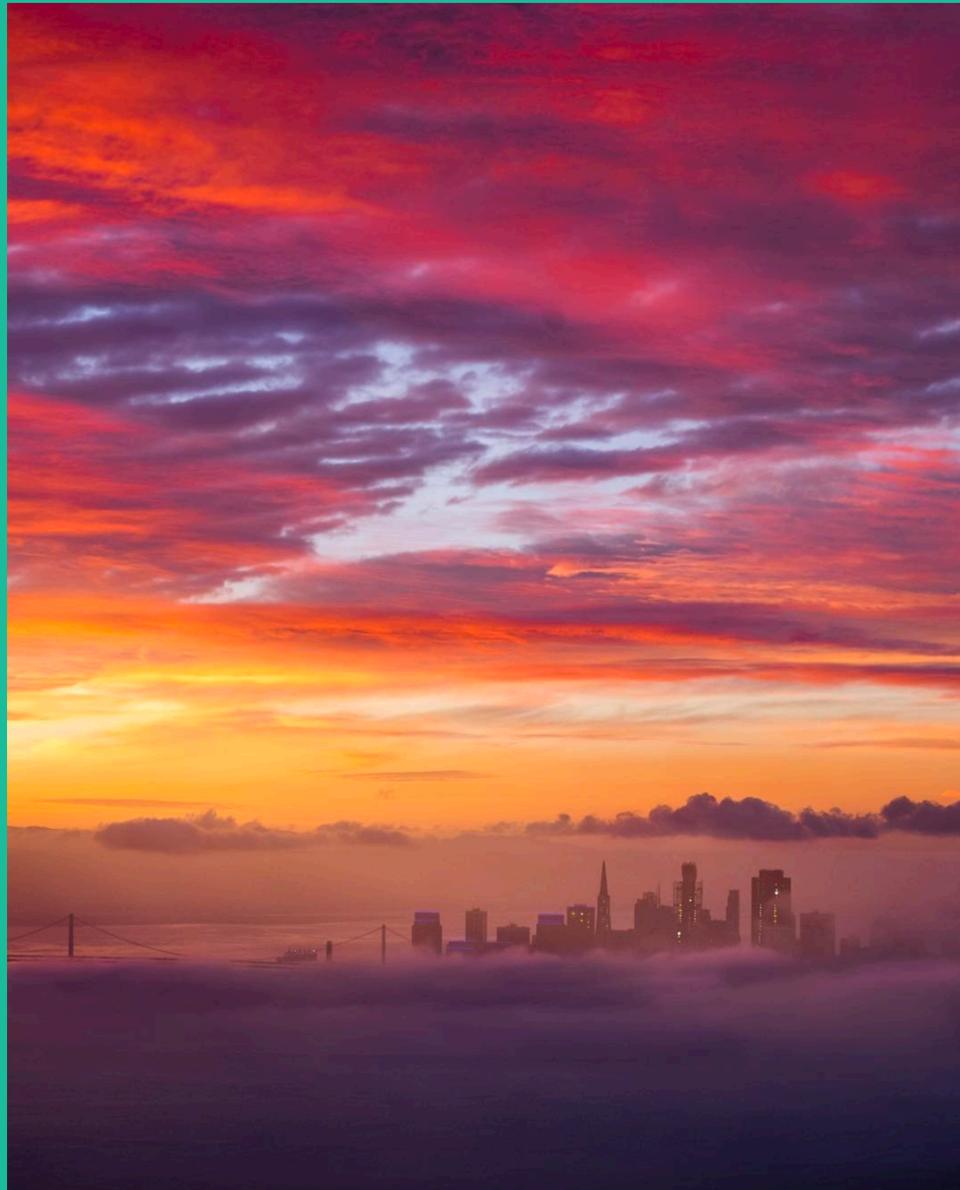


SCHHEMA DESIGN

Let's Clone
INSTAGRAM



coltsteele

337 likes

30w

coltsteele San Francisco floating in the clouds. Yesterday's spectacular sunrise combined with the cotton candy fog made for one of the most amazing displays I've ever seen. Still buzzing from it!

