

Today's Agenda:-

Req Gathering ✓

Class Diagram ✓

- Schema Design.
- Coding the models
- Coding the controllers

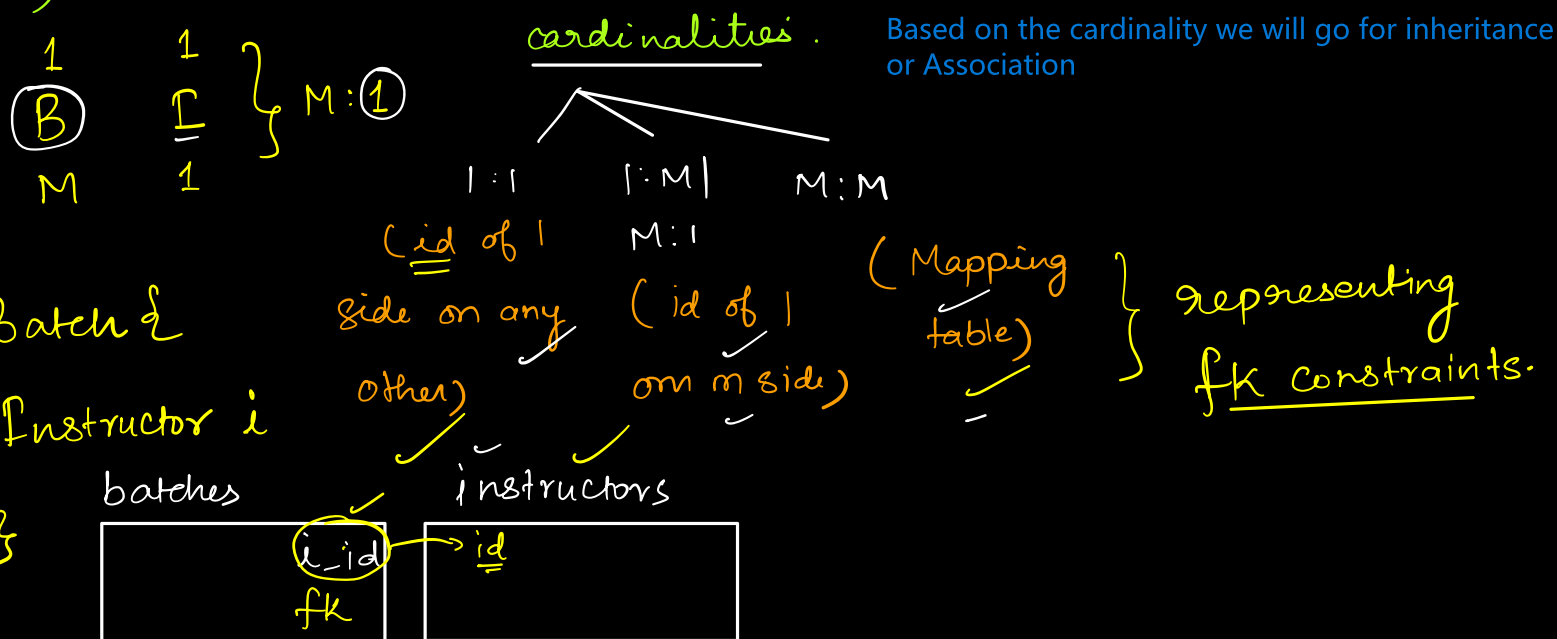
↳ DTO (Data transfer objects)

