d38	bff8f8bd-3931-4f3f-b0c1-636597f97db5	118.34	2
13	583ebd92-6330-47e2-9115-c590b51238c9	92ffabae-dab4-4737-8b26-ee60ed598cea	81.82	2
14	5b01a515-b320-4411-bc4d-03057bc38c7d	17a9ed0a-5ed3-41d6-9e20-df434296c83d	79.90	2

B. PROCEDURE

1. Procedure sp_CreateCustomer untuk menambahkan customer baru ke dalam tabel customers: input first_name, last_name, email, phone_number, address.

```

CREATE PROCEDURE sp_CreateCustomer
    @first_name VARCHAR(50),
    @last_name VARCHAR(50),
    @email VARCHAR(50),
    @phone_number VARCHAR(20),
    @address VARCHAR(255)
AS
BEGIN
    INSERT INTO customers(first_name, last_name, email, phone_number, address)
    VALUES(@first_name, @last_name, @email, @phone_number, @address);
END;

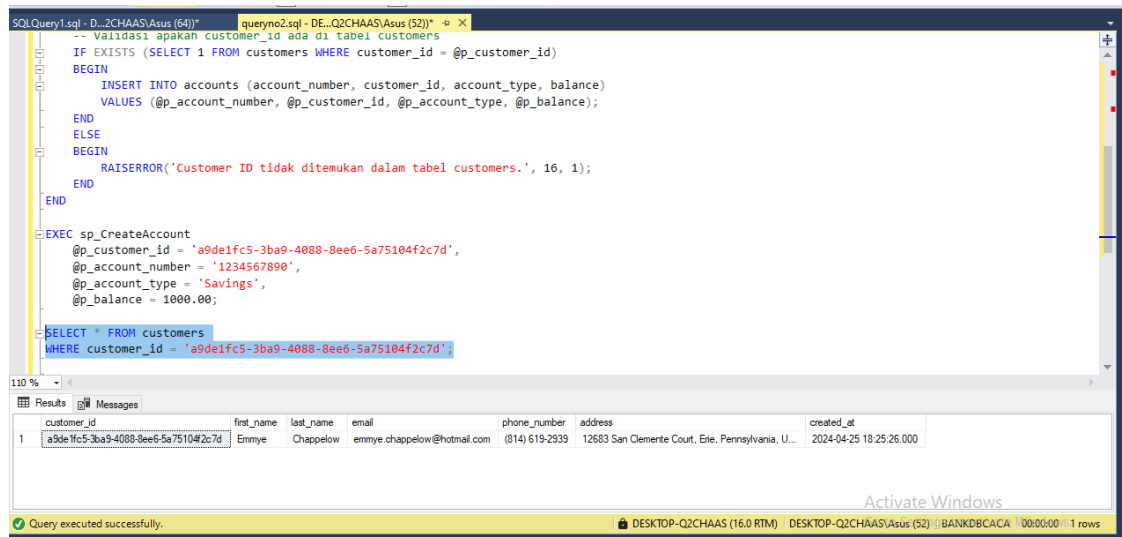
EXEC sp_CreateCustomer
    @first_name = 'Megan',
    @last_name = 'Kaith',
    @email = 'meghan123@yahoo.com',
    @phone_number = '(770) 678-9182',
    @address = '11121 Bentwood Lane, Austin, Texas, United States, 78778';

select * from customers
where first_name = 'Megan';

```

	customer_id	first_name	last_name	email	phone_number	address	created_at
1	82D13230-EA32-4915-8C5B-CD06DBB0F712	Megan	Kaith	meghan123@yahoo.com	(770) 678-9182	11121 Bentwood Lane, Austin, Texas, United States, 78778	2025-05-02 23:11:40.777

