

# Database Systems

Instructor: Fatih Şen

## Aim of the Project:

- We are aiming to design and implement a simple Twitter-like social networking platform using both MySQL and Neo4j databases.
- To make the practical application for both the relational and graph databases for a practical application.

## Introduction:

The most popular social networking sites, including Twitter and Instagram, need a database design that is free of errors to function properly. It is of the utmost importance to accurately map and store all their user data and authentication data, their preferences, connections between profiles, and individual posts. Common database designs for social networking sites include quick-reference features, tools for adding and removing social media sites and channels from one's own database, and the ability to filter sites based on a variety of factors. In addition, user tables typically can search for specific content on the sites. Daily use of social networking sites is estimated to account for around three billion people throughout the globe. Twitter is making steady progress toward overtaking Facebook, which is believed to have 1.2 billion active user\_table on a monthly basis. On these websites, you could discover a variety of knowledge that is useful to you. Despite the fact that "social media" and "social networking" are not interchangeable terms, the two concepts are inextricably linked to one another. There are many kinds of social media, such as weblogs, vlogs, graphics, news articles, posts on social networks, and pictures. You may have anticipated this fact but keeping accounts on social media platforms also demands you to handle vast amounts of data that come from a variety of different sources. The term "Bigfoot" has been appropriated for usage in the context of business to refer to very large amounts of data. This project's goal is to create a simple social networking website with functionality similar to that of Twitter by using the MySQL and Neo4j graph databases.

## Objectives:

The purpose of the project is to design and implement the database system of the Twitter platform using relational data and graph databases. Both the relational datastores and graph database has their functional-specific advantages, and one is preferred over another based on different computations for efficient data retrieval.

In one word:

This project's goal is to create a simple social networking website with functionality like that of Twitter by using the MySQL and Neo4j graph databases.

# Database Design

## ➤ ER Diagram for MySQL Implementation

To understand the database, we can draw our entity-relationship model, which would make our job easy. ER model is defined as an entity-relationship model that describes interrelated things of interest in a specific domain of knowledge. An ER model is composed of entity types and relationships that can exist between entities. It illustrates how entities such as people, objects or concepts relate to each other.

We have different tables in the database and my database name is `twitter\_database`

To create and use that database

----- To create

Create database twitter\_database;

-----To use the

database Use

twitter\_database

Later using the create and insert statements of MYSQL, I created different tables. The

