

## Schema Design - II

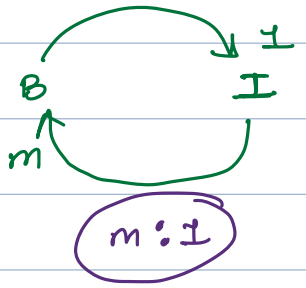
- scalar design
- case study → Netflix

### Tables

- 1) name → create table
- 2) Attributes / PK
- 3) Relations  
↓  
cardinality

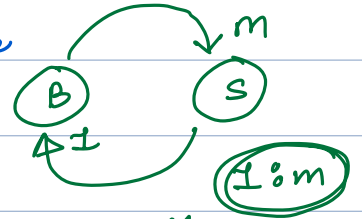
- ① Scaler will have multiple batches.

About each batch we have to store their name, start month, current instructor.

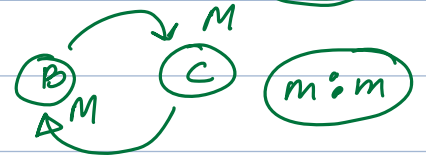


- ② Each batch of Scaler will have multiple

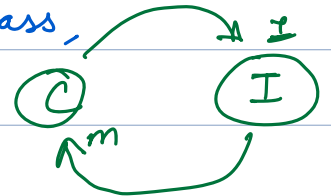
Students



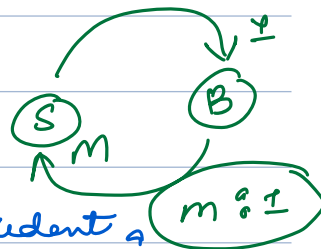
- ③ Each batch has multiple classes



- ④ For each class I have to store the name of the class, date and time of the class, instructor of class.



- ⑤ For every student we store their name, grad year, university name, email, phone number.



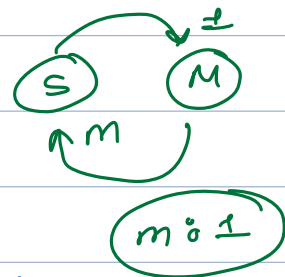
- ⑥ Each student has a buddy who is also a student, we can allow one student to be the buddy of multiple students.

- ⑦ A student may move from one batch to another

- ⑧ For every batch a student goes to we need to store the start date

9

Every student is going to have a mentor. For every mentor we store their name, and current company.



10

We have to store the info about mentor sessions (time, duration, student, mentor, stud-rating, mentor-rating)

$MS_m:1^S$

11

For every batch if it is ACADEMY or

$MS_m:1^M$

DSML batch

↓  
Data Science  
ML

• batches

batch-id	name	start month	instructor-id
----------	------	-------------	---------------

• Instructor

I-id	name	avg-rating	email
------	------	------------	-------

• students

s-id	name	grad-year	univ	email	phone
------	------	-----------	------	-------	-------

batch-id,  
buddy-id,  
mentor-id

• classes

class-id	name	scheduled-time	instructor-id
----------	------	----------------	---------------

• mentors

m-id	name	company name
------	------	--------------

• mentor\_sessions

mentor-session-id	time	duration	stud-raty
-------------------	------	----------	-----------

