SQL IV - CRUD

Agenda
- 3NF
- DDL, DML, etc.
- CRUD

ENUM?

Status
Type

8 bytes

Batch

0	PENDING
1	IN PROGRESS
2	PAUSED
3	COMPLETED

DB 4

(Enum) Tingint CHAR VARCHAR
X

Problem → It will allow any value

Problem → Performance
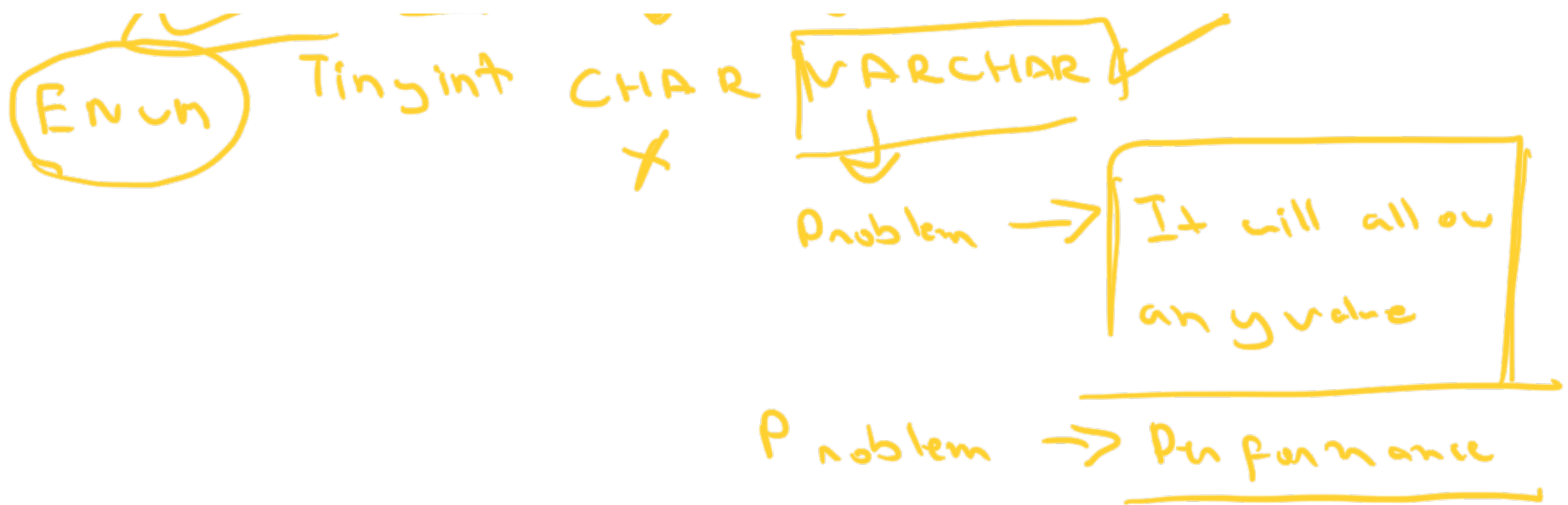
1NF → ATOMIC
→ NO COLLECTIONS

