

Praktikum 2 Sistem Basis Data 2025

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Kelas : C
RDBMS : MySQL (MySQL Workbench 8.0)
Link SQL :
https://drive.google.com/drive/folders/1gYEG7RzjswvA1N8el4ezQCV_CoKRPPN9?usp=sharing
Kode Asdos : SBDC03
Sesi : Modul Pendahuluan / Praktikum

Nomor 1

Sintaks:

```
CREATE DATABASE praktikum3DB;
USE praktikum3DB;

# no1
CREATE TABLE game(
    G_id CHAR(5) PRIMARY KEY,
    G_title VARCHAR(100) NOT NULL,
    G_release_date DATE NOT NULL,
    G_rating VARCHAR(10) NOT NULL,
    G_price INT NOT NULL,
    G_stock INT NOT NULL
);

CREATE TABLE tags(
    tag_id CHAR(5) PRIMARY KEY,
    tag_name VARCHAR(50) NOT NULL,
    tag_description VARCHAR(250) NOT NULL
);

CREATE TABLE staff(
    S_id CHAR(5) PRIMARY KEY,
    S_name VARCHAR(100) NOT NULL,
    S_email VARCHAR(100) NOT NULL,
    S_gender CHAR(1) NOT NULL,
    S_position VARCHAR(50) NOT NULL,
    S_address VARCHAR(100) NOT NULL
);
```

```

CREATE TABLE customer (
    C_id CHAR(5) PRIMARY KEY,
    C_name VARCHAR(100) NOT NULL,
    C_email VARCHAR(100) NOT NULL,
    C_gender CHAR (1) NOT NULL,
    C_pnumber VARCHAR(15) NOT NULL,
    C_address VARCHAR (100) NOT NULL
);

CREATE TABLE transaction (
    T_id CHAR (5) PRIMARY KEY,
    T_date DATE NOT NULL,
    T_method VARCHAR(20) NOT NULL,
    customer_id CHAR (5),
    staff_id CHAR(5),
    CONSTRAINT pk_customer_id_transaction FOREIGN KEY (customer_id)
REFERENCES customer(C_id) ON UPDATE CASCADE ON DELETE CASCADE,
    CONSTRAINT pk_staff_id_transaction FOREIGN KEY (staff_id) REFERENCES
staff(S_id) ON UPDATE CASCADE ON DELETE CASCADE
);

CREATE TABLE game_tags( # perhatikan foreign key
tags_id CHAR(5),
game_id CHAR(5),
PRIMARY KEY(tags_id, game_id),
    CONSTRAINT fk_tags_id FOREIGN KEY (tags_id) REFERENCES tags(tag_id) ON
UPDATE CASCADE ON DELETE CASCADE,
    CONSTRAINT fk_game_id FOREIGN KEY (game_id) REFERENCES game(G_id) ON
UPDATE CASCADE ON DELETE CASCADE
);

CREATE TABLE transaction_detail ( # perhatikan foreign key
transaction_id VARCHAR(15) PRIMARY KEY,
quantity INT NOT NULL,
total_price INT NOT NULL,
game_id CHAR (5),
    CONSTRAINT fk_game_id_transdetail FOREIGN KEY (game_id) REFERENCES
game(G_id) ON UPDATE CASCADE ON DELETE CASCADE
);

CREATE TABLE phone_number (
    S_pnumber VARCHAR(15) PRIMARY KEY,
    staff_id CHAR(5),
    CONSTRAINT fk_staff_id_phonenumber FOREIGN KEY (staff_id) REFERENCES
staff(S_id) ON UPDATE CASCADE ON DELETE CASCADE
);

```

```

);

-- SELECT * FROM customer;
-- SELECT * FROM game;
-- SELECT * FROM game_tags;
-- SELECT * FROM staff;
-- SELECT * FROM tags;
-- SELECT * FROM transaction;
-- SELECT * FROM transaction_detail;
-- SELECT * FROM phone_number;

```

Hasil:

The screenshot shows the MySQL Workbench interface with the database **praktikum3db** selected. The database structure is as follows:

- Tables:**
 - customer**: Columns include C_id, C_name, C_email, C_gender, C_pnumber, and C_adress. All values are NULL.
 - game**: Columns include G_id, G_title, G_release_date, G_rating, G_price, and G_stock. All values are NULL.
 - staff**: Columns include S_id, S_name, S_email, S_gender, S_position, and S_adress. All values are NULL.
 - tags**: Columns include tag_id, tag_name, and tag_description. All values are NULL.
 - transaction**: Columns include T_id, T_date, T_method, customer_id, and staff_id. All values are NULL.
 - transaction_detail**: Columns include transaction_id, quantity, total_price, and game_id. All values are NULL.
 - phone_number**: Columns include S_pnumber and staff_id. All values are NULL.
- Views**: None
- Stored Procedures**: None
- Functions**: None

Nomor 2

Sintaks:

```
CREATE TABLE developer (
    D_id CHAR (5) PRIMARY KEY,
    D_name VARCHAR (100) NOT NULL,
    D_country VARCHAR(50) NOT NULL
);

ALTER TABLE game
ADD COLUMN D_id CHAR(5);

ALTER TABLE game
ADD FOREIGN KEY (D_id) REFERENCES developer(D_id) ON UPDATE CASCADE ON
DELETE CASCADE;

-- SELECT * FROM developer;
```

Hasil:

	D_id	D_name	D_country
*	NULL	NULL	NULL

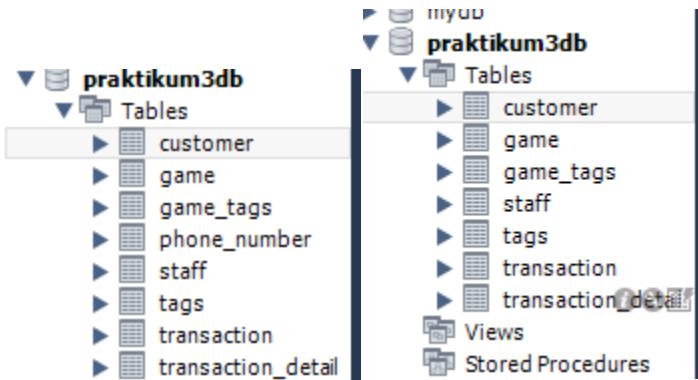
Nomor 3

Sintaks:

```
DROP TABLE phone_number;

ALTER TABLE staff
ADD COLUMN S_pnumber VARCHAR(15) NOT NULL;
SET SQL_safe_updates = 0;
```

Hasil:



Nomor 4

Sintaks:

```
ALTER TABLE customer
ADD COLUMN C_joindate DATE NOT NULL;
```

Hasil:

	C_id	C_name	C_email	C_gender	C_pnumber	C_adress
*	NULL	NULL	NULL	NULL	NULL	NULL
*	C_id	C_name	C_email	C_gender	C_pnumber	C_adress