mentor-raty

stud-id,  
mentor-id

## batches - classes

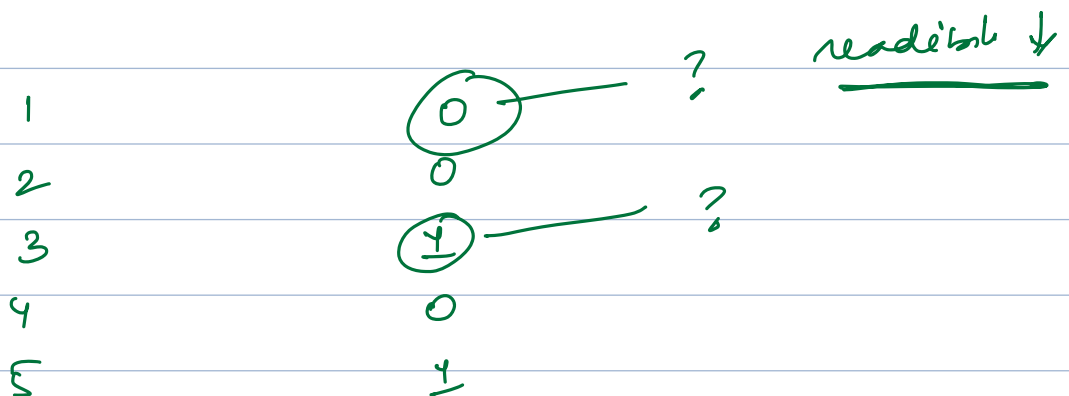
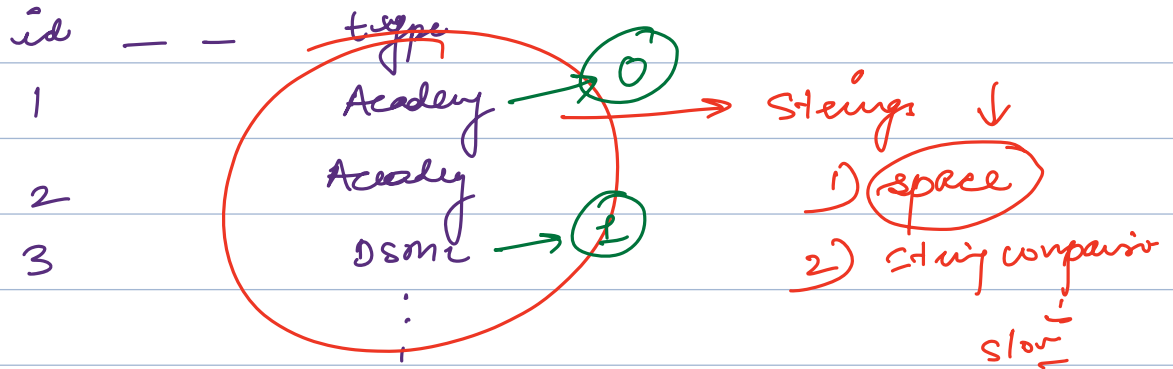
batch-id	class-id
----------	----------

## Student\_batches

st_id	b_id	start_date
-------	------	------------

## batch type

### Batches



Batch-types

<u>id</u>	type
1	Academy
2	DSML
3	SST
4	Neonairig
5	FreeExp
6	Maskulu

<sup>a</sup>  
indexes → who taught a patient class?  
↑

## Use Cases

Netflix has users.

Every user has an email and a password.

Users can create profiles to have separate independent environments.

Each profile has a name and a type. Type can be KID or ADULT.

There are multiple videos on netflix.

For each video, there will be a title, description and a cast.

A cast is a list of actors who were a part of the video. For each actor we need to know their name and list of videos they were a part of.

For every video, for any profile who watched that video, we need to know the status (COMPLETED/ IN PROGRESS).

For every profile for whom a video is in progress, we want to know their last watch timestamp.

users

- id
- email
- password

profiles

- id
- name
- user-id
- profile-type-id

profile-type

- id
- value

videos

- id
- title
- description

Actors

- id
- name

watch-status-type

- id
- value

video-actors

- id
- video-id
- actor-id

video-profiles

- profile-id
- video-id
- watch-status-type-id
- last-watch-timestamp

## Use Cases

Netflix has users. → ✗

Every user has an email and a password. → ✗

Users can create profiles to have separate independent environments.

Each profile has a name and a type. Type can be KID or ADULT.

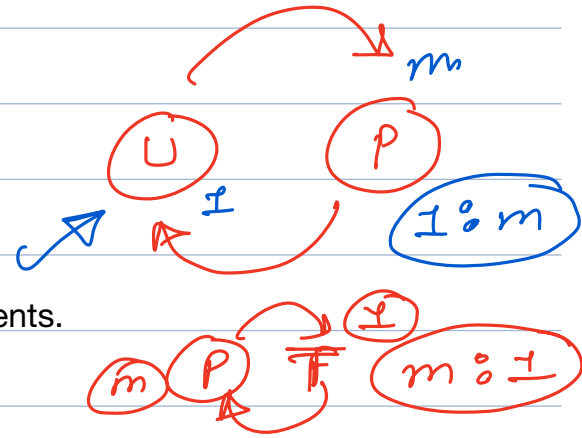
There are multiple videos on netflix. → ✗

For each video, there will be a title, description and a cast.