Schema Design

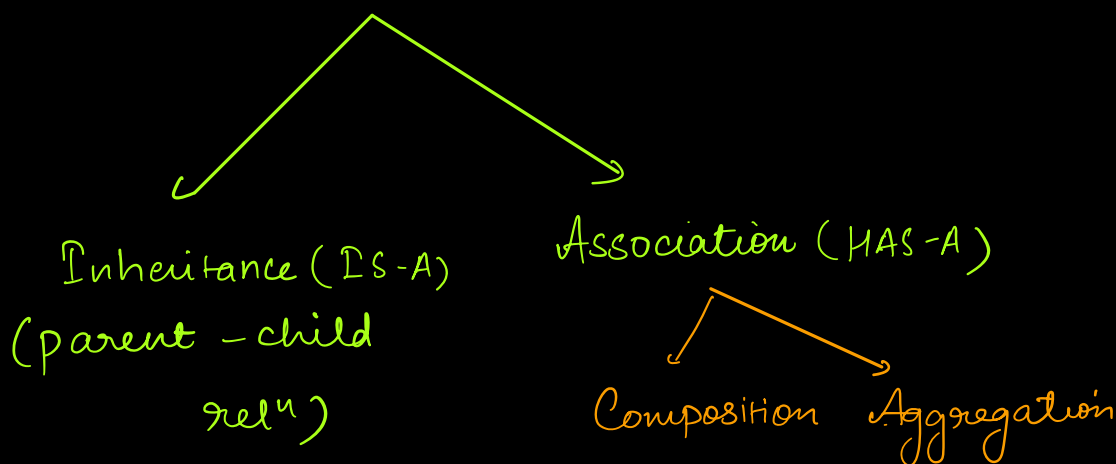
1) For all the classes in the Class Diagram, create a table for them.

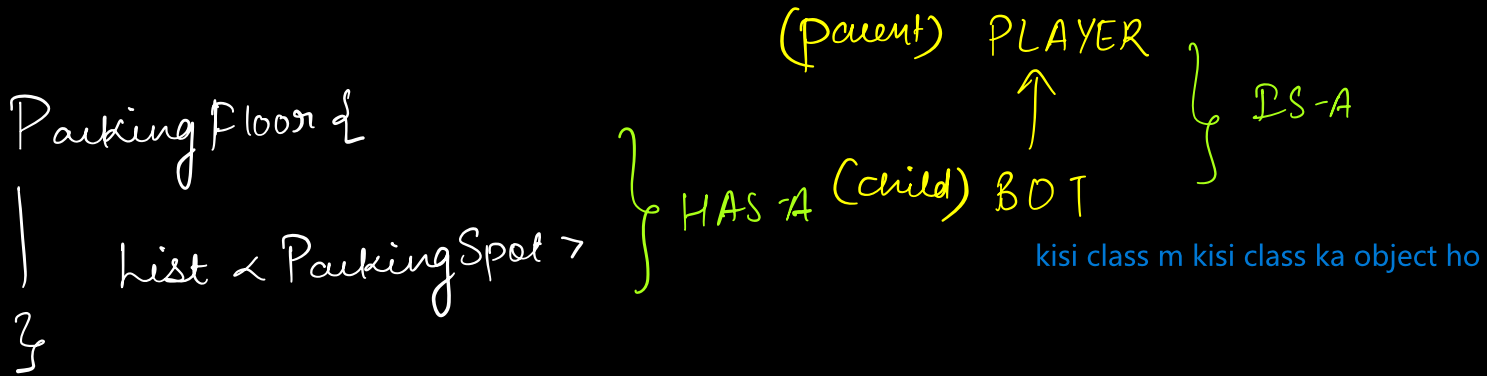
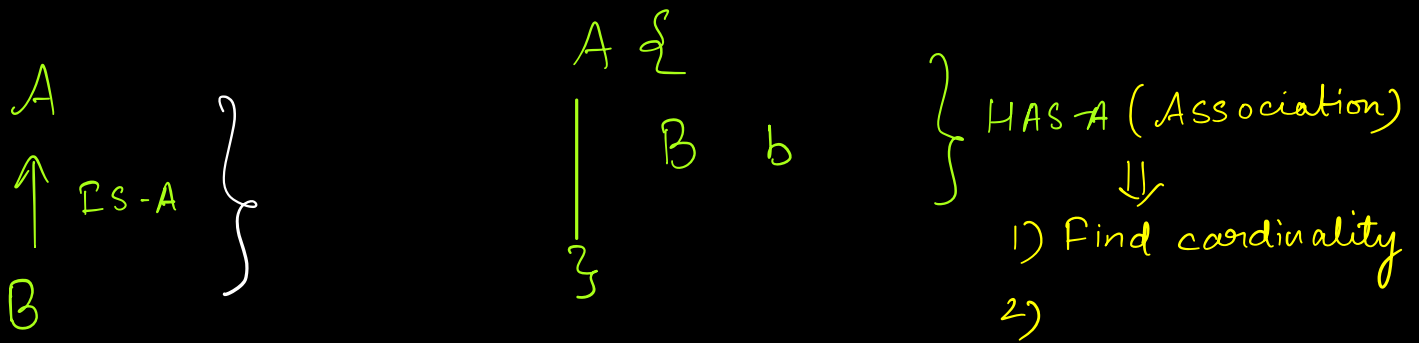
2) For all the primitive attr, represent them as columns in the corresponding table.