Nomor 5

Sintaks:

```
INSERT INTO customer (C_id, C_name, C_email, C_gender, C_pnumber,
C_adress, C_joindate) VALUES
('C0001', 'Alice', 'alice@example.com', 'F', '(555)010-1234', '123 Maple
St, IL', '2023-12-01'),
('C0002', 'Ben', 'ben@example.com', 'M', '(555)011-6789', '321 Birch Blvd,
WI', '2023-12-02'),
('C0003', 'Chloe', 'chloe@example.com', 'F', '(555)012-3456', '654 Cedar
Ct, TX', '2023-12-03'),
('C0004', 'Daniel', 'daniel@example.com', 'M', '(555)013-8901', '246
Willow Way, OR', '2023-12-04'),
('C0005', 'Ethan', 'ethan@example.com', 'M', '(555)014-9012', '147
Maplewood Ln, GA', '2023-12-05');
```

```

INSERT INTO staff (S_id, S_name, S_email, S_gender, S_position, S_pnumber, S_address) VALUES
('S0001', 'Adam', 'adam@example.com', 'M', 'Cashier', '(555)010-5678', '456 Oak Ave, NE'),
('S0002', 'Bella', 'Bella@example.com', 'F', 'Cashier', '(555)011-2345', '789 Pine Rd, OH'),
('S0003', 'Charlie', 'charlie@example.com', 'M', 'Database Engineer', '(555)012-7890', '987 Elm St, CO'),
('S0004', 'Daisy', 'daisy@example.com', 'F', 'Customer Service Rep', '(555)013-4567', '135 Spruce Pl, WA'),
('S0005', 'Emma', 'emma@example.com', 'F', 'Content Writer', '(555)014-5678', '369 Ash Dr, TN');

INSERT INTO transaction (T_id, T_date, T_method, customer_id, staff_id) VALUES
('T0001', '2024-01-01', 'Cash', 'C0001', 'S0001'),
('T0002', '2024-01-02', 'Cash', 'C0002', 'S0002'),
('T0003', '2024-01-02', 'QRIS', 'C0003', 'S0003'),
('T0004', '2024-01-09', 'Debit', 'C0004', 'S0004'),
('T0005', '2024-01-13', 'Credit', 'C0005', 'S0005');

INSERT INTO tags (tag_id, tag_name, tag_description) VALUES
('TG001', 'Action', 'Fast-paced gameplay requiring quick reflexes and combat skills.'),
('TG002', 'Horror', 'Focuses on creating fear and tension through unsettling atmospheres and scares.'),
('TG003', 'Puzzle', 'Challenges players to solve problems and riddles using logic and critical thinking.'),
('TG004', 'RPG', 'Players assume character roles, developing skills and engaging in storytelling.'),
('TG005', 'Sports', 'Involves competitive gameplay based on real or fictional sports, emphasizing skill, strategy, and teamwork.');

INSERT INTO game (G_id, G_title, G_release_date, G_rating, G_price, G_stock, D_id) VALUES
('G0001', 'Call of Duty: Black Ops 6', '2024-10-25', '18+', 1040000, 2, 'D0001'),
('G0002', 'F1 24', '2024-05-31', '3+', 759000, 11, 'D0002'),
('G0003', 'Hogwarts Legacy', '2023-02-11', '13+', 799000, 9, 'D0003'),
('G0004', 'FC 25', '2024-09-27', '3+', 799000, 32, 'D0002'),
('G0005', 'HELLDIVERS II', '2024-02-08', '18+', 579000, 20, 'D0004'),
('G0006', 'Concord', '2024-08-23', '13+', 579000, 10, 'D0005');

INSERT INTO developer (D_id, D_name, D_country) VALUES
('D0001', 'Activision', 'USA'),

```

```

('D0002', 'EA Sports', 'Canada'),
('D0003', 'Avalanche', 'UK'),
('D0004', 'Arrowhead', 'Sweden'),
('D0005', 'Firewalk Studio', 'USA');

INSERT INTO game_tags (tags_id, game_id) VALUES
('TG001', 'G0001'),
('TG001', 'G0005'),
('TG001', 'G0006'),
('TG001', 'G0003'),
('TG004', 'G0003'),
('TG005', 'G0002'),
('TG005', 'G0004');

INSERT INTO transaction_detail (transaction_id, game_id, quantity,
total_price) VALUES
('T0001', 'G0001', 1, 1040000),
('T0002', 'G0002', 1, 759000),
('T0003', 'G0003', 1, 799000),
('T0004', 'G0004', 2, 1598000),
('T0005', 'G0005', 2, 1158000);

```

*Ada sedikit kesalahan, seharusnya insert values pada tabel developer sebelum insert values tabel game (script tidak dapat dijalankan secara berurutan).

