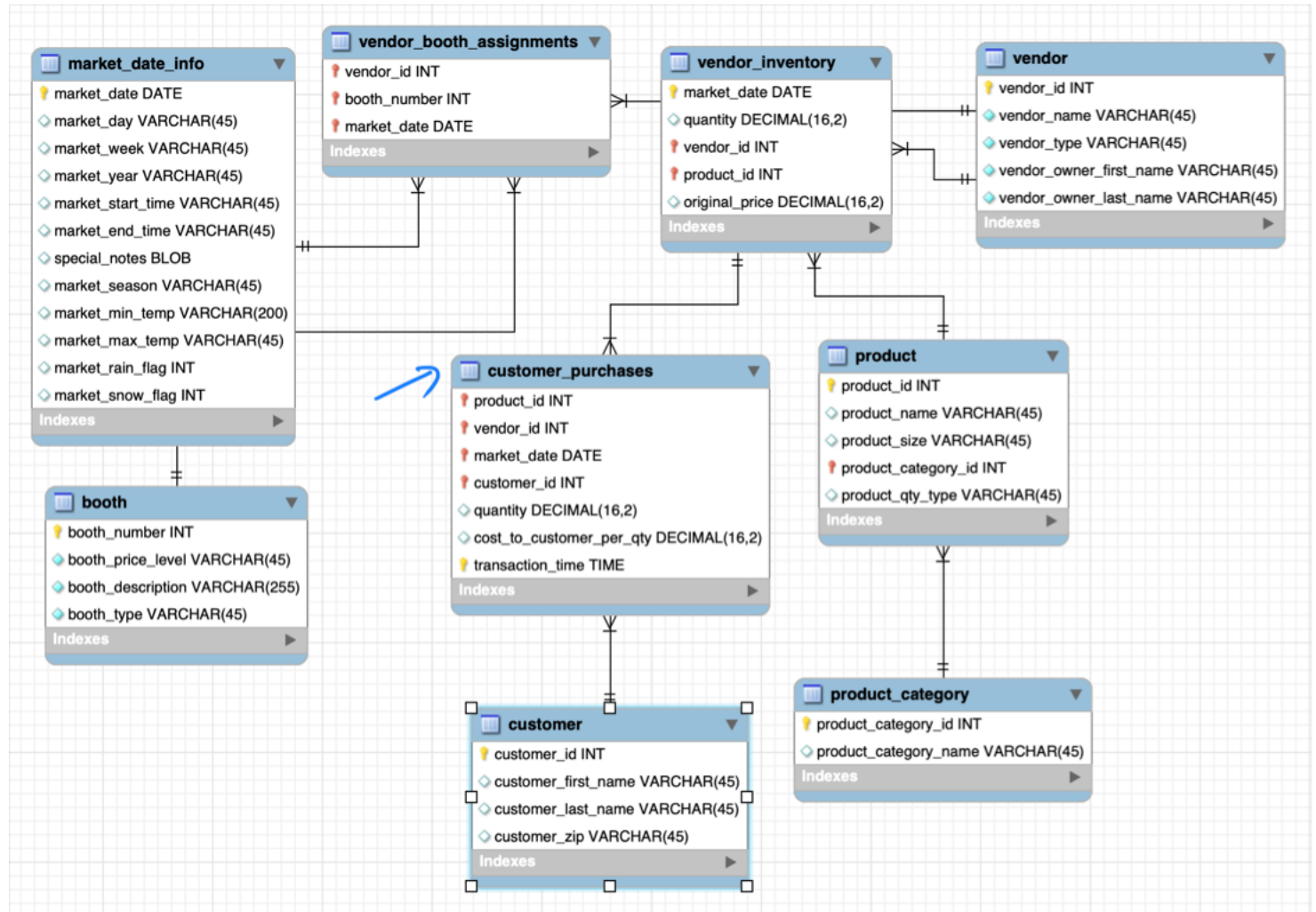


Agenda :

- a. Intro to DBMS and SQL
- b. Filtering and Subqueries



① DBMS / RDBMS

DB

MS

→ CRUD

R
C

1970 - IBM-DB2

Oracle, MySQL, PostgreSQL
MS SQL, SQLite

①

SQL DB

RDBMS

②

NoSQL DB

(a)

Columnar storage

CK, Hbase

(b)

Document storage

MongoDB

(c)

Key value storage

Redis

(d)

