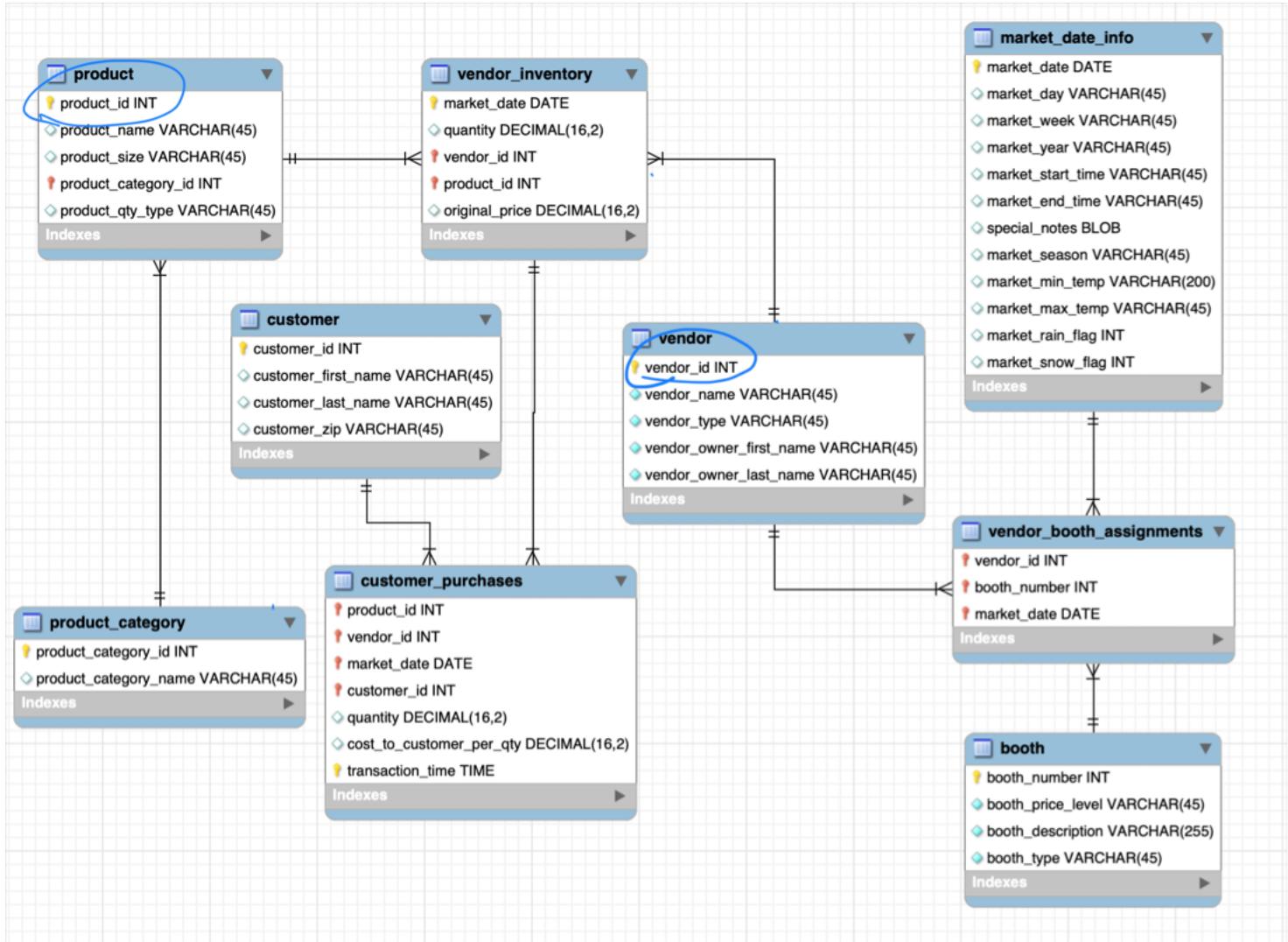


Agenda

- a. Keys and its types
- b. Relationships among tables
- c. SQL grammar
- d. SQL syntax
- e. Bigquery Setup
- f. Lets play with SQL