#artofvisuals #escaype
#westcoast_exposures #welivetoexplore
#fantastic_earthpix #visitcalifornia
#sky_captures #master_shots
#earthexperience #wildbayarea
#agameoftones #epic_captures
#awesomeearth #bestvacations
#earthfocus #instagood
#jaw_dropping_shots
#wildernessculture #instalove



Add a comment...

○ ○ ○



coltsteele

430 likes

35w

santamonicaboardwalk Awesome ✕

ray_dmc Amazing ✕

kushpush banger ✕

amandaschaeffs Holy smokes this
sky is unreal. 😍Gorgeous sunset
capture! 🙌 ✕

johnpwise Dude your gallery is
amazing! ✕

bucisphotography nice picture 🌟🌟 ✕



Add a comment...

• • •



coltsteele

[Edit Profile](#)



429 posts

786 followers

408 following

Colt Developer /Teacher /Fuji photographer

USERS

PHOTOS

COMMENTS

LIKES

HASHTAGS

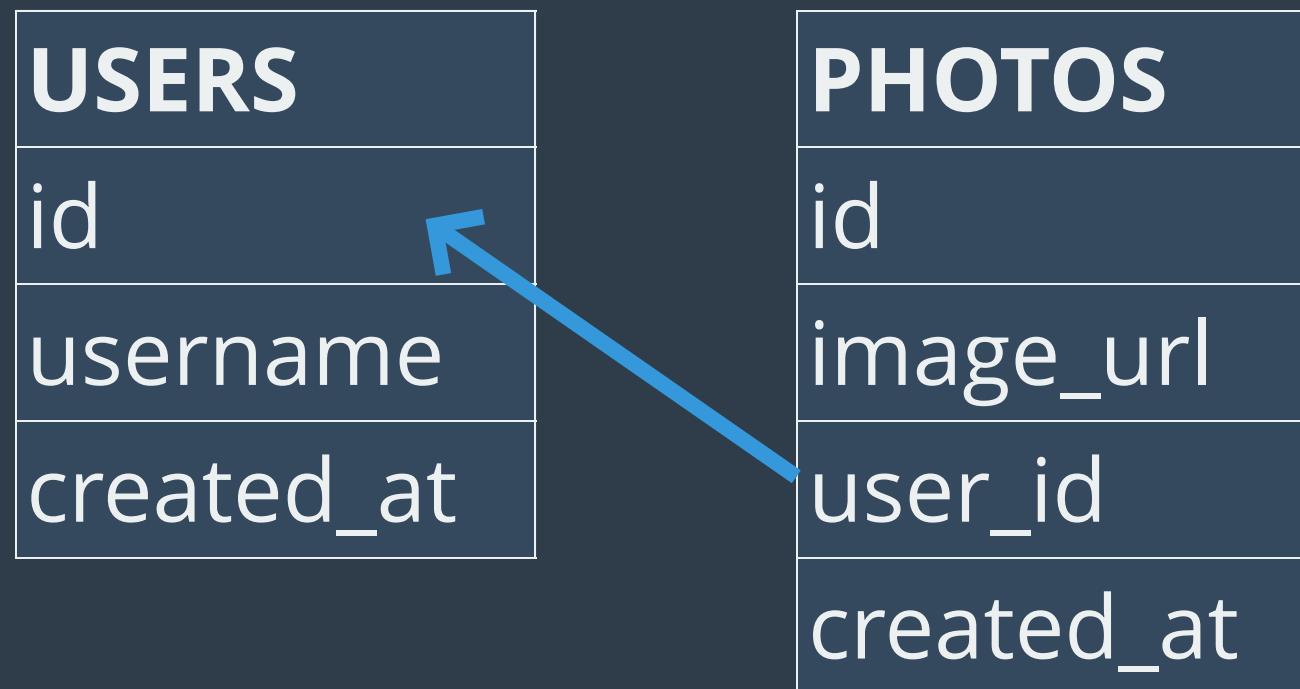
FOLLOWERS/FOLLOWEES

WRITE A SCHEMA
GIVE IT A SHOT

Let's Start With Users...

USERS
id
username
created_at

Up Next: Photos



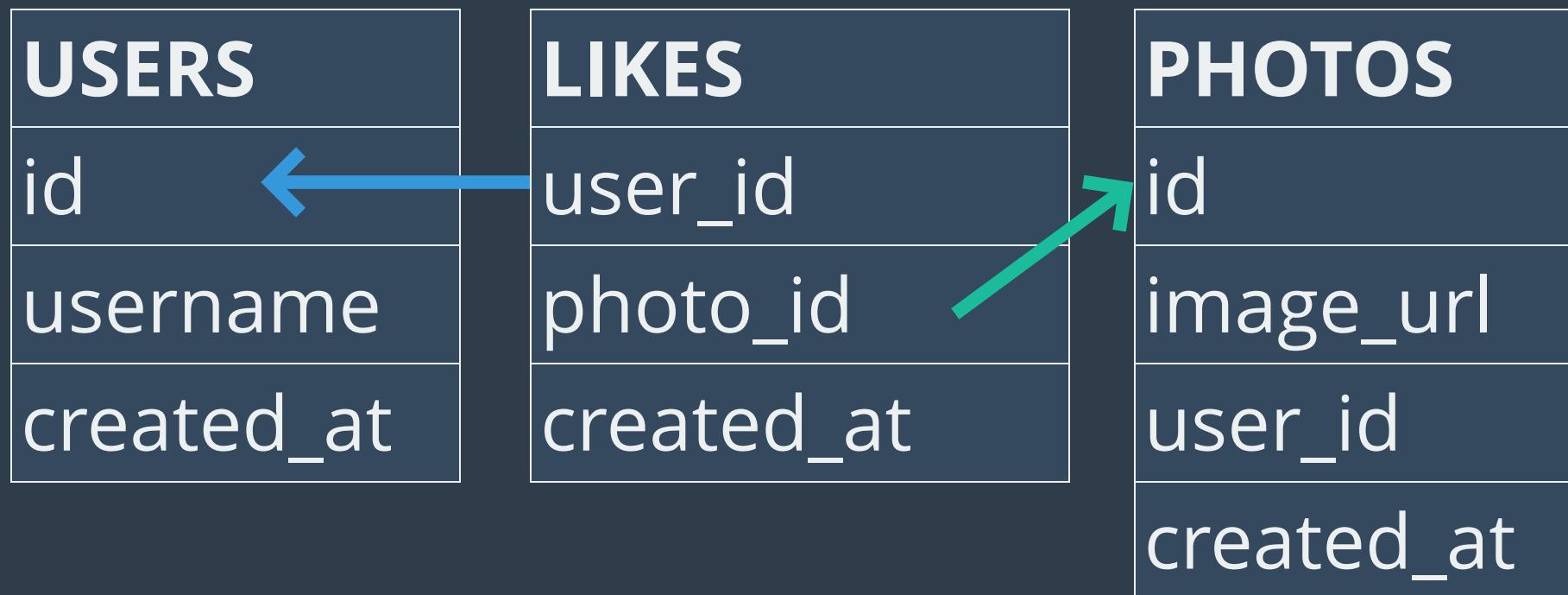
Now Comments

USERS	
id	↑
username	
created_at	

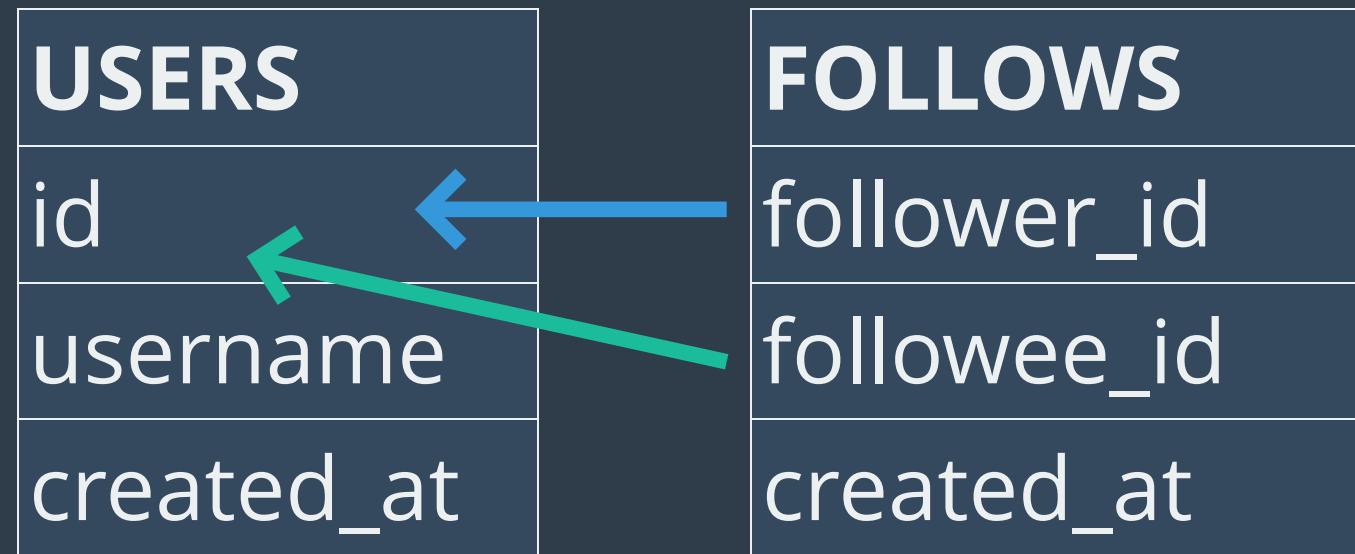
COMMENTS	
id	
comment_text	
user_id	
photo_id	↑
created_at	

PHOTOS	
id	
image_url	
user_id	
created_at	

What About Likes?



Relationship Troubles



EXAMPLE TIME

Users

ID	USERNAME	CREATED_AT
1	Tommy	2016-10-11
2	BlueCat	2017-01-10
3	ColtSteele	2017-04-04

Follows

FOLLOWER_ID	FOLLOWEE_ID	CREATED_AT
3	2	2017-03-03
3	1	2017-04-04
2	3	2017-05-05

AND NOW...Tags!
(The Fun One)

There are 3 popular
solutions to tagging

Solution 1

id	image_url	caption	tags
1	'/ksjd97123'	'My cat'	'#cat#pets#animals#cute#omg'
2	'/098fsdskj'	'My meal'	'#microwave#sadfood#gross'
3	'/87hghjkd'	'A Selfie'	'#smile#ego#cute#srrynotsrry'

Super easy to implement

Limited number of tags can be stored

Cannot store additional information

Have to be careful with searching

Solution 2

Photos

id	image_url	caption
1	'/ksjd97123'	'My cat'
2	'/098fsdskj'	'My meal'
3	'/87hghjkd'	'A Selfie'

Tags

tag_name	photo_id
'#cute'	1
'#cute'	3
'#microwave'	2
'#ego'	3
'#smile'	3
'#gross'	2

Unlimited Number Of Tags

Slower Than Previous Solution

AND FINALLY...
SOLUTION 3

Photos

id	image_url	caption
1	'/ksjd97123'	'My cat'
2	'/098fsdskj'	'My meal'
3	'/87hghjkd'	'A Selfie'

Photo_Tags

photo_id	tag_id
1	1
1	2
2	3
2	6
3	1
3	4
3	5

Tags

id	tag_name
1	'#cute'
2	'#pets'
3	'#microwave'
4	'#ego'
5	'#smile'
6	'#gross'

Unlimited Number Of Tags

Can add additional information

More work when inserting/updating

Have to worry about orphans

YOUR
TURN

Step 1

INSERT a ton of data

Step 2

Ask Some Questions

We want to reward our
users who have been
around the longest.

Find the 5 oldest users.

What day of the week do
most users register on?

We need to figure out when
to schedule an ad campgain

We want to target our inactive
users with an email campaign.
Find the users who have never
posted a photo

We're running a new contest
to see who can get the most
likes on a single photo.

WHO WON??!!

Our Investors want to know...

How many times does the
average user post?

A brand wants to know which hashtags to use in a post

What are the top 5 most commonly used hashtags?

We have a small problem with
bots on our site...

Find users who have liked
every single photo on the site

We also have a problem with
celebrities

Find users who have never
commented on a photo

MEGA CHALLENGE

Are we overrun with bots and
celebrity accounts?

Find the percentage of our users who
have either never commented on a
photo or have commented on every
photo