tables in the Mysql are

1. User\_table
2. Followers\_table
3. Comments\_table
4. Feeds\_table
5. Retweets\_table

Every table has its constraints or columns

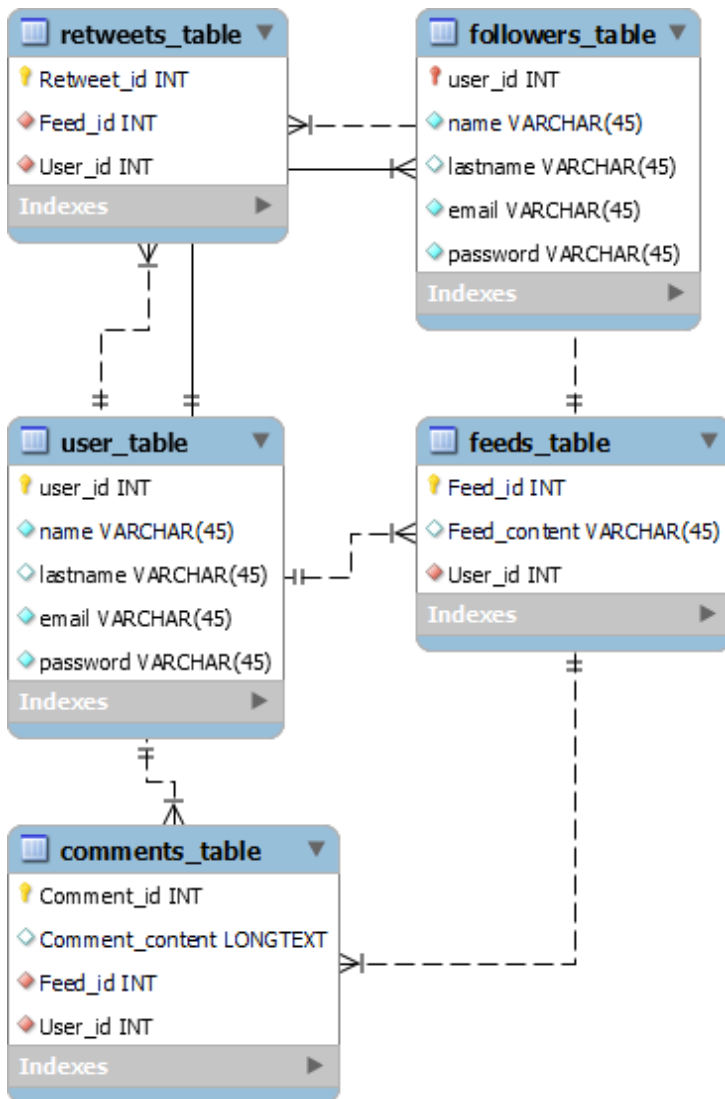
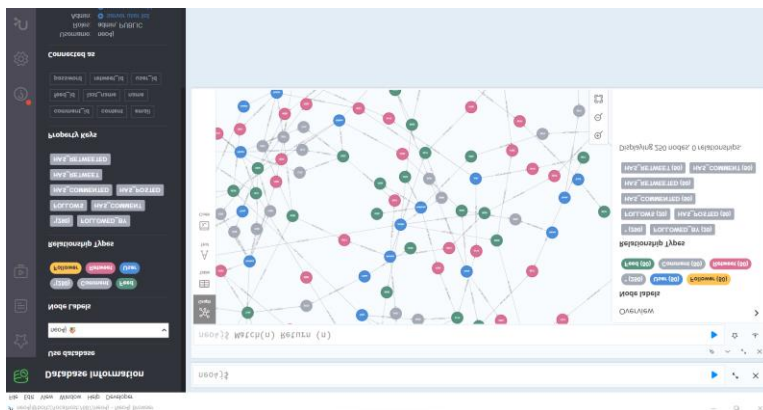
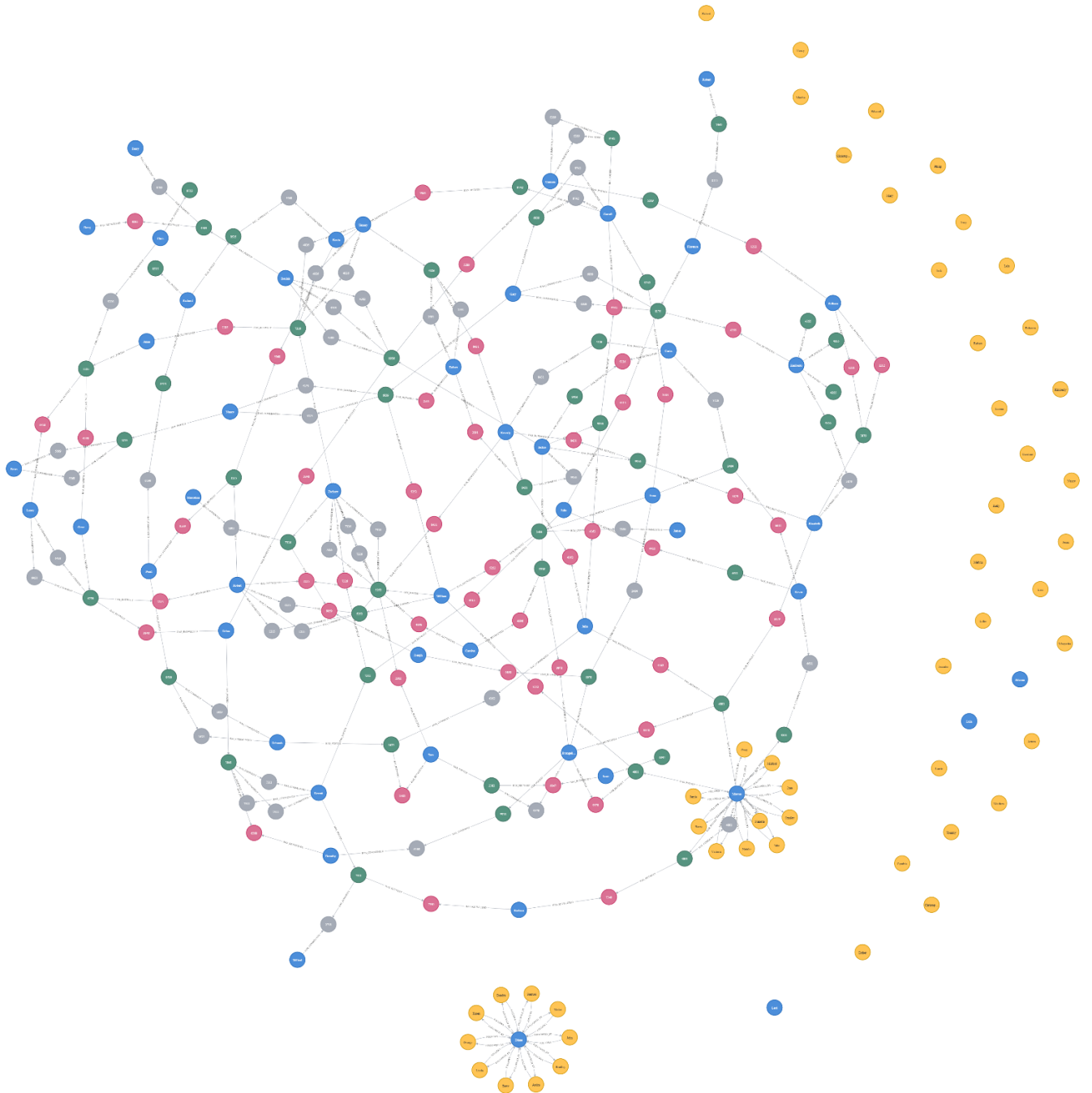