3) For all the non primitive attr, find relationships / Association

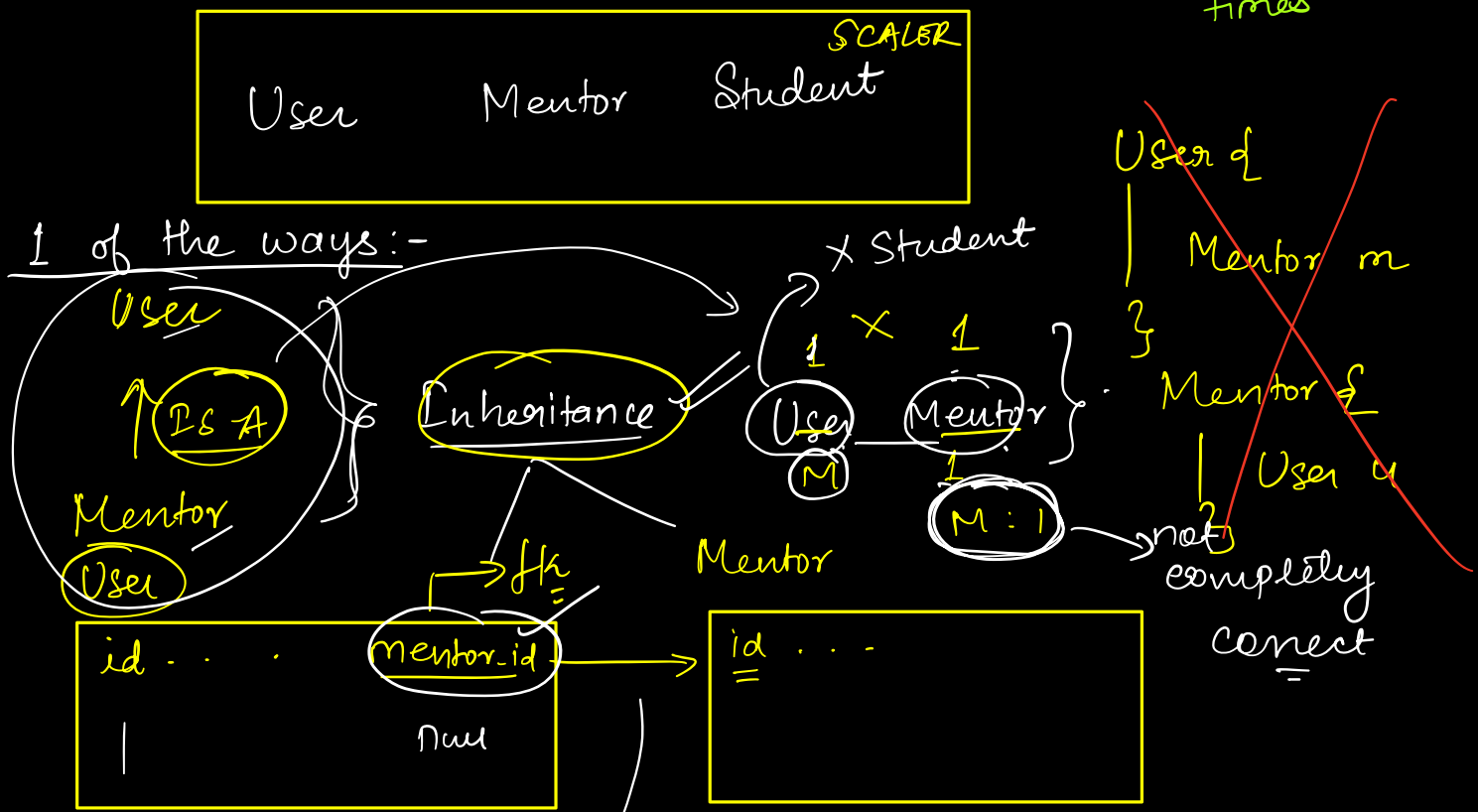


There can exist 2 types of relationships b/w classes





Representation of Inheritance is also done through fk most of the times



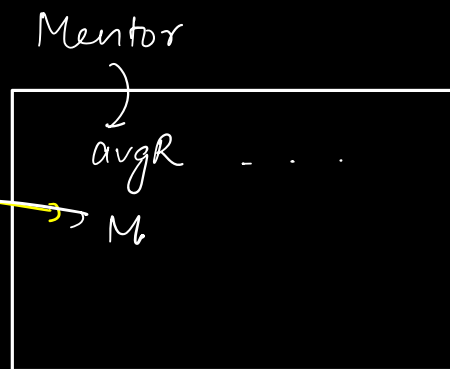
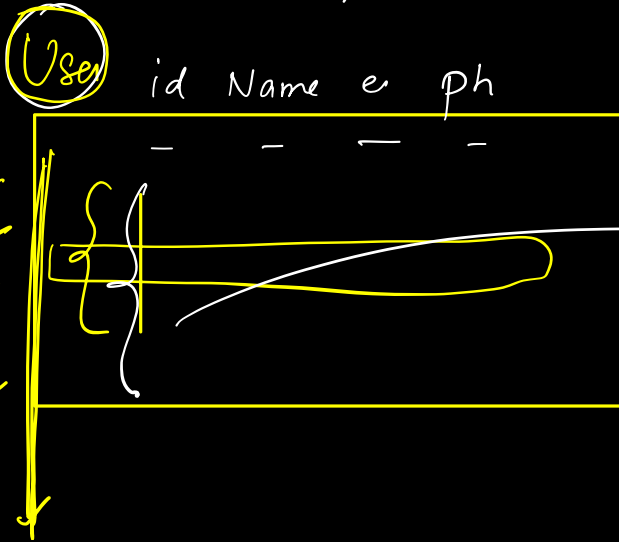
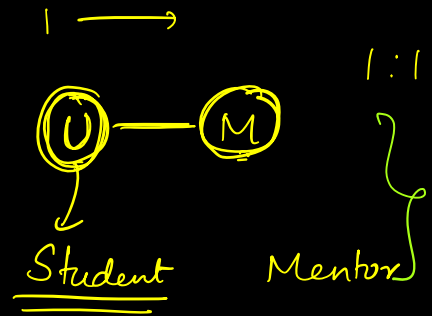
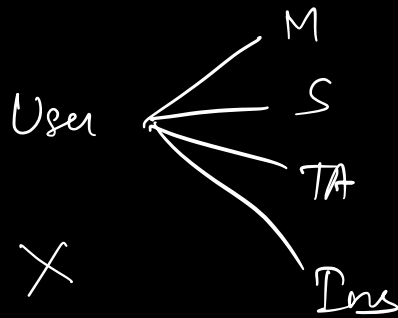
multiple users can have a mentor but 1 user can not have multiple mentors and its not necessary that every user will have mentor, he may be student or mentor itself. so cardinality is M:1 and for some mentor_id it can be null.

uniquely identifies a row in the other table.