Graph storage

Neo4j, Neptune

2010

- IN
- WA
- FB
- TW
- TikTok
- LinkedIn
- Youtube

Youtube

Views

vid	vid	Streaming	Actions
-	Di007	-	-

Deepak | Ankit | Rajat
Pyshu

Oracle 2012

Gangnam style

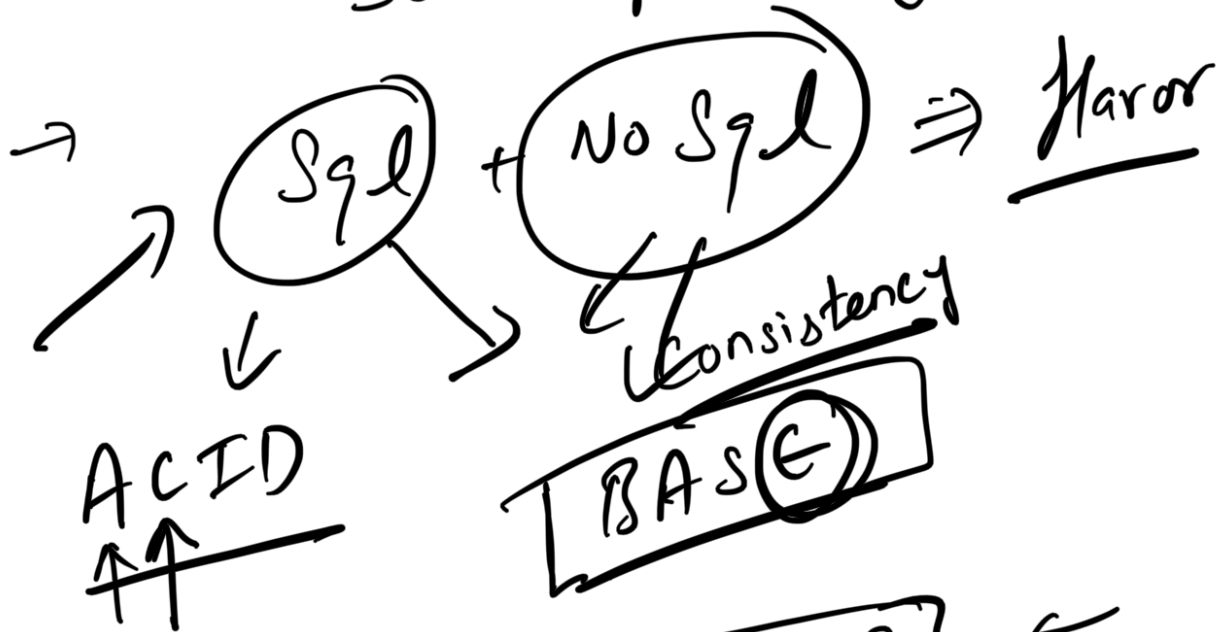
Upsert

SQL
2012
Schema

→ 4 colu

NoSQL → R1 → □ □ □ □ □
 R2 → □ □ □ □ □ □ □ □ □ □
 R3 → □ □ □ □ 1M

Schema flexibility



9:31 CR → 29,766,792
 29,766,7926
 29,802,802

Reliance → Fresh → (DE)