Fig1: ER diagram of Twitter-like social media

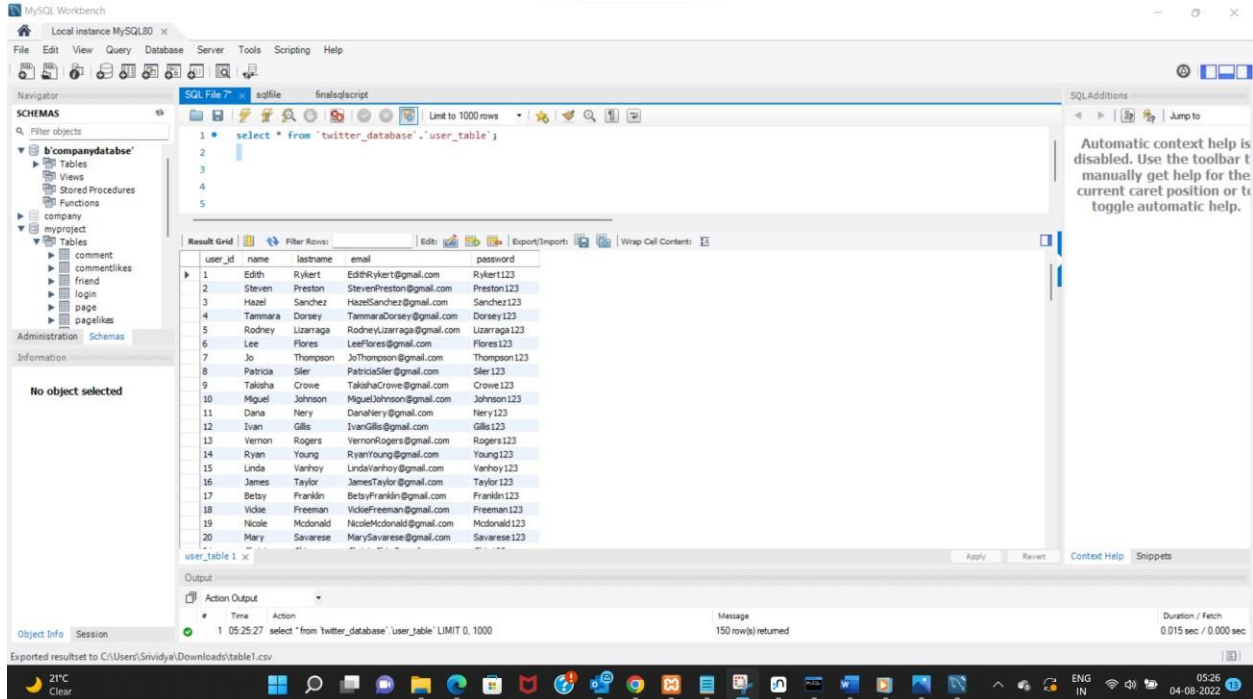
But we get a graph even using the Neo4j



# Database

We have 5 different tables so let me add the images of all the tables existing in my database

