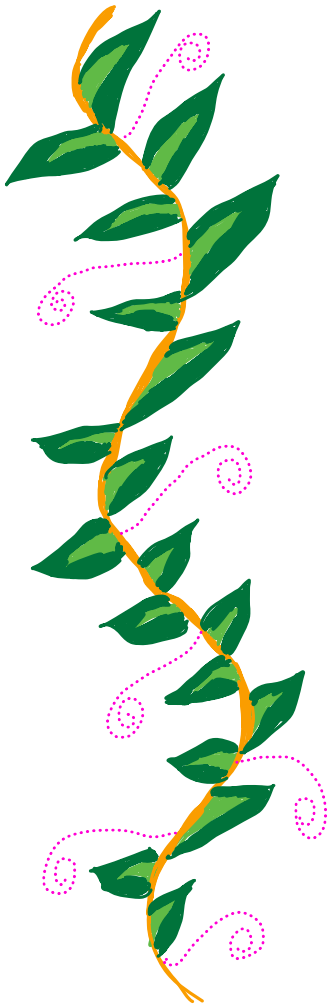


Agenda :

- What is Database
- Why are we studying it
- Scaler curriculum for SQL
- Types of Databases
- Intro to RDBMS
- Intro to keys
  1. Super keys } today
  2. Candidate keys
  3. Primary keys } Next
  4. Composite keys
  5. foreign keys
- Guide for setup & installations

People :

mobile no.
photos
grocery list
bills
text

Applicatn

Google docs
excel
notion
contacts
to_do_list

Scaler

id	name	psp	attendance
1	Rahul	98	90
2	Suman	99	100
3	Ankit	love	80
4	Surya	88	95

=> open -> line
=> read -> split
=> write -> compare

It's cumbersome to perform operations & get some informatn here.

Drawbacks :

1) Inefficient :

TC ~ O(N)

→ 10^{10}

→ 10^8 ~ 1sec

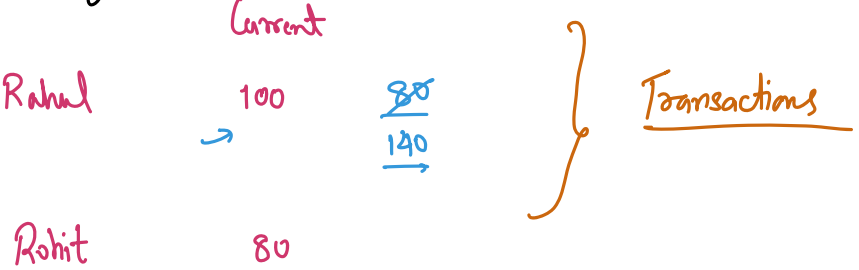
→ time = 100 sec

→ log(N) =

2) Data Integrity :

-> lets say in your psp if you find str -> data integrity.

3) Concurrency :



4) Security issues :

→ passwords etc.

→ **What is Database ?**

* A database is a collection of related data.

Air base : Aircrafts
Army base : Army personnels
Naval base : ships

Scaler :

Students Classes TA ....

→ Advanced data structures : B-trees.

→ **Database Management System :**

* It is a software which helps us to manage data efficiently.

* SQL, postgress etc.

→ C reate
R ead
U pdate
D elete

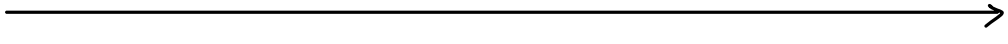
⇒ 7_10 days please attempt contest.

⇒ 75 day hard challenge ? consistency

⇒ 45 hard days challenge ?