2NF → Should be 1NF
→ No. Partial dependencies
→ Only composite keys

Part of a PK ———> Another column

(SID | BID) ———> PSD
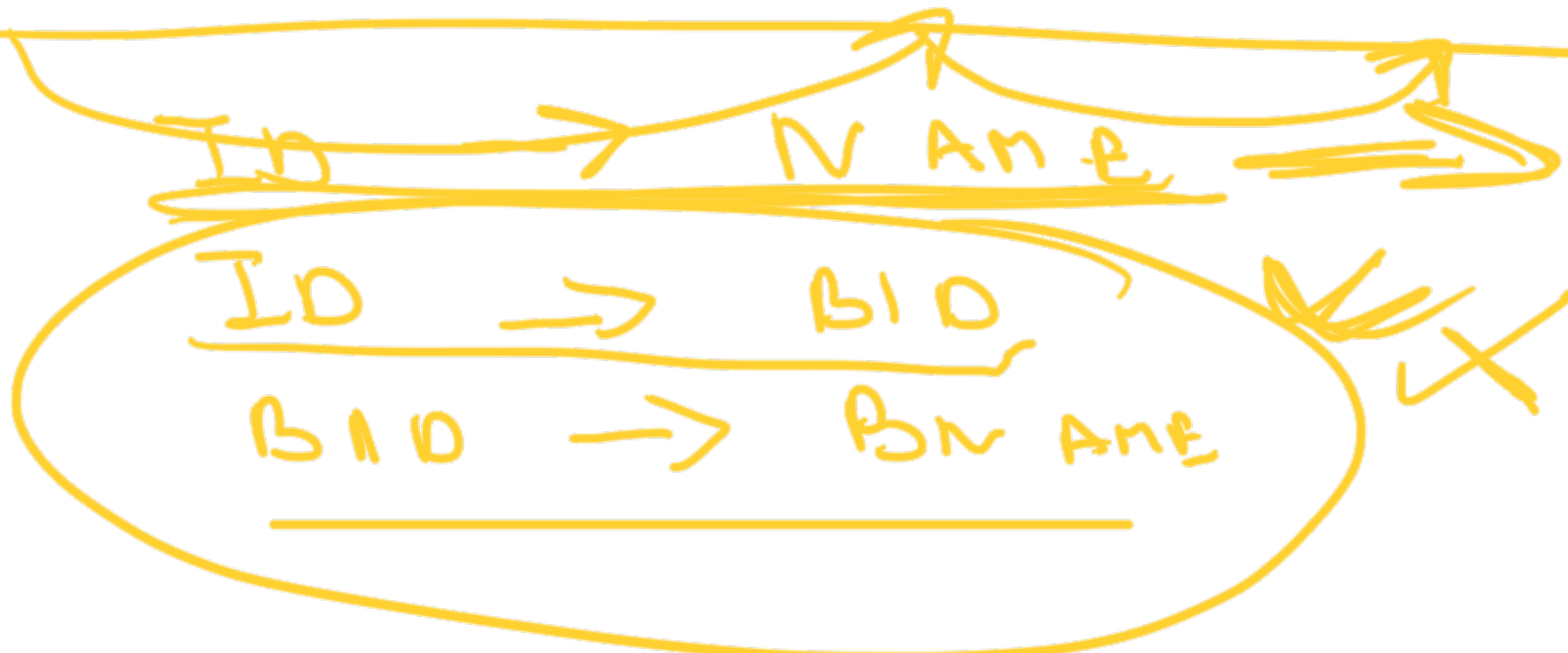
———> Attendance

BID ———> BNAME

SID ———> NAME

3 NF

———> Should be 2NF

———> No transitive dependencies

a = b   b = c

$$a = c$$

ID	NAME	BIO	BNAME

ID → NAME

ID → BIO
BID → BNAME

ID → BNAME

ID	PHONE	NAME

$$ID \rightarrow BID$$
