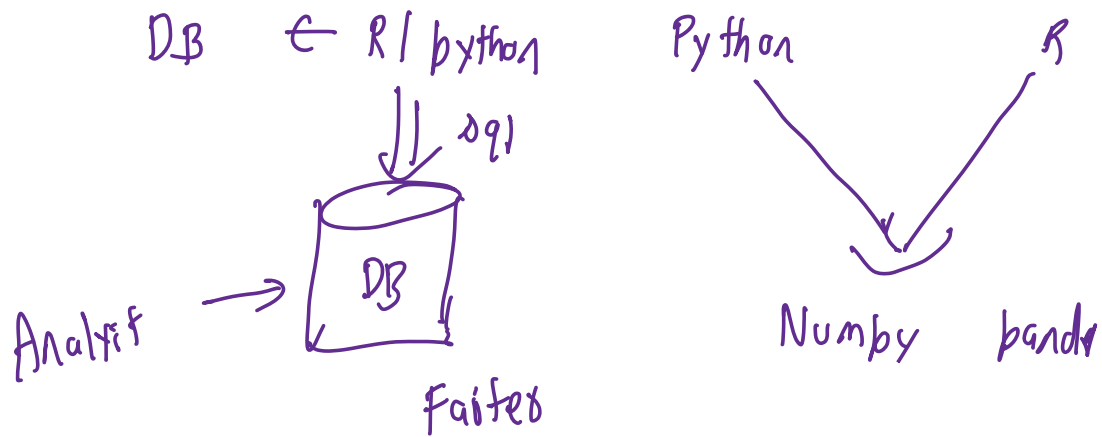
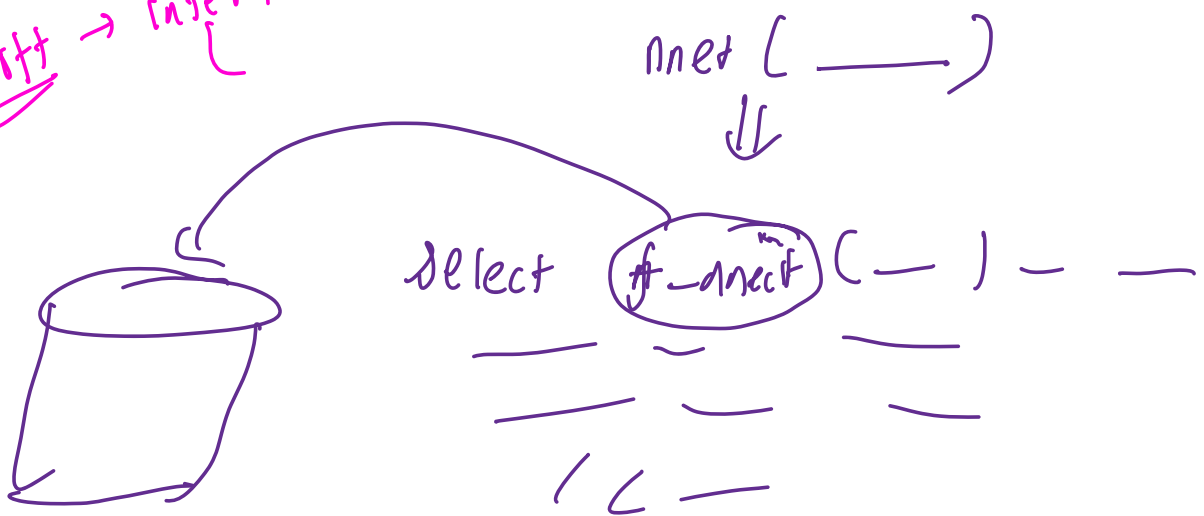