↳ You have to study SQL & solve Assignments / HW

⇒ 8130326501 : whatsapp only



* Curriculum :

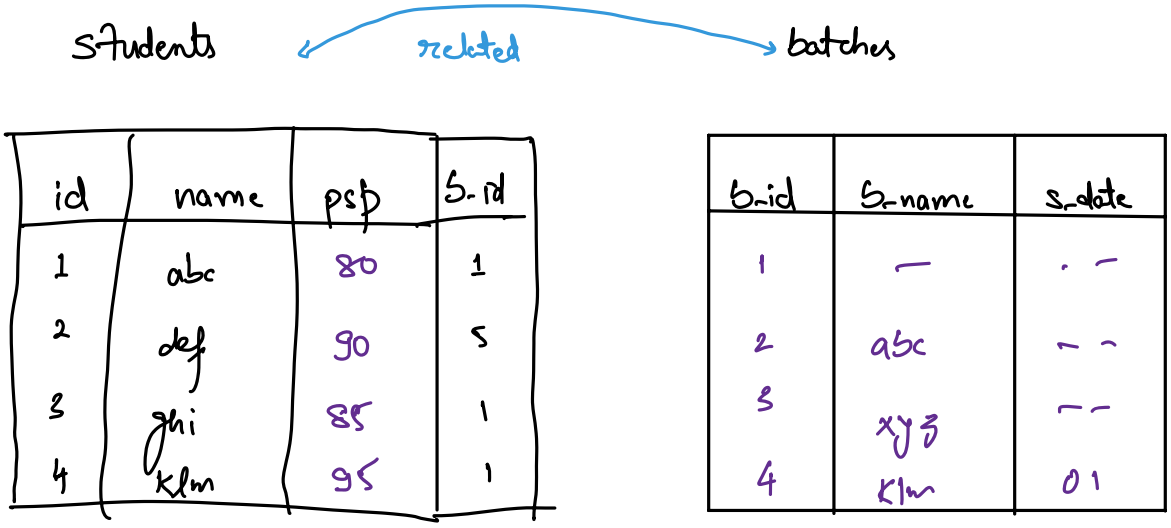
- → Intro to DBMS & SQL
- → CRUD
- → JOINS
- → Aggregate
- → Subqueries & views
- → Indexes
- → Transactions → 2
- → Schema Design → 2 → Netflix, Scaler

Mock interview

* Types of DBMS :

1) Relational DB → SQL

→ Here, we store data in form of inter-related tables.



2) Non-Relational DB → No SQL # HLD

→ They don't follow relation module

Ex: doc, key_value, graphs etc.

→

* **Properties of RDBMS :**

1) Stores data in form of inter-related tables

2) Every row is unique :

↗ students

id	name	psp	attendance
1	Rahul	98	90
2	Suman	99	100
3	Suman	99	100
4	Surya	88	95

3) All values in a col^m holds same datatype.

4) All values are atomic

→ We shouldn't put list of values in a cell.

Students

id	name	phn	attendance
1	Rahul	8150, 2857	90
2	Suman	1234	100
3	Suman	5678	100
4	Surya	91011	95

every cell should have single value

5) Column seq. is not guaranteed :

→ Data in background is stored in any non_sequencial form.

PS: In MySQL it follows the sequence.

6) Row sequence is also not guaranteed

PS: In MySQL it follows the sequence.

7) All column names are unique.

* Keys in Relational Databases :

id	name	psp	attendance
1	Rahul	98	90
2	Suman	99	100
3	Suman	99	100
4	Surya	88	95

- Keys help us to uniquely identify a row

1. Super keys
2. Candidate keys
3. Primary keys
4. Composite keys
5. foreign keys

1 Super keys :

Students table

id	name	psp	attendance
1	Rahul	98	90
2	Suman	99	100
3	Suman	99	100
4	Surya	88	95

→ name ✗

→ psp ✗

→ name, psp ✗

→ id ✓

Definition : A Super key is a combination of col^{m} using which we can uniquely identify a row.

Quiz 1 :

a) s_id , c_id ✓

b) f_name , l_name

Quiz 2 :

a S_id , C_name ✓

b first_name , age ✗

c Last_name , age ✗

d C_id , C_name ✗

PS : Only S_id is also a Super key.

Quiz 3 :

a) S_id , f_name ✓

b) S_id , Age ✓

c) S_id , C_name ✓

d) All of the above ✓

→ MYSQL Server 8 & above

→ MySQL Workbench

→ Sakila DB