I identify this bit for a generation

char(10)



strings

Varchar(10)



$\leq 10 \checkmark$
 $= 10 \checkmark$

-----)

$\geq 10 \checkmark$

≤ 10

Error X

M | F

$> 10 \times$
2 amit
4 Singh
6 amit - Singh ✓
10 Amit - Singh X

11 Amit - Singh X

Pizza

DB

12

M

DWN

16 J 400

BigQuery (TB) PB

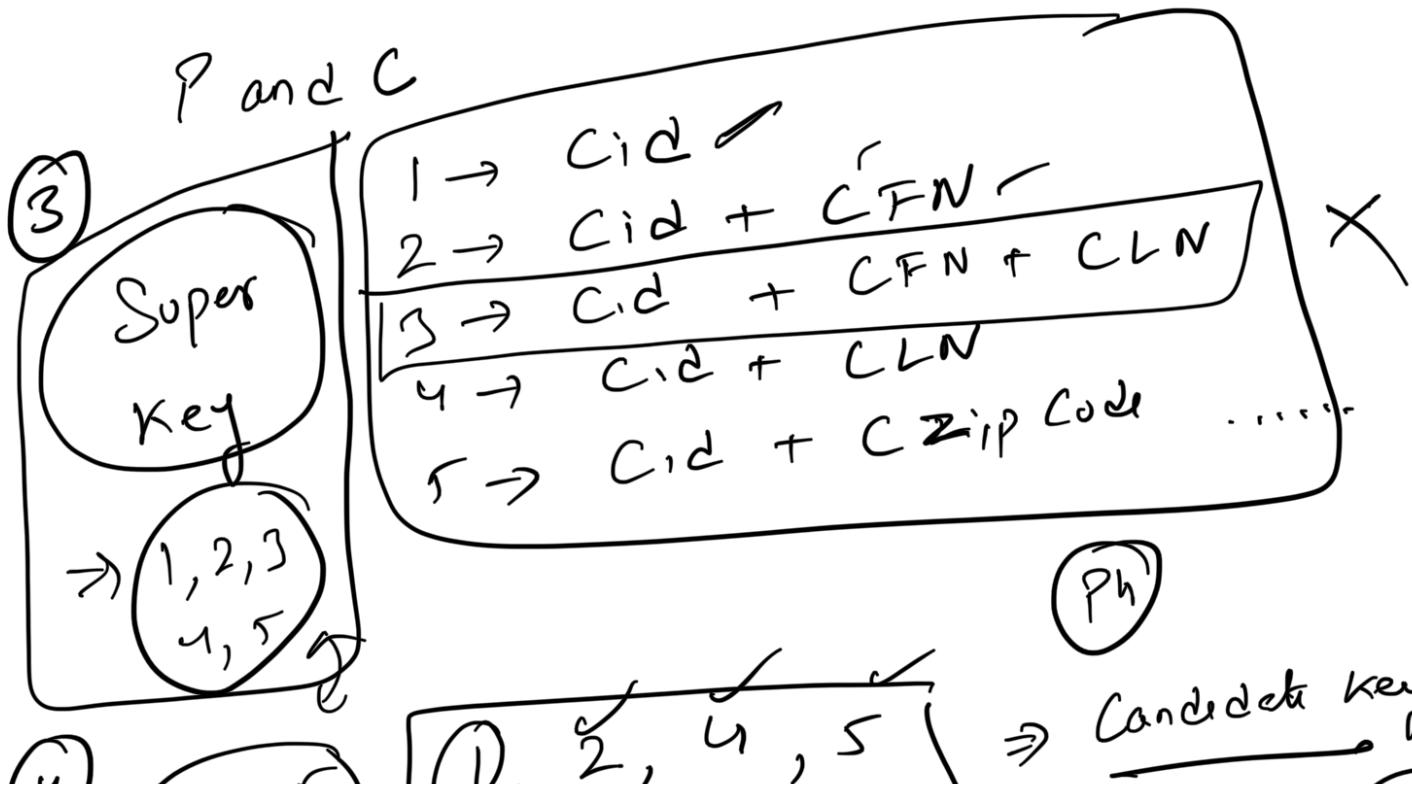
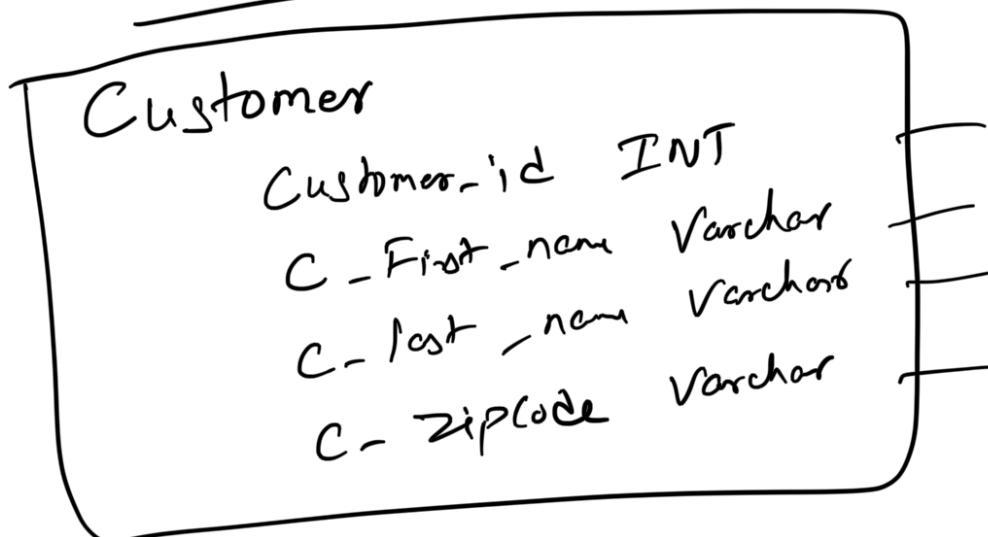
MySQL