SQL → DB  
└→

Oracle DB

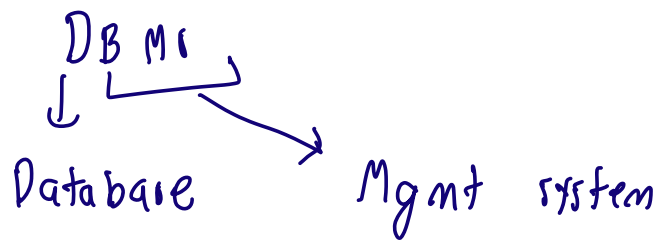
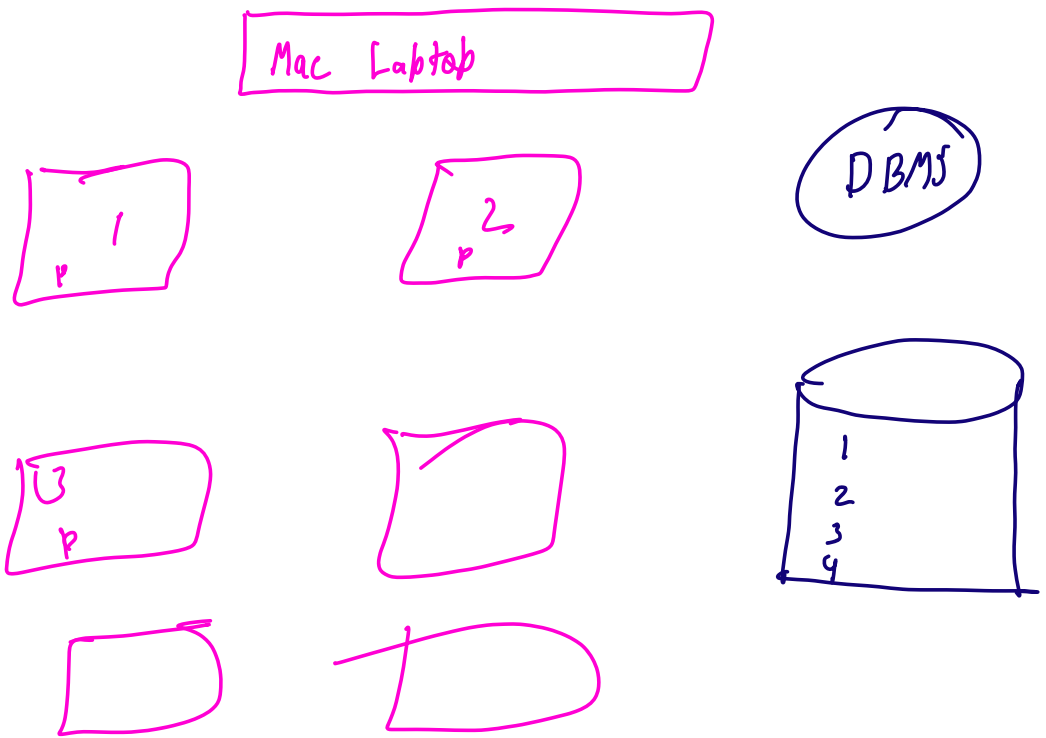