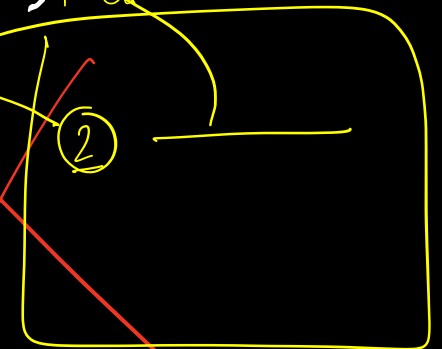
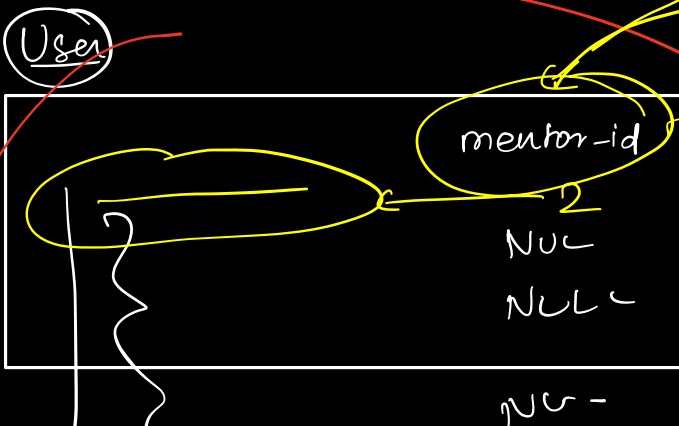
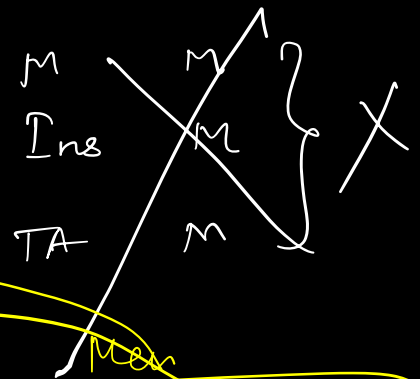
Student Mentor

M:1

{fk constraints



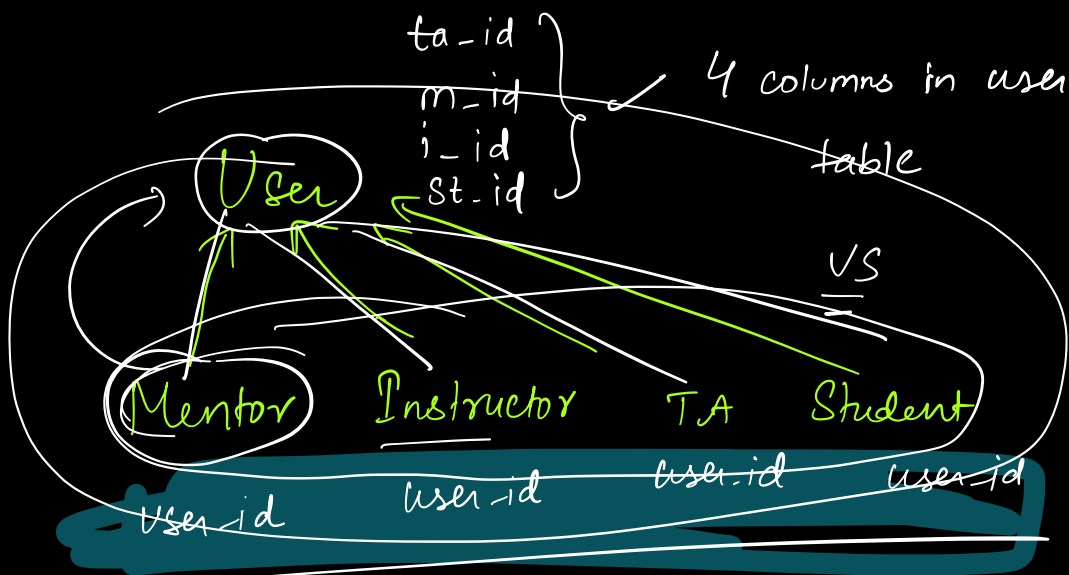
SSMMITP



1M users at Scales

Correct way
Not to
represent inheritance
in tables.

add the ref of parent in the child



Adding parent id in the child table is correct way

Normalization

Design

Inheritance

User ✓

id	Name	email	pw	address
(21)	Vinay			

Mentor ✓

id	avgRating	s/p	expertise
(2)	✓	✓	✓

Instructor

id	avgR	Salary	user-id
2	4.9	10€	(21)