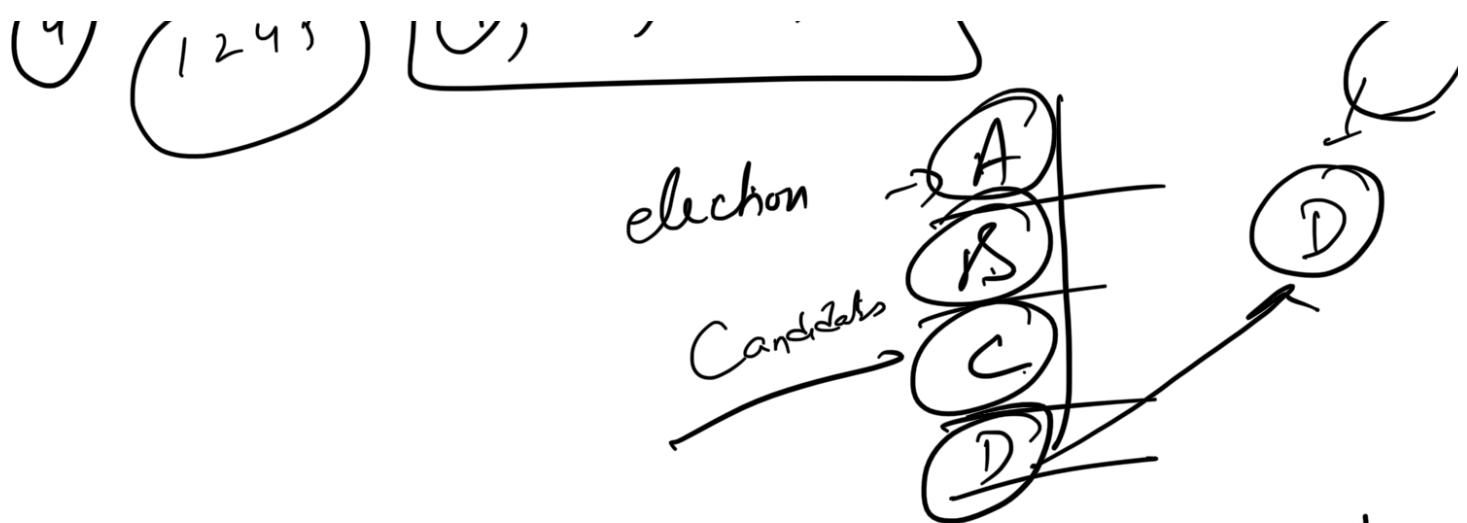
4 slices

... - Tab4

- * \Rightarrow Meaning =
- 2 ① Primary key \rightarrow 1 per table, unique
- 2 ② Foreign key \rightarrow can be 1 or more,
act like the data from
multiple tables