Mrftt → intern

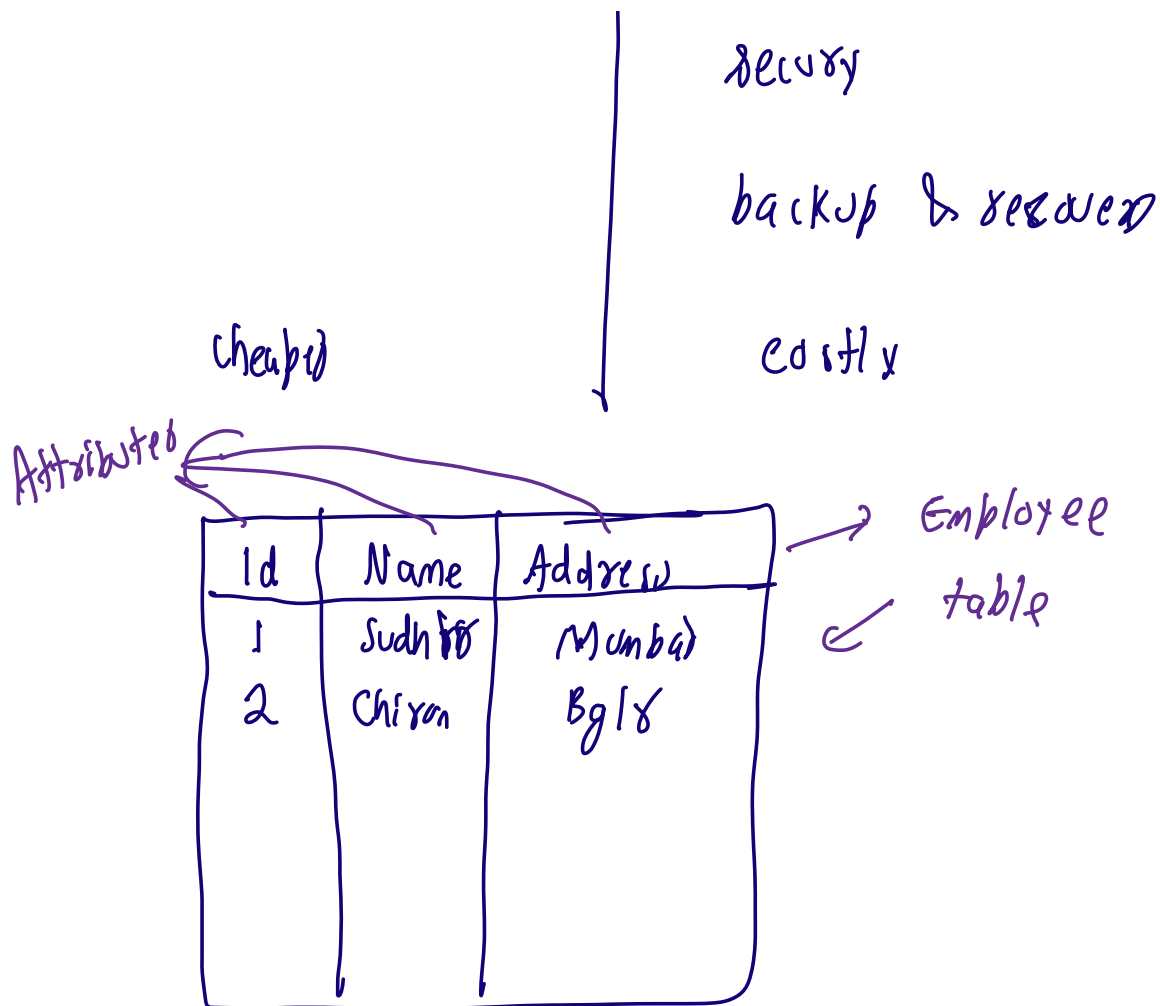


sql / — — — — —

Amazon



| File system | DBMS                    |
|-------------|-------------------------|
|             | management              |
|             | constraints (Redundant) |
|             | Efficient query         |



Employee (id, Name, Address)

Keys →

Cust\_details

(cust\_id, fname, lname, city, Email, ph\_no, SSN)

orders (order\_id, order\_details, Price, cust\_id)

## Super Key

{ cust\_id }, { Email }, { Ph\_no }, { SSN }

{ cust\_id, SSN }, { Email, SSN },  
{ Email, Ph\_no }

## Candidate Key

NULL

{ cust\_id, }

## Primary Key

: NULL x

cust\_id

## Foreign Key

## one - one relation

Country

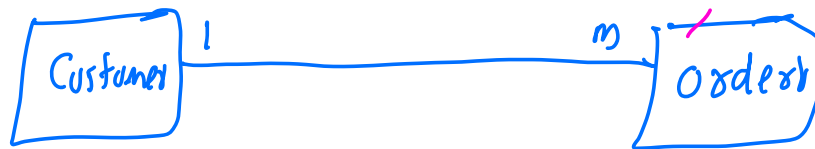
president

( country\_id, name, region, pres\_id )  
1, India, —, 24



(prei\_id, name, age)  
24, Dr. , JJ

One to many relationship



(cust\_id, name, age)

(order\_id, date, total, cust\_id)