$$BID \rightarrow BNAEE$$

SID	BID	BNAE
1		A B
2	1	A
3	2	B
4	1	

Update Ar only

ID PHONE NAME
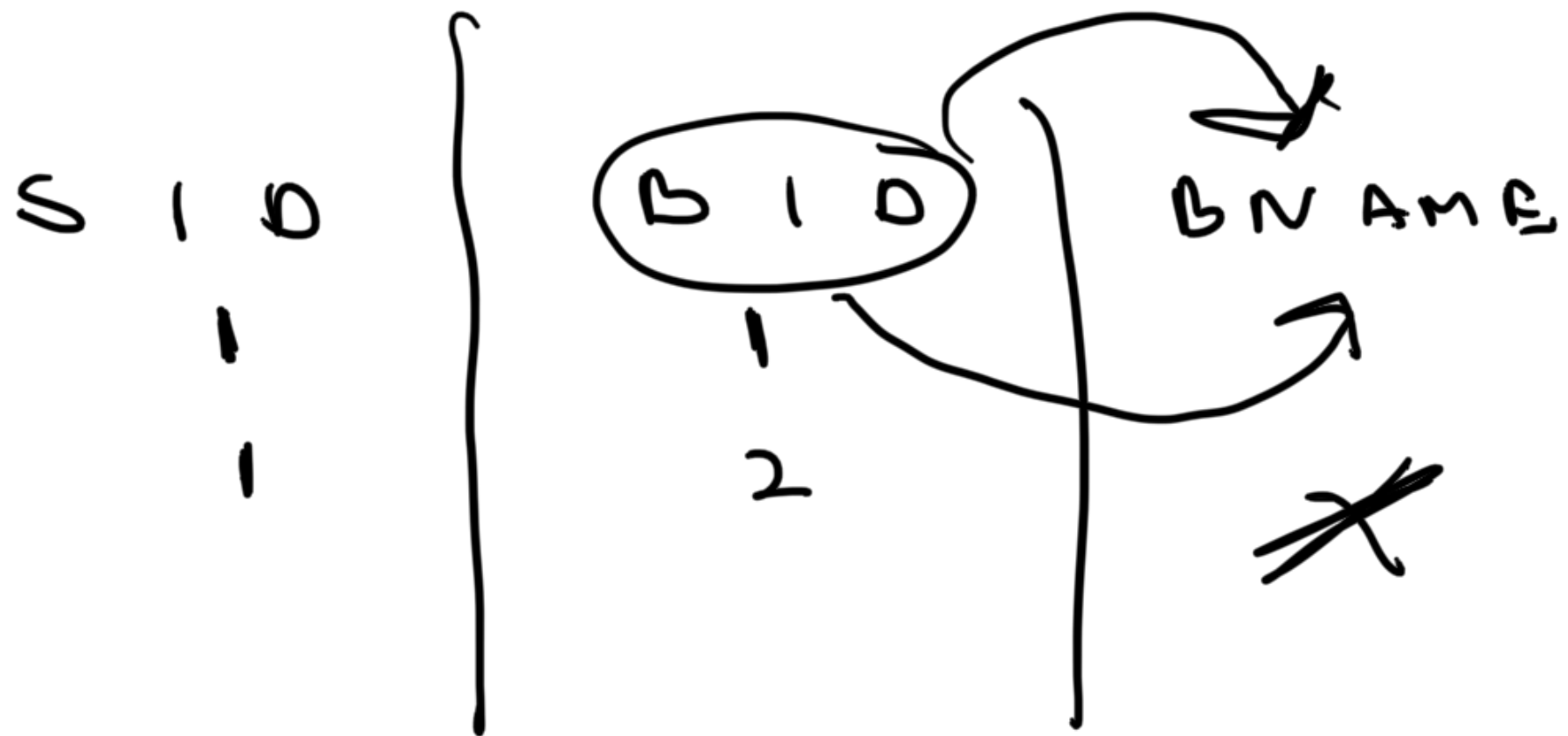
SID   BID   BNAME
  1   1   2
  1

SID → NAME ✓   Partial Depen
SID → BID

SID   BID   BNAME
  1   1   2
  2

3   J   2   1   B

$$SID \longrightarrow BID$$
$$BID \longrightarrow BNAME$$

$$a = b$$
$$b = c$$
$$\left.\right\} \quad a = c$$

Mapping table

Student

SID , SNAME , (BID)