Database Engineer



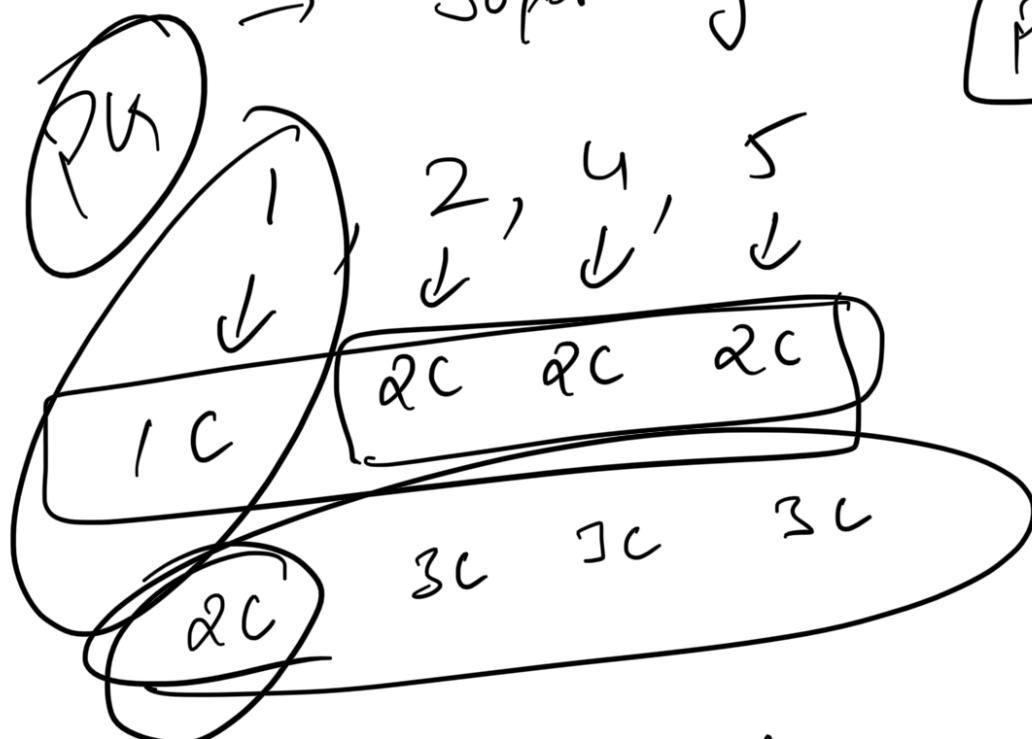


Uniques

A, B, C
D, E, AB, BC
CD, ABC ...

A, B
C, D
E

Super Key

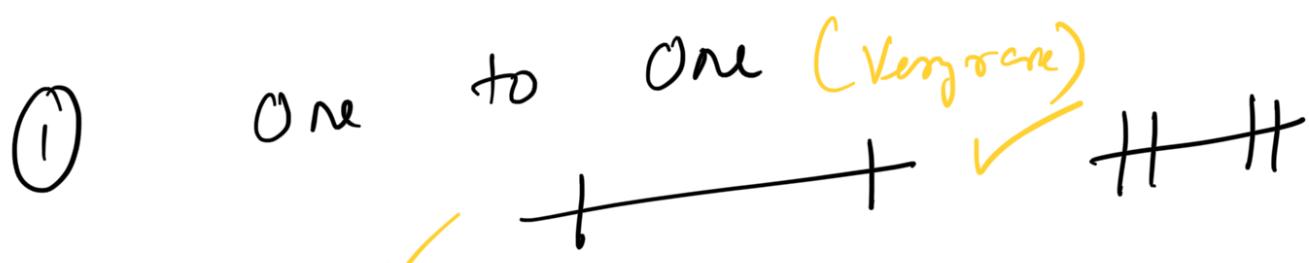


PK = 1C

2C
3C
4C
5C

1C ... to one

- ① one to one
- ② one to many
- ③ many to one
- ④ many to many



→ It is a relationship where a record in 1 table is associated with exact 1 record in other table.