Hasil:

	tag_id	tag_name	tag_description
▶	TG001	Action	Fast-paced gameplay requiring quick reflexes a...
	TG002	Horror	Focuses on creating fear and tension through u...
	TG003	Puzzle	Challenges players to solve problems and riddle...
	TG004	RPG	Players assume character roles, developing skill...
*	TG005	Sports	Involves competitive gameplay based on real or...
*	NULL	NULL	NULL

	T_id	T_date	T_method	customer_id	staff_id
▶	T0001	2024-01-01	Cash	C0001	S0001
	T0002	2024-01-02	Cash	C0002	S0002
	T0003	2024-01-02	QRIS	C0003	S0003
	T0004	2024-01-09	Debit	C0004	S0004
*	T0005	2024-01-13	Credit	C0005	S0005
*	NULL	NULL	NULL	NULL	NULL

	transaction_id	quantity	total_price	game_id		D_id	D_name	D_country
▶	T0001	1	1040000	G0001	▶	D0001	Activision	USA
	T0002	1	759000	G0002		D0002	EA Sports	Canada
	T0003	1	799000	G0003		D0003	Avalanche	UK
	T0004	2	1598000	G0004		D0004	Arrowhead	Sweden
*	T0005	2	1158000	G0005		D0005	Firewalk Studio	USA
*	NULL	NULL	NULL	NULL	*	NULL	NULL	NULL

	C_id	C_name	C_email	C_gender	C_pnumber	C_adress	C_joindate
▶	C0001	Alice	alice@example.com	F	(555)010-1234	123 Maple St, IL	2023-12-01
	C0002	Ben	ben@example.com	M	(555)011-6789	321 Birch Blvd, WI	2023-12-02
	C0003	Chloe	chloe@example.com	F	(555)012-3456	654 Cedar Ct, TX	2023-12-03
	C0004	Daniel	daniel@example.com	M	(555)013-8901	246 Willow Way, OR	2023-12-04
*	C0005	Ethan	ethan@example.com	M	(555)014-9012	147 Maplewood Ln, GA	2023-12-05
*	NULL	NULL	NULL	NULL	NULL	NULL	NULL

	G_id	G_title	G_release_date	G_rating	G_price	G_stock	D_id
▶	G0001	Call of Duty: Black Ops 6	2024-10-25	18+	1040000	2	D0001
	G0002	F1 24	2024-05-31	3+	759000	11	D0002
	G0003	Hogwarts Legacy	2023-02-11	13+	799000	9	D0003
	G0004	FC 25	2024-09-27	3+	799000	32	D0002
	G0005	HELLDIVERS II	2024-02-08	18+	579000	20	D0004
*	G0006	Concord	2024-08-23	13+	579000	10	D0005
*	NULL	NULL	NULL	NULL	NULL	NULL	NULL

	tags_id	game_id
▶	TG001	G0001
	TG005	G0002
	TG001	G0003
	TG004	G0003
	TG005	G0004
	TG001	G0005
*	TG001	G0006
*	NULL	NULL

	S_id	S_name	S_email	S_gender	S_position	S_adress	S_pnumber
▶	S0001	Adam	adam@example.com	M	Cashier	456 Oak Ave, NE	(555)010-5678
	S0002	Bella	Bella@example.com	F	Cashier	789 Pine Rd, OH	(555)011-2345
	S0003	Charlie	charlie@example.com	M	Database Engineer	987 Elm St, CO	(555)012-7890
	S0004	Daisy	daisy@example.com	F	Customer Service Rep	135 Spruce Pl, WA	(555)013-4567
*	S0005	Emma	emma@example.com	F	Content Writer	369 Ash Dr, TN	(555)014-5678
*	NULL	NULL	NULL	NULL	NULL	NULL	NULL

Nomor 6

Sintaks:

```
ALTER TABLE game
ADD COLUMN D_id CHAR(5);
```

```
ALTER TABLE game
ADD FOREIGN KEY (D_id) REFERENCES developer(D_id) ON UPDATE CASCADE ON
DELETE CASCADE;
```

*Seharusnya menghapus fk di game lalu buat fk lagi dan input values lagi.