Batch
BID , BNAME

BD

$$\rightarrow \quad \underline{SID} \longrightarrow BID$$

$$\underline{SID} \longrightarrow SNAME$$

$$\boxed{\underline{BID} \longrightarrow BNAME}$$
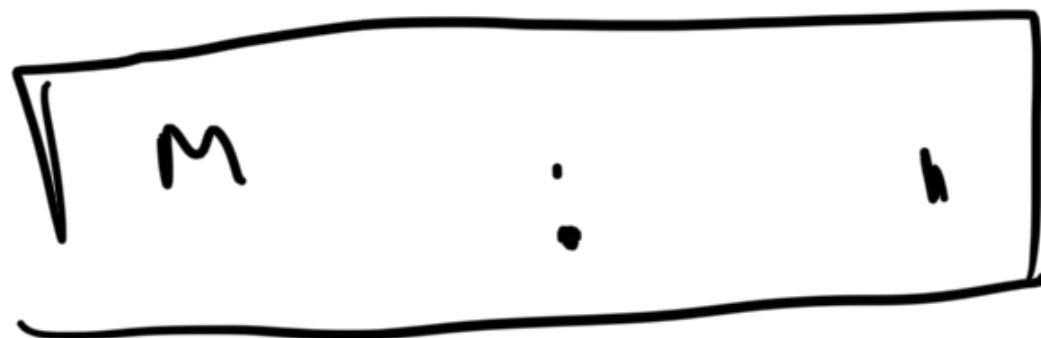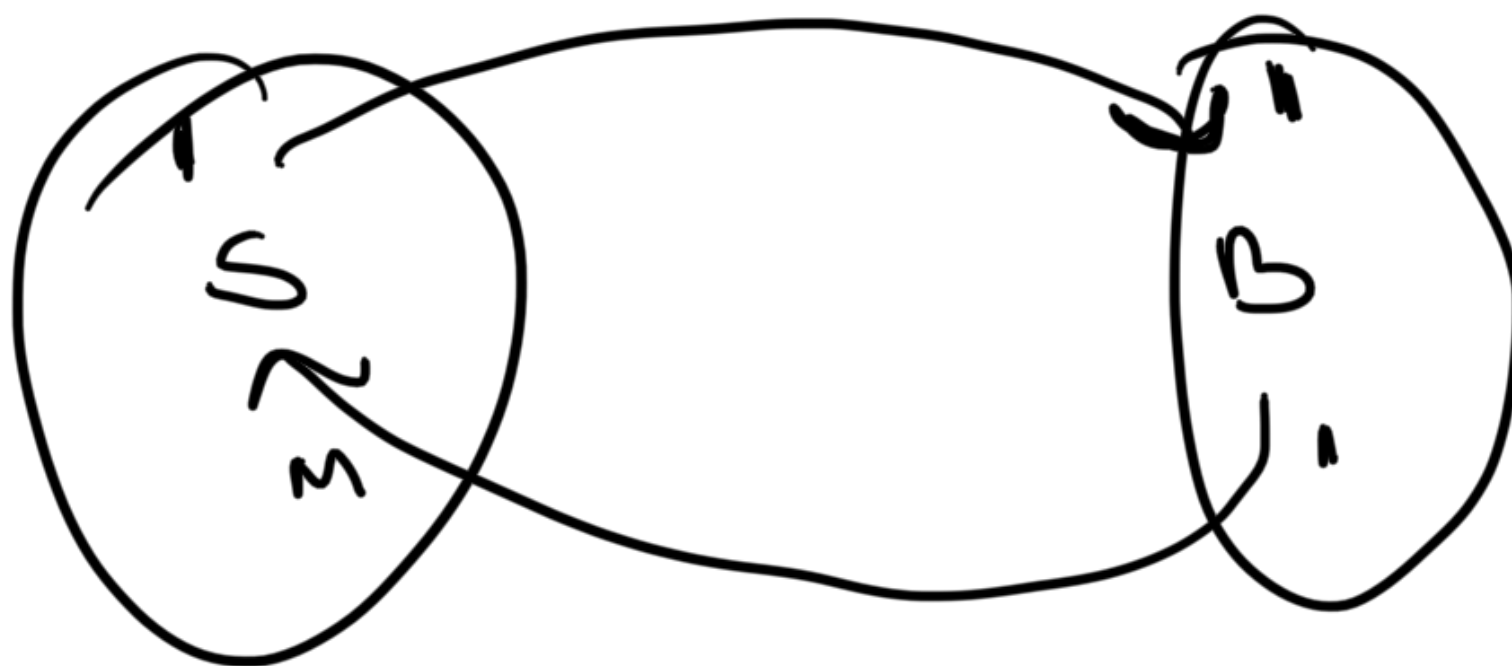
ID | PHONE | NAME

Student

SID, NAME

Phone

SID PHONE

Db

CREATE
DROP

Database

ALTER

(DDL)

Definition) L.