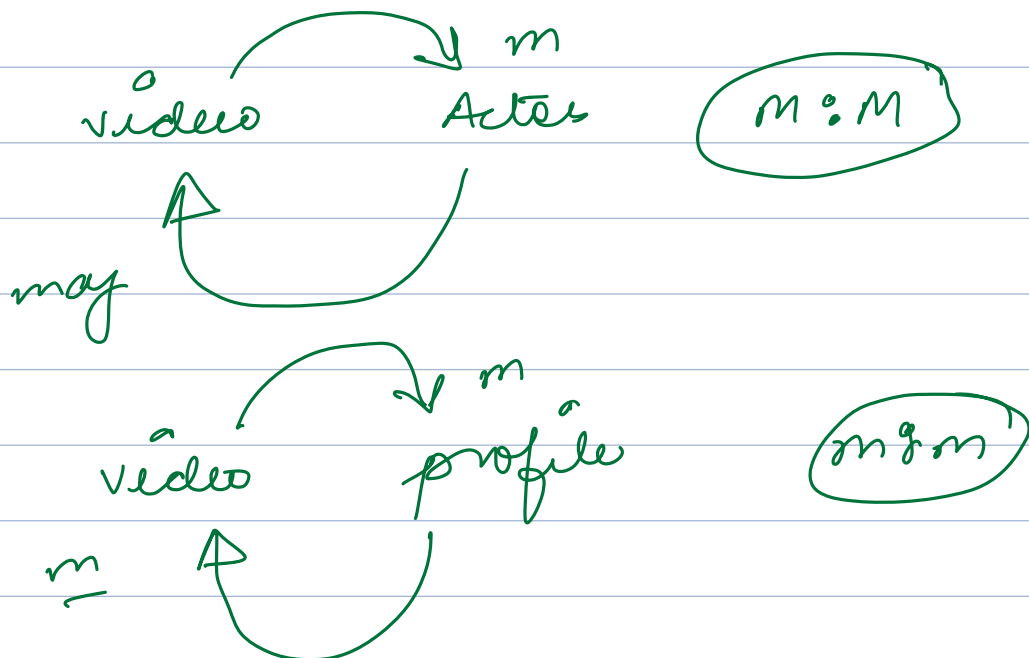
A cast is a list of actors who were a part of the video. For each actor we need to know their name and list of videos they were a part of.

For every video, for any profile who watched that video, we need to know the status (COMPLETED/ IN PROGRESS).

For every profile for whom a video is in progress, we want to know their last watch timestamp.



video cost  
↓ Actor







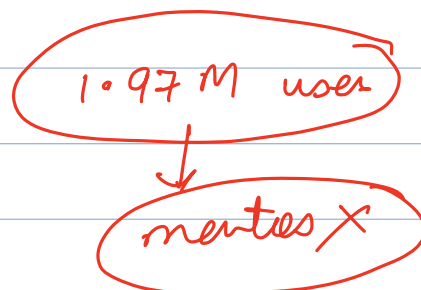
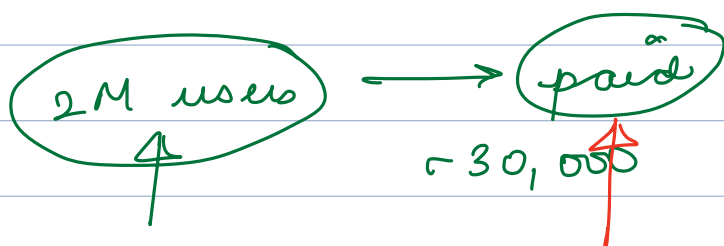
Student, mentor



$m \neq 1$

mentor.id  $\rightarrow$  student

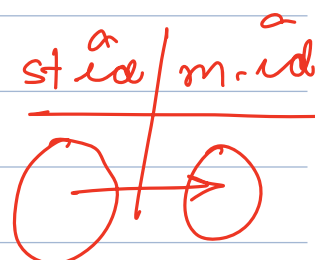
Alumni, Free students

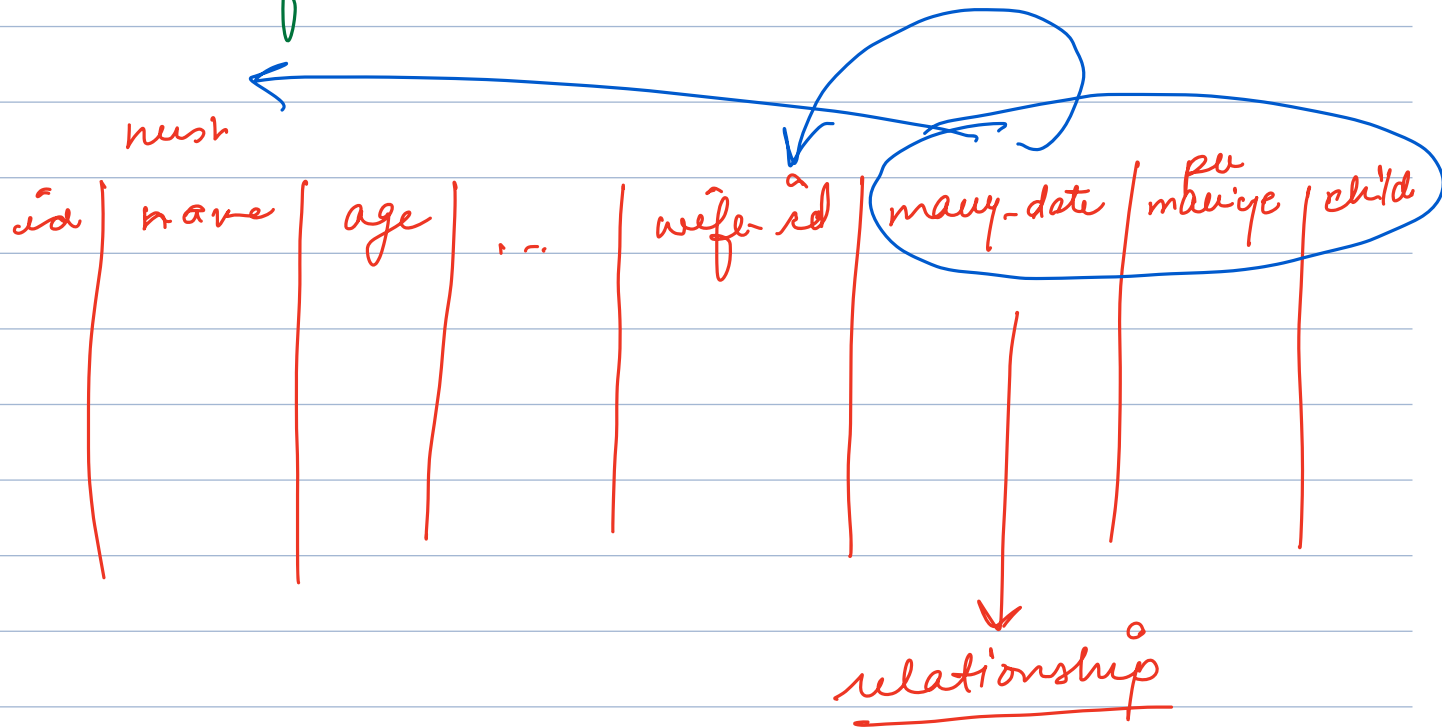
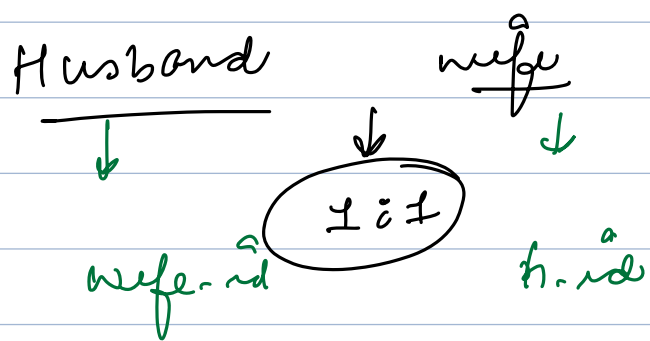


Students

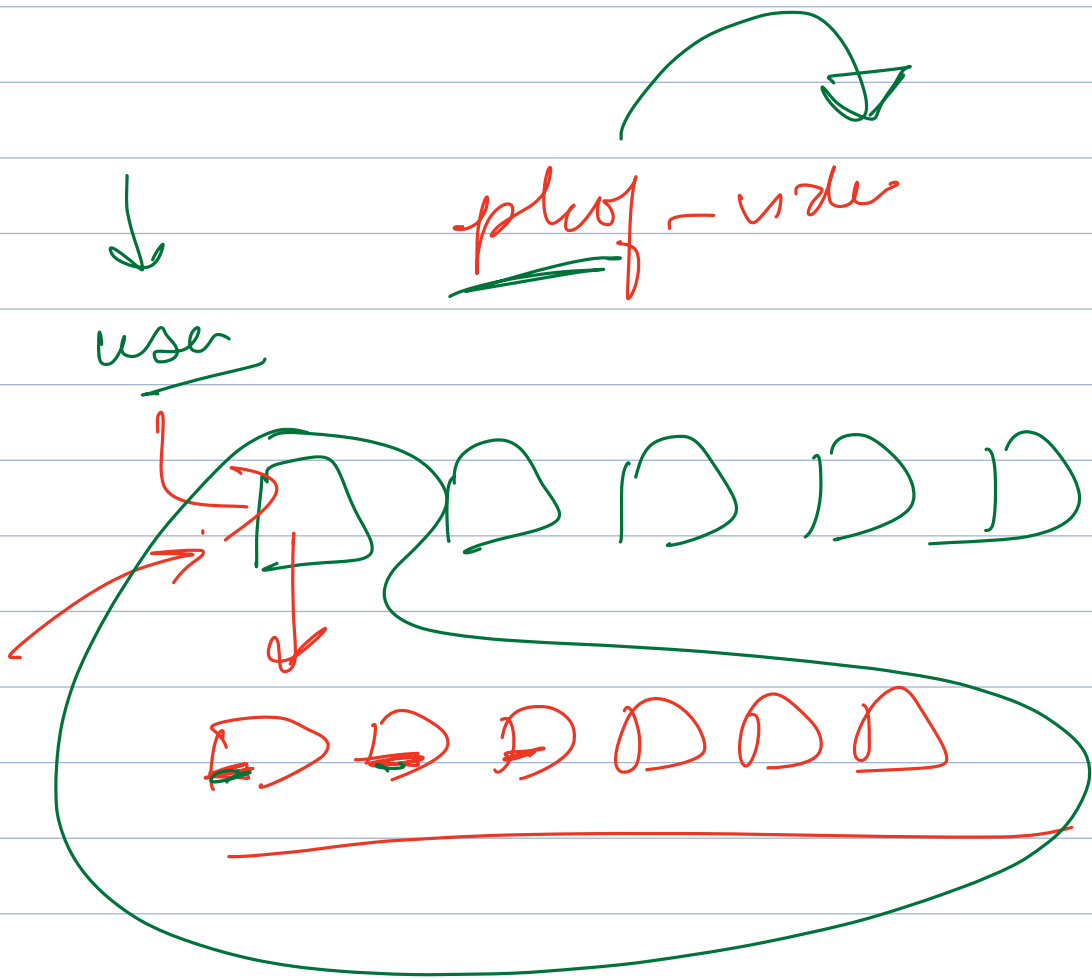
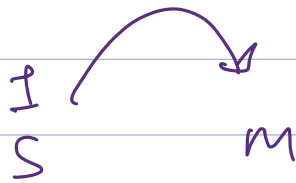
<u>2M</u>	id	name	..	mentor.id
	<u>1</u>			Null
				Null

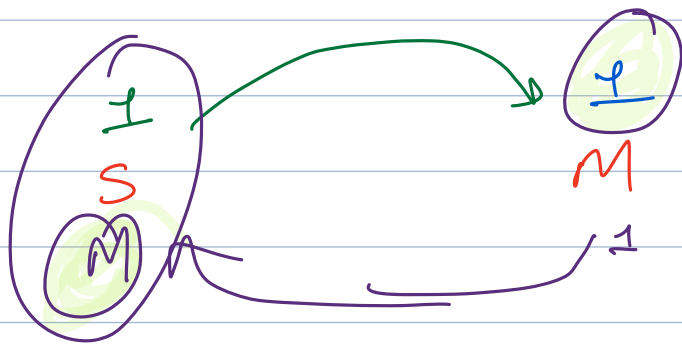
sparse rel<sup>n</sup>  $\therefore$  when lot of entries are null





Mannige





$\sigma$        $\psi$

$M$