Customer

PK	id	FN	LN
→	1	Akash	Tripathi
→	2	Abdul	Shah

Customer_address

PK	aid	id	Street	City	State
001	1	1	7th	Ban	KA
002	2	2	9th	Hyp	AP
003					

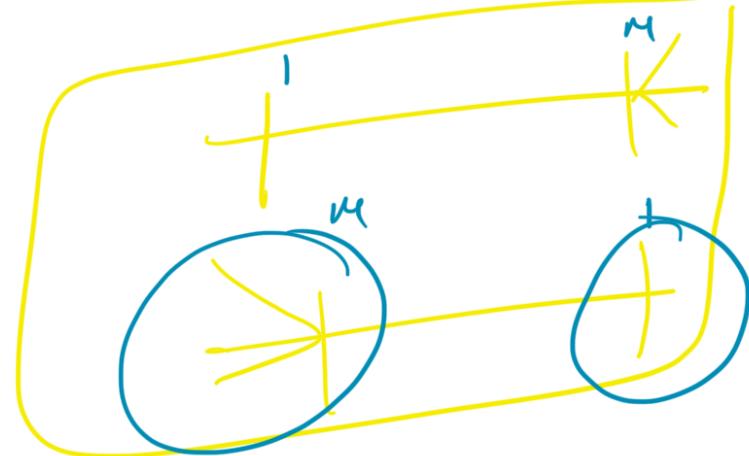


→ One record in a table can be associated with one or more records in another table in order /

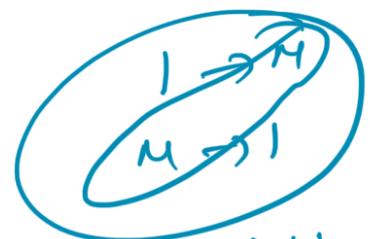
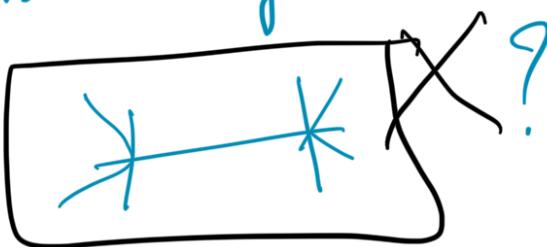
Customer C_id in account C_id

1	Harsh	D
2	Pulkit	D
3	Kanika	B
4	Arun	C
5	G	P

001	iPad Pro
002	iPad
003	Macbook
004	Jeans
005	AirPods
006	iWatch Ultra



③ Many to Many



→ occurs when multiple records in a table are associated with multiple records in another table

→ PK People FK

Pic	Bid	FN	LN
-----	-----	----	----

Banks

R_id	Review	Location
------	--------	----------

1	I	Soham	R		1	ICICI	M
1	2	"	"		2	SBI	M
1	5	"	"		3	Axis	A
2	1	Soham	A		4	Canara	B
2	5	"	A			Kotak	M



$$M : m \times$$

Solution :- third table
 → Bridge table } Junction table
 Junction table Rules



① PK = More than 1 column (2 cols)

② PK = $P_{id} + B_{id}$

③ PK for both tables has to be there but you can add any additional column

but this col won't be a part of PK.

✓

PK	People	LN
P1d	PN	LN
S	12	12

✓

PK	P_id	B_id	location
1	1	1	M
2	2	2	S

PK, Bank

PK	B2	BN	L
1	I	I	B
2	S	M	M

<u>U</u>	<u>S</u>	<u>I</u>
2	S	A
3	H	K



J	A	M
Y	C	S
S	K	A

PK = more than 1 column = Composite Primary Key