2. Procedure `sp_CreateAccount` untuk membuat akun baru untuk customer yang sudah ada: input `customer_id`, `account_number`, `account_type`, `balance`. Notes: Tambahkan validasi untuk memastikan bahwa `customer_id` benar benar ada pada table `customers`.



```
SQLQuery1.sql - D:\2CHAAS\Asus (54)* queryno2.sql - DE...Q2CHAAS\Asus (52)*
-- Validasi apakah customer_id ada di tabel customers
IF EXISTS (SELECT 1 FROM customers WHERE customer_id = @p_customer_id)
BEGIN
    INSERT INTO accounts (account_number, customer_id, account_type, balance)
    VALUES (@p_account_number, @p_customer_id, @p_account_type, @p_balance);
END
ELSE
BEGIN
    RAISERROR('Customer ID tidak ditemukan dalam tabel customers.', 16, 1);
END
END

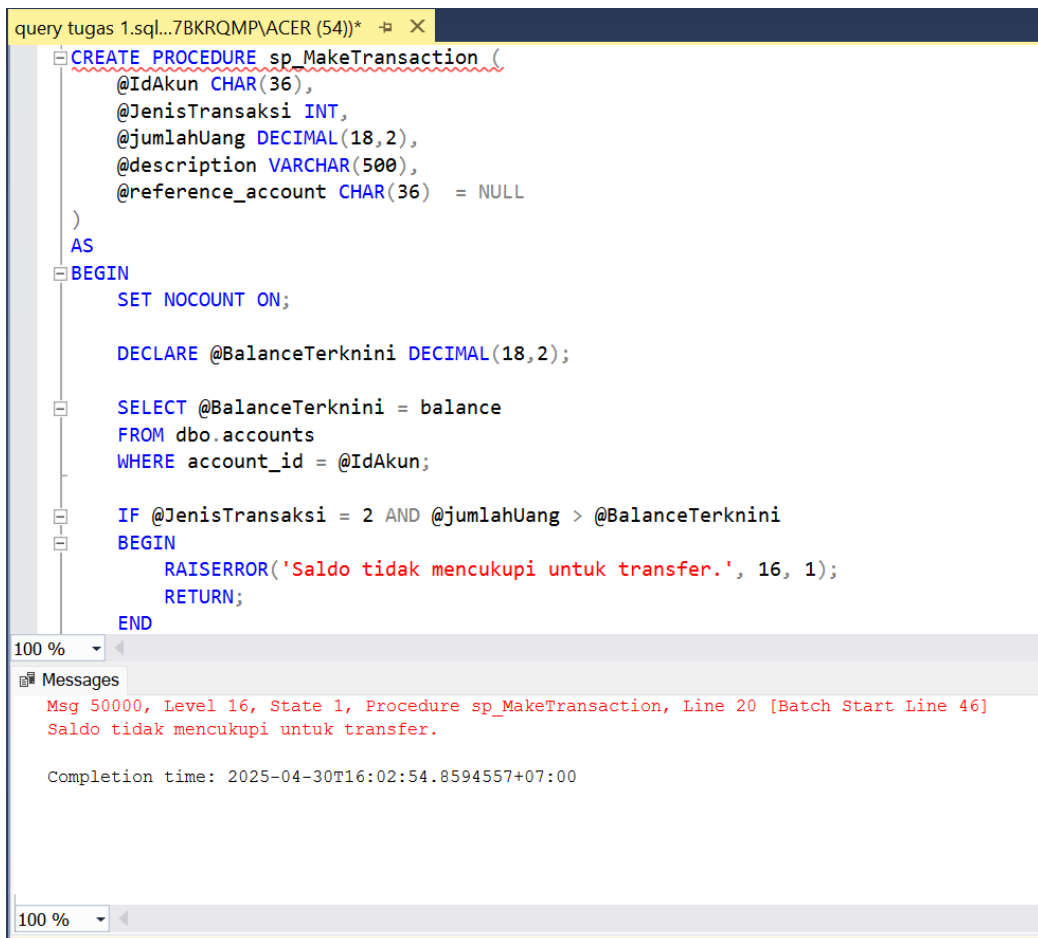
EXEC sp_CreateAccount
    @p_customer_id = 'a9de1fc5-3ba9-4088-8ee6-5a75104f2c7d',
    @p_account_number = '1234567890',
    @p_account_type = 'Savings',
    @p_balance = 1000.00;

SELECT * FROM customers
WHERE customer_id = 'a9de1fc5-3ba9-4088-8ee6-5a75104f2c7d';
```

customer_id	first_name	last_name	email	phone_number	address	created_at
a9de1fc5-3ba9-4088-8ee6-5a75104f2c7d	Emmye	Chappelow	emmye.chappelow@hotmail.com	(814) 619-2939	12683 San Clemente Court, Erie, Pennsylvania, U...	2024-04-25 18:25:26.000

Query executed successfully.