Hasil:

Table: game

Columns:

G_id	char(5) PK
G_title	varchar(100)
G_release_date	date
G_rating	varchar(10)
G_price	int
G_stock	int
D_id	char(5)

Related Tables:

Target developer (D_id → D_id)
On Update CASCADE
On Delete CASCADE

Nomor 7

Sintaks:

```
INSERT INTO staff (S_id, S_name, S_email, S_gender, S_position, S_pnumber, S_adress) VALUES ('S0006', 'Fiona', 'fiona@example.com', 'F', 'Cashier', '(555) 016-3456', '420 Thick Fein, LS');
```

Hasil:

Nomor 8

Sintaks:

```
UPDATE game
SET G_price = 0.7 * G_price
WHERE G_rating = '3+';
```

*Harus menonaktifkan safe mode juga:

Error Code: 1175. You are using safe update mode and you tried to update a table without a WHERE that uses a KEY column. To disable safe mode, toggle the option in Preferences -> SQL Editor and reconnect.

```
SET SQL_safe_updates = 0;
```

Hasil:

	G_id	G_title	G_release_date	G_rating	G_price	G_stock	D_id
▶	G0001	Call of Duty: Black Ops 6	2024-10-25	18+	1040000	2	D0001
	G0002	F1 24	2024-05-31	3+	759000	11	D0002
	G0003	Hogwarts Legacy	2023-02-11	13+	799000	9	D0003
	G0004	FC 25	2024-09-27	3+	799000	32	D0002
	G0005	HELLDIVERS II	2024-02-08	18+	579000	20	D0004
*	G0006	Concord	2024-08-23	13+	579000	10	D0005
*	NULL	NULL	NULL	NULL	NULL	NULL	NULL

	G_id	G_title	G_release_date	G_rating	G_price	G_stock	D_id
▶	G0001	Call of Duty: Black Ops 6	2024-10-25	18+	1040000	2	D0001
	G0002	F1 24	2024-05-31	3+	531300	11	D0002
	G0003	Hogwarts Legacy	2023-02-11	13+	799000	9	D0003
	G0004	FC 25	2024-09-27	3+	559300	32	D0002
	G0005	HELLDIVERS II	2024-02-08	18+	579000	20	D0004
*	G0006	Concord	2024-08-23	13+	579000	10	D0005
*	NULL	NULL	NULL	NULL	NULL	NULL	NULL

Nomor 9

Sintaks:

```
INSERT INTO transaction (T_id, T_date, T_method, customer_id, staff_id)
VALUES
('T0006', '2024-11-01', 'Credit', 'C0005', 'S0005');
```

```
UPDATE game
SET G_stock = 0
WHERE G_title = 'Hogwarts Legacy';
```

Hasil:

Nomor 10

Sintaks:

```
UPDATE staff  
SET S_position = 'Database Engineer'  
WHERE S_id = 'S0006';
```

Hasil:

Nomor 11

Sintaks:

```
DELETE FROM game  
WHERE G_title = 'Concord';
```

Hasil:

	G_id	G_title	G_release_date	G_rating	G_price	G_stock	D_id
▶	G0001	Call of Duty: Black Ops 6	2024-10-25	18+	1040000	2	D0001
	G0002	F1 24	2024-05-31	3+	531300	11	D0002
	G0003	Hogwarts Legacy	2023-02-11	13+	799000	0	D0003
	G0004	FC 25	2024-09-27	3+	559300	32	D0002
	G0005	HELLDIVERS II	2024-02-08	18+	579000	20	D0004
*	G0006	Concord	2024-08-23	13+	579000	10	D0005
	NULL	NULL	NULL	NULL	NULL	NULL	NULL

	G_id	G_title	G_release_date	G_rating	G_price	G_stock	D_id
▶	G0001	Call of Duty: Black Ops 6	2024-10-25	18+	1040000	2	D0001
	G0002	F1 24	2024-05-31	3+	531300	11	D0002
	G0003	Hogwarts Legacy	2023-02-11	13+	799000	0	D0003
	G0004	FC 25	2024-09-27	3+	559300	32	D0002
	G0005	HELLDIVERS II	2024-02-08	18+	579000	20	D0004
*	NULL	NULL	NULL	NULL	NULL	NULL	NULL

Nomor 12

Sintaks:

```
DROP DATABASE praktikum3DB;
```

Hasil:

