

Week 2 Lecture Assignment

```
2 CREATE DATABASE WEEK2;
3 USE WEEK2;
4
5
6 CREATE TABLE Accounts (
7     AccountID INT PRIMARY KEY,
8     AccountHolderName VARCHAR(100),
9     Balance DECIMAL(10, 2)
10 );
11
12 CREATE TABLE Transactions (
13     TransactionID INT PRIMARY KEY,
14     FromAccountID INT,
15     ToAccountID INT,
16     Amount DECIMAL(10, 2),
17     Status VARCHAR(10)
18 );
19
20 INSERT INTO Accounts (AccountID, AccountHolderName, Balance) VALUES
21 (1, 'Alice', 5000.00),
22 (2, 'Bob', 3000.50),
23 (3, 'Carol', 1500.75);
24
25 INSERT INTO Transactions (TransactionID, FromAccountID, ToAccountID, Amount, Status) VALUES
26 (101, 1, 2, 1000.00, 'Completed'),
27 (102, 2, 3, 500.50, 'Pending'),
28 (103, 1, 3, 2000.75, 'Completed');
```

```
2 USE WEEK2;
3
4 SELECT AccountHolderName, Balance FROM Accounts;
5
```

Accounts (3r × 2c)		
#	AccountHolderName	Balance
1	Alice	5 000,0
2	Bob	3 000,5
3	Carol	1 500,75

```
4 SELECT * FROM Transactions WHERE Status = 'Completed';
5
```

Transactions (2r × 5c)						
#	TransactionID	FromAccountID	ToAccountID	Amount	Status	
1	101	1	2	1 000,0	Completed	
2	103	1	3	2 000,75	Completed	

```
3
4 SELECT * FROM Accounts, Transactions;
5
```

Accounts (9r × 8c)									
	AccountID	AccountHolderName	Balance	TransactionID	FromAccountID	ToAccountID	Amount	Status	
1	1	Alice	5 000,0	101	1	2	1 000,0	Completed	
2	2	Bob	3 000,5	101	1	2	1 000,0	Completed	
3	3	Carol	1 500,75	101	1	2	1 000,0	Completed	
4	1	Alice	5 000,0	102	2	3	500,5	Pending	
5	2	Bob	3 000,5	102	2	3	500,5	Pending	
6	3	Carol	1 500,75	102	2	3	500,5	Pending	
7	1	Alice	5 000,0	103	1	3	2 000,75	Completed	
8	2	Bob	3 000,5	103	1	3	2 000,75	Completed	
9	3	Carol	1 500,75	103	1	3	2 000,75	Completed	

```
4 EXPLAIN SELECT * FROM Accounts, Transactions;
5
```

Accounts (2r × 10c)										
#	id	select_type	table	type	possible_keys	key	key_len	ref	rows	Extra
1	1	SIMPLE	Accounts	ALL	(NULL)	(NULL)	(NULL)	(NULL)	3	
2	1	SIMPLE	Transactions	ALL	(NULL)	(NULL)	(NULL)	(NULL)	3	Using join buffer (flat, BNL join)

```

4 SELECT AccountHolderName, Balance FROM Accounts WHERE Balance > 2000.00;
5 |

```

Accounts (2r × 2c)

	AccountHolderName	Balance
1	Alice	5 000,0
2	Bob	3 000,5

```

4 SELECT
5     Transactions.TransactionID,
6     Accounts.AccountHolderName AS FromAccountHolder,
7     Transactions.Amount,
8     Transactions.Status
9 FROM
10    Transactions
11 JOIN
12    Accounts
13 ON
14    Transactions.FromAccountID = Accounts.AccountID;
15

```

Transactions (3r × 4c)

#	TransactionID	FromAccountHolder	Amount	Status
1	101	Alice	1 000,0	Completed
2	102	Bob	500,5	Pending
3	103	Alice	2 000,75	Completed

Transaction

```

4 SELECT * FROM Accounts;
5 SELECT * FROM Transactions;
6

```

Accounts (3r × 3c) Transactions (3r × 5c)

	AccountID	AccountHolderName	Balance
1	1	Alice	5 000,0
2	2	Bob	3 000,5
3	3	Carol	1 500,75

```

4 START TRANSACTION;
5
6 UPDATE Accounts
7 SET Balance = Balance - 200
8 WHERE AccountID = 1;
9
10 UPDATE Accounts
11 SET Balance = Balance + 200
12 WHERE AccountID = 2;
13
14 COMMIT;

```

```

4  START TRANSACTION;
5
6  UPDATE Accounts
7  SET Balance = Balance - 200
8  WHERE AccountID = 1;
9
10 UPDATE Accounts
11 SET Balance = Balance + 200
12 WHERE AccountID = 999;
13
14 ROLLBACK;
15
16 SELECT * FROM Accounts;
17

```

	AccountID	AccountHolderName	Balance
1	1	Alice	4 800,0
2	2	Bob	3 200,5
3	3	Carol	1 500,75

```

4  SET GLOBAL general_log = 'ON';
5  SET GLOBAL log_output = 'TABLE';
6
7  SELECT * FROM mysql.general_log WHERE argument LIKE '%UPDATE Accounts%';
8

```


	event_time	user_host	thread_id	server_id	command_type	argument
1	2025-03-15 11:15:08.931737	root[root] @ localhost [127.0.0.1]	32	1	Query	SELECT * FROM mysql.general_log WHERE arg...

```

4 UPDATE Transactions
5 SET Status = 'Failed'
6 WHERE TransactionID = 101;
7
8 SELECT * FROM Transactions;
9

```

Transactions (3r × 5c)


	TransactionID 	FromAccountID	ToAccountID	Amount	Status
1	101	1	2	1 000,0	Failed
2	102	2	3	500,5	Pending
3	103	1	3	2 000,75	Completed

```

4 UPDATE Transactions
5 SET Status = 'Success'
6 WHERE TransactionID = 101;
7
8 SELECT * FROM Transactions;
9

```

Transactions (3r × 5c)

	TransactionID 	FromAccountID	ToAccountID	Amount	Status
1	101	1	2	1 000,0	Success
2	102	2	3	500,5	Pending
3	103	1	3	2 000,75	Completed