Day 1 → ① Big Query → Data Analysis

Schema

Big Query - Google Cloud Datawarehouse
 ↓ Playground

Customer

- ① ph.no
- ② CFN + CLN
- ③ Cid, ph.no
- ④ Cid
- ⑤ FN + LN
- ⑥ CFN + CLN + ph.no

Cid
CFN
CLN
C.Phno
C.Address

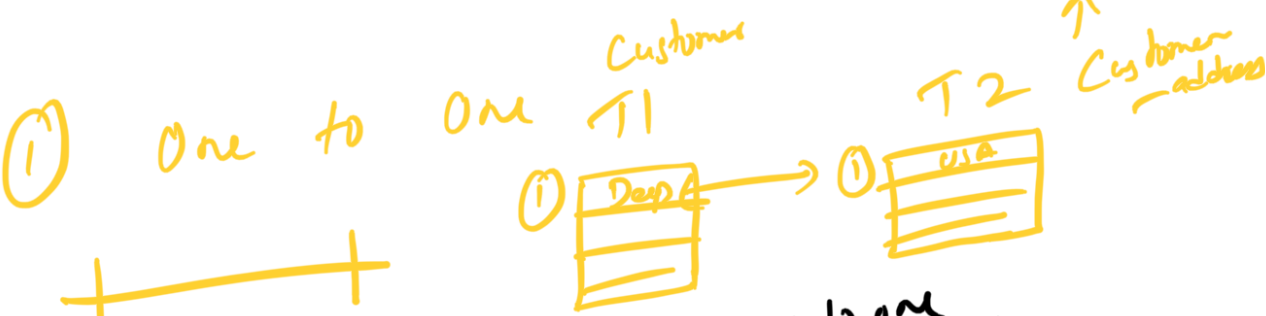
① Super Key

② 5, 6, 2, 3
↓
Candidate key

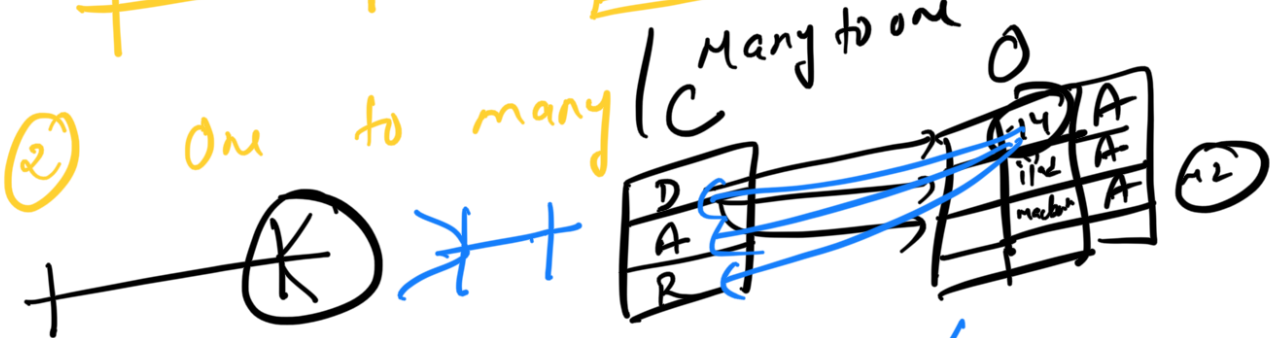
③ Cid
↓
Primary key

Superkey - ① ④ ⑦
⑦ CFN + CLN
⑧ Composite Primary key

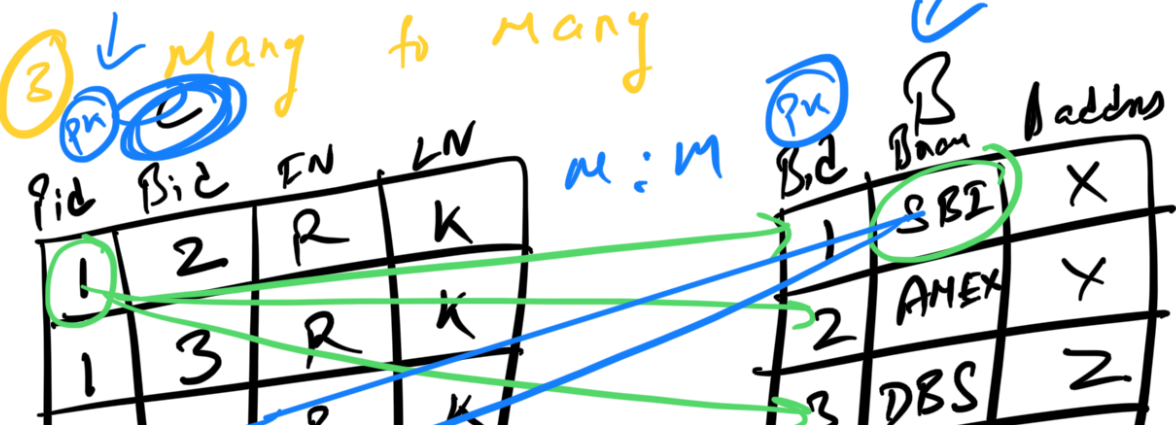
Ques



Ques



Rakesh



1	1	A	R
2	2	A	R

4	BoJA	0
5	ICICI	

X many to many

Junction Table (Mapping)

Cid	Bid
1	2
1	3
1	1
2	1
2	4

PK = (Cid + Bid)

PK Cid	CFN	CLN	CA
1	R	K	USA
2	A	R	UK
3	R	S	Fr
4	X	-	-
5	-	-	-

PK Bid	Bank	Address
1	SBI	
2	AMEX	
3	DOS	
4	ICICI	
5	HDFC	

Database

SQ L



are you how? →

→ how are
Grammar Rules

SQL				
DDL	DML	TCL	DQL	DCL
→ Create → Drop → Alter → Truncate	→ Insert → Update → Delete → Lock	→ Commit → Roll back → Savepoint	→ Select	→ Grant → Revoke

① SELECT [all cols, some cols]
 FROM T
 WHERE (filter)
 Group By (col, cols)
 order By (col, cols)
 limit (n)

Product

P_id	P_id	P_id	P_id	P_id	P_id	P_id
①	②	①	②	①	②	①
②	①	②	①	②	①	②

① orders

by Product

order by

Pid

↓

Pid desc

Pid

3		2	2	1	2	1
4		1	3	2	3	2
1		1	4	1	4	1
6		3	6	3	6	3