## 1. User\_table



Values of user\_table

user_id	name	lastname	email	password
1	Edith	Rykert	EdithRykert@gmail.com	Rykert123
2	Steven	Preston	StevenPreston@gmail.com	Preston123
3	Hazel	Sanchez	HazelSanchez@gmail.com	Sanchez123
4	Tammara	Dorsey	TammaraDorsey@gmail.com	Dorsey123
5	Rodney	Lizarraga	RodneyLizarraga@gmail.com	Lizarraga123
6	Lee	Flores	LeeFlores@gmail.com	Flores123
7	Jo	Thompson	JoThompson@gmail.com	Thompson123
8	Patricia	Siler	PatriciaSiler@gmail.com	Siler123
9	Takisha	Crowe	TakishaCrowe@gmail.com	Crowe123
10	Miguel	Johnson	MiguelJohnson@gmail.com	Johnson123
11	Dana	Nery	DanaNery@gmail.com	Nery123
12	Ivan	Gillis	IvanGillis@gmail.com	Gillis123
13	Vernon	Rogers	VernonRogers@gmail.com	Rogers123
14	Ryan	Young	RyanYoung@gmail.com	Young123

15	Linda	Vanhoy	LindaVanhoy@gmail.com	Vanhoy123
16	James	Taylor	JamesTaylor@gmail.com	Taylor123
17	Betsy	Franklin	BetsyFranklin@gmail.com	Franklin123
18	Vickie	Freeman	VickieFreeman@gmail.com	Freeman123
19	Nicole	Mcdonald	NicoleMcdonald@gmail.com	Mcdonald123
20	Mary	Savarese	MarySavarese@gmail.com	Savarese123
21	Christy	Chin	ChristyChin@gmail.com	Chin123
22	Sharon	Briggs	SharonBriggs@gmail.com	Briggs123
23	Ronald	Apo	RonaldApo@gmail.com	Apo123
24	Keith	Lowe	KeithLowe@gmail.com	Lowe123
25	Scott	Morales	ScottMorales@gmail.com	Morales123
26	Cameron	Cogar	CameronCogar@gmail.com	Cogar123
27	Amy	Price	AmyPrice@gmail.com	Price123
28	Charles	Archie	CharlesArchie@gmail.com	Archie123
29	Mark	Kerwood	MarkKerwood@gmail.com	Kerwood123
30	Beverly	Schulz	BeverlySchulz@gmail.com	Schulz123
31	Joan	Rivera	JoanRivera@gmail.com	Rivera123
32	Margo	Vecker	MargoVecker@gmail.com	Vecker123
33	Richard	Tyson	RichardTyson@gmail.com	Tyson123
34	Susan	Carr	SusanCarr@gmail.com	Carr123
35	Lisa	Brown	LisaBrown@gmail.com	Brown123
36	Rebecca	Massie	RebeccaMassie@gmail.com	Massie123
37	Sidney	Scott	SidneyScott@gmail.com	Scott123
38	Glenda	Warrington	GlendaWarrington@gmail.com	Warrington123
39	Sarah	Walk	SarahWalk@gmail.com	Walk123
40	Sherrie	Gaters	SherrieGaters@gmail.com	Gaters123
41	George	Thomas	GeorgeThomas@gmail.com	Thomas123
42	Pat	Johnson	PatJohnson@gmail.com	Johnson123
43	Phillip	Garza	PhillipGarza@gmail.com	Garza123
44	Kevin	Johnson	KevinJohnson@gmail.com	Johnson123
45	Carolyn	Modlin	CarolynModlin@gmail.com	Modlin123
46	Robert	Bare	RobertBare@gmail.com	Bare123
47	Benjamin	Smith	BenjaminSmith@gmail.com	Smith123
48	Walter	Shaw	WalterShaw@gmail.com	Shaw123
49	Laura	Carrillo	LauraCarrillo@gmail.com	Carrillo123
50	Jewel	Jennings	