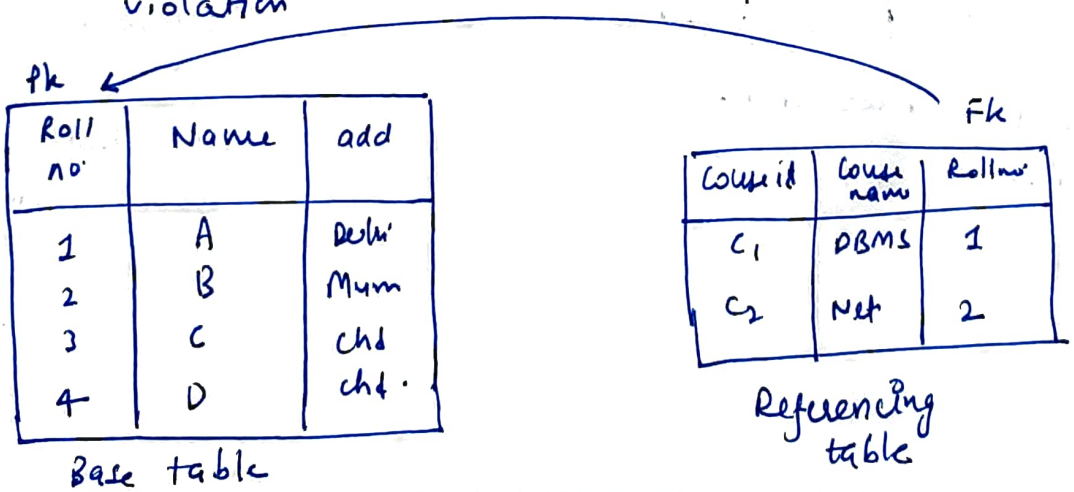
Lec 11 Insert, Update, Delete Foreign key

Referential Integrity - Property of data stating that all its references are valid.

↳ violation below refers to violation of referential integrity

Referenced table	Referencing Table
1) INSERT - NO violation	1) INSERT - May cause violation
2) DELETE - Deletion of one row will cause violation in referenced table.	2) DELETION - WILL NOT cause any violation
Automatic soln.	(3) UPDATION - May cause violation
ON DELETE CASCADE	
all Roll No 1 refs would be deleted.	
ON DELETE SET NULL	

(3) UPDATION - May cause violation



Roll no	Name	add
1	A	Delhi
2	B	Mum
3	C	Chd
4	D	Chd.

Base table

Courseid	Course name	Rollno
C_1	DBMS	1
C_2	Net	2

Referencing table

(8) Let $R_1(a, b, c)$ and $R_2(x, y, z)$ be two relations in which 'a' is foreign key in R_1 refers to primary key of R_2. Consider four options

(a) Insert into R_1

(b) Insert into R_2

(c) Delete from R_1

(d) Delete from R_2

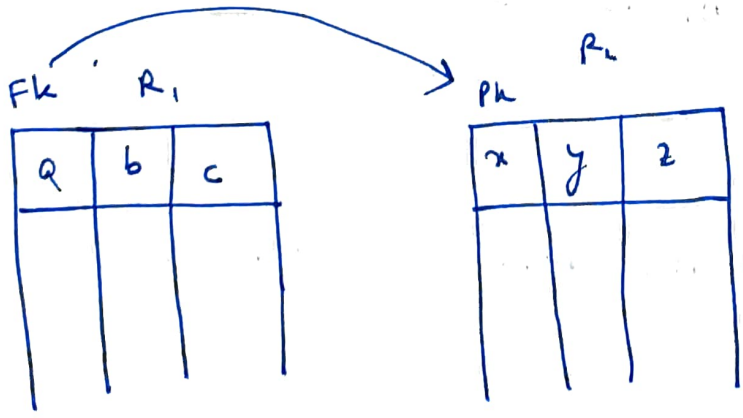
which is correct regarding referential integrity?

(1) options a and b cause violation.

(2) options b and c cause violation

(3) options c and d cause violation

(4) options d and a cause violation



Lec 13 - Super key

A super key is a combination of all possible attributes which can uniquely identify two tuples.

→ one of the attribute should be candidate key

→ Super set of any candidate key is super key.

For ex.-

Roll no.	name	age

CK = Roll no.

(Roll no, age) → super key

(Roll no, name) → super key

(Roll no, age, name) → super key

(name, age) → not super key

because no candidate key

ex let $R(A_1, A_2 \dots A_n)$ then how many super keys are possible if A_1 is candidate key?

→ 2^{n-1}

→ Now, let A_1 and A_2 both are CK.

$= 2^{n-1} + 2^{n-1} - (2^{n-2})$ → repeated count

$= 2^n - 2^{n-2}$

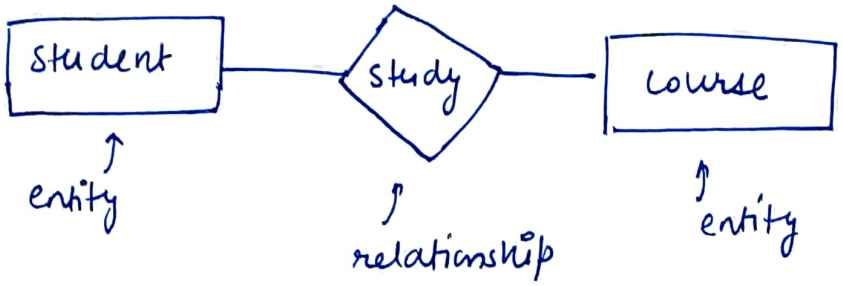
Lec 14 - Entity Relationship Model (ER Model)

↳ conceptual model of database

Entity → Any object ~~or attributes~~ in existence.

For ex. student (Roll no, age, address)

Associations between multiple entities are relationships



Roll, no, age → attributes of student entity.