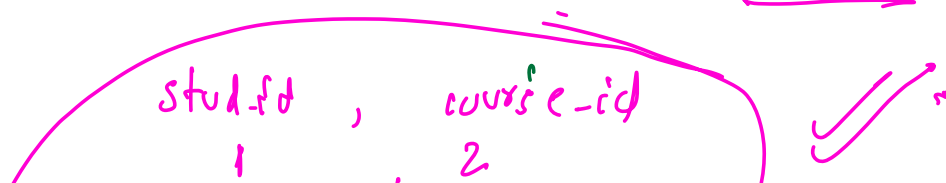
Many - Many

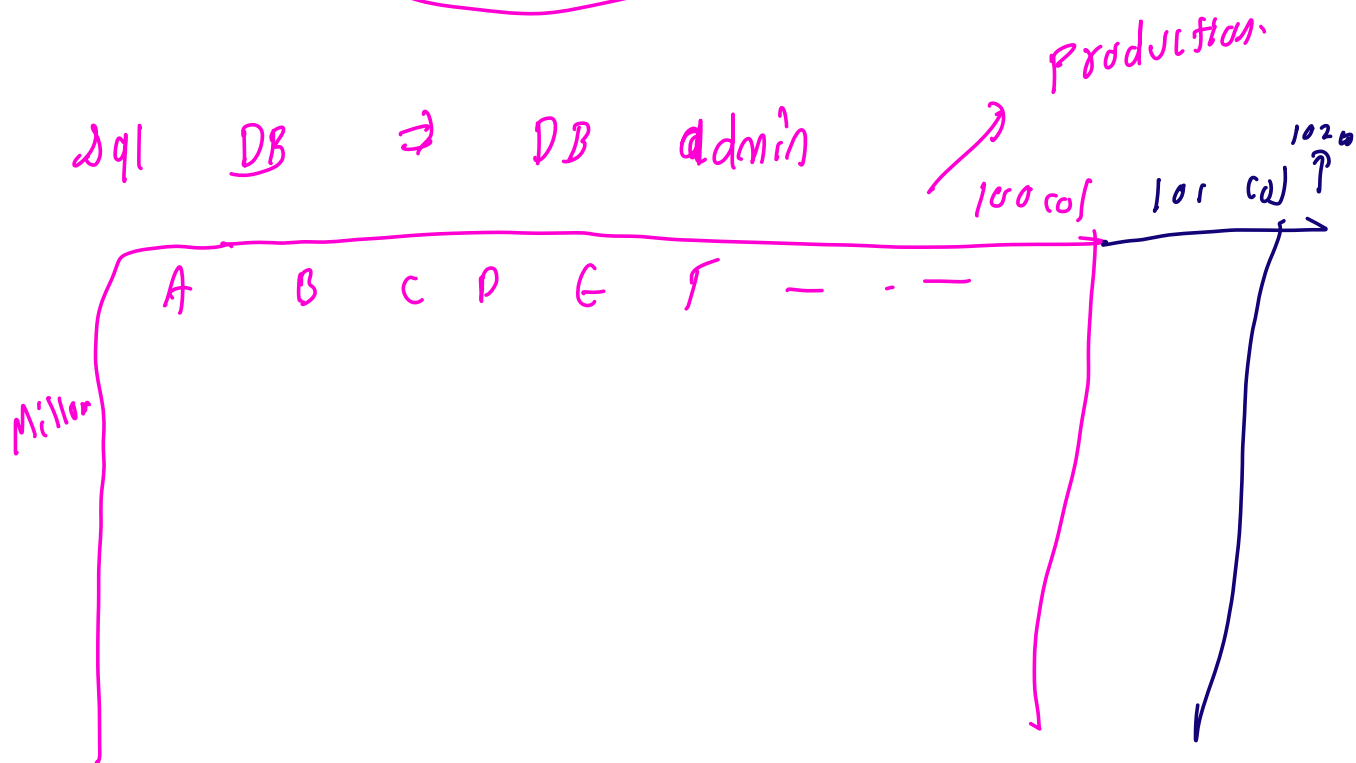


(stud\_id, name, age, email)

(course\_id, title)

stud - course (stud\_id, course\_id, grade)





Amazon

| Prod_id | Name    | size   | color | gender | Brand | display type | screen |
|---------|---------|--------|-------|--------|-------|--------------|--------|
| 1       | t-shirt | XL     | Red   | M      | puma  | —            | —      |
| 2       | tv      | 40inch | —     | —      | —     | ⊗            | ⊗      |

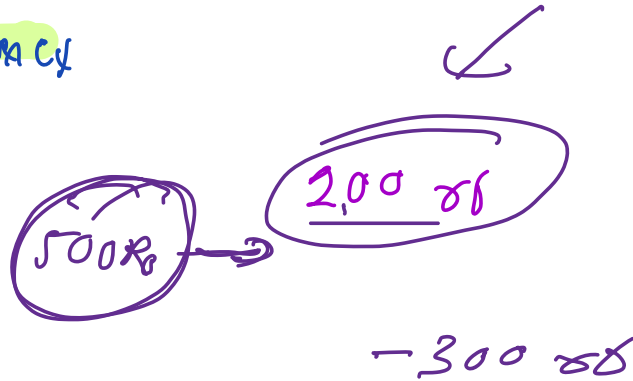
NoSQL DB

ACID

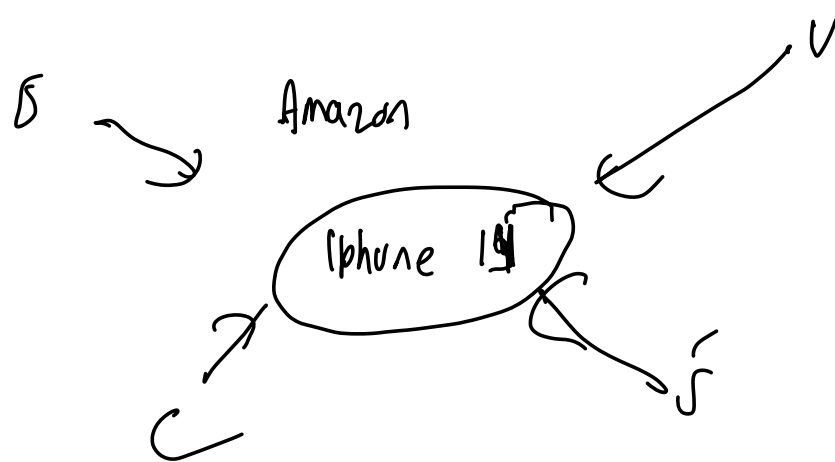
Atomicity

Atom

Consistency



Isolation



Durability