Data Manipulation

⌐→ INSERT

⌐→ SELECT

Create
Read
Update
Delete

Insert
Select
Update
DELETE

S QL

DDL   DML   DCL   TCL
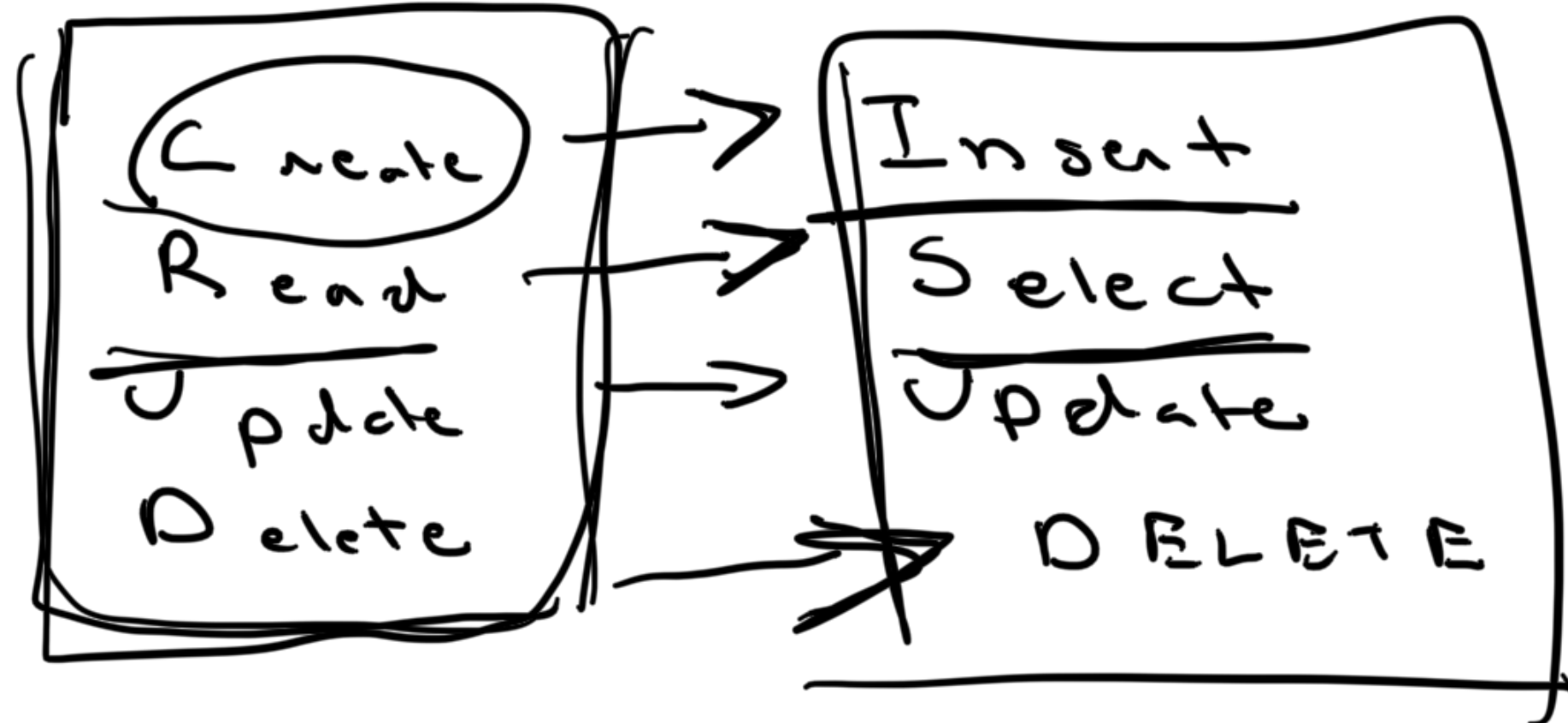
DCL → Control

Transaction

Control
- GIVE → GRANT
- TAKE → REVOKE

Creating rows

INSERT INTO TABLE ( )

VALUES ( )