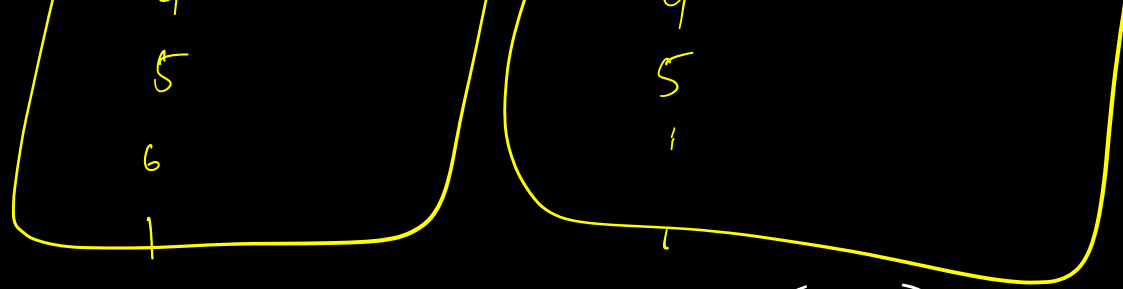
St

id	psp	...	user-id
1			

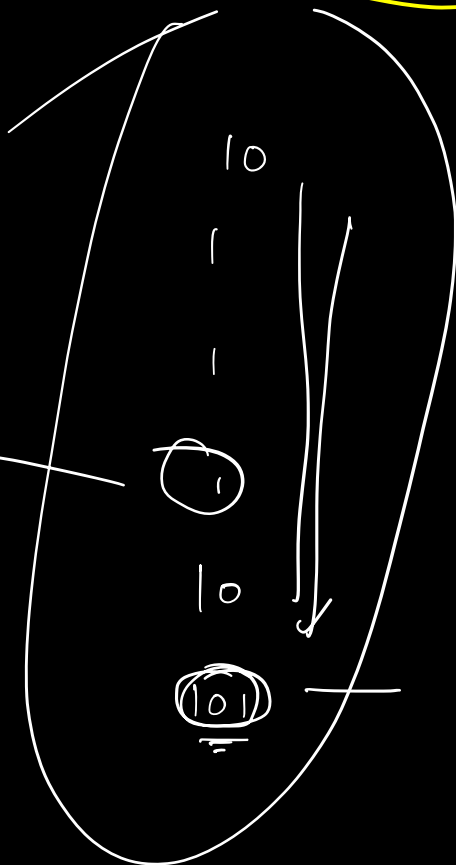
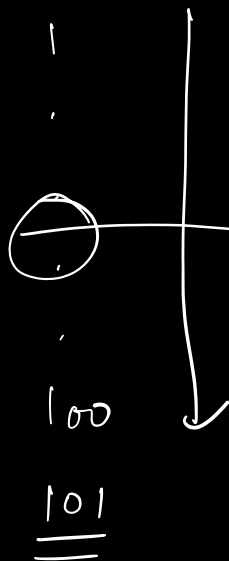
M S ✓

1
2
(3)
4

1
(2)
3
4



84



11-100 ! ? x

q →

i_id

105

205

^{next}
205

User



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13

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7
8
9
10

11th x

2

[]

x
x

Representing enums in tables

enums as data-types in
the SQL DB

ParkingSpot Status

AVAILABLE

BLOCKED

UNDER MAINTAINENCE

ParkingSpot {

ParkingSpot Status

}

PS

enum

(PS-S)

PSS-2 ✓

PSS-3 ✓

PSS-4 ✓

2nd (suggested)

- 1) For every enum, create a separate table
- 2) Every table should have 2 columns - (id, value)
- 3) In the tables, you can represent enum_id as fk.

disk
= MT

ParkingSpotStatus

id	value
1	BOOKED
2	V-M
3	BLOCKED

String/Vanchar

ParkingSpot

1	2	39	PSS
			2

int (5k)

int

Models \Rightarrow objects

Class
↓

Blueprint of entity
↓
real
world
object

class BaseModel {

id
createdAt
lastModifiedAt
}

Audit / logging

konsa object kb bna kha update hua sari info.. so it will help in logging purpose

extend BaseModel