3. Procedure `sp_MakeTransaction` untuk menambahkan transaksi baru: input `account_id`, `transaction_type_id`, `amount`, `description`, `reference_account` (opsional). Notes: Tambahkan validasi untuk transfer, jika jumlah transfer melebihi balance maka transaksi dihentikan.



```
query tugas 1.sql...7BKRRQMP\ACER (54)*
CREATE PROCEDURE sp_MakeTransaction (
    @IdAkun CHAR(36),
    @JenisTransaksi INT,
    @jumlahUang DECIMAL(18,2),
    @description VARCHAR(500),
    @reference_account CHAR(36) = NULL
)
AS
BEGIN
    SET NOCOUNT ON;

    DECLARE @BalanceTerknini DECIMAL(18,2);

    SELECT @BalanceTerknini = balance
    FROM dbo.accounts
    WHERE account_id = @IdAkun;

    IF @JenisTransaksi = 2 AND @jumlahUang > @BalanceTerknini
    BEGIN
        RAISERROR('Saldo tidak mencukupi untuk transfer.', 16, 1);
        RETURN;
    END
END
```

Msg 50000, Level 16, State 1, Procedure sp_MakeTransaction, Line 20 [Batch Start Line 46]
Saldo tidak mencukupi untuk transfer.

Completion time: 2025-04-30T16:02:54.8594557+07:00

```

query tugas 1.sql...7BKQMP\ACER (54)*
END

INSERT INTO dbo.transactions(transaction_id, account_id, amount, description, reference_account)
VALUES (@IdAkun, @JenisTransaksi, @JumlahUang, @description, @reference_account);

END;

EXEC sp_MakeTransaction
    @IdAkun = '318c43bf-9511-4030-bd13-81a47a4b8cac',
    @JenisTransaksi = 2,
    @jumlahUang = 8000.00,
    @description = "Transfer pembelian baju",
    @reference_account = NULL;

```

100 %

Messages

Msg 50000, Level 16, State 1, Procedure sp_MakeTransaction, Line 20 [Batch Start Line 46]
Saldo tidak mencukupi untuk transfer.

Completion time: 2025-04-30T16:02:54.8594557+07:00

100 %

Querv completed with errors.

4. Procedure sp_GetCustomerSummary untuk menampilkan ringkasan data customer berdasarkan customer_id:

- 1) Nama lengkap customer
- 2) Jumlah akun yang dimiliki
- 3) Jumlah total saldo semua akun
- 4) Jumlah pinjaman aktif
- 5) Total pinjaman amount aktif

```

CREATE PROCEDURE sp_GetCustomerSummary
    @customer_id VARCHAR(36)
AS
BEGIN
    SELECT
        CONCAT(c.first_name, ' ', c.last_name) AS full_name,
        COUNT(DISTINCT a.account_id) AS total_accounts,
        SUM(a.balance) AS total_balance,
        COUNT(DISTINCT l.loan_id) AS active_loans,
        SUM(l.loan_amount) AS total_loan_amount
    FROM dbo.customers c
    LEFT JOIN dbo.accounts a ON a.customer_id = c.customer_id
    LEFT JOIN dbo.loans l ON l.customer_id = c.customer_id AND l.status = 'active'
    WHERE c.customer_id = @customer_id
    GROUP BY c.first_name, c.last_name;
END;

EXEC sp_GetCustomerSummary @customer_id = 'a9de1fc5-3ba9-4088-8ee6-5a75104f2c7d';

```

100 %

Results Messages

	full_name	total_accounts	total_balance	active_loans	total_loan_amount
1	Emmye Chappelow	1	10851.95	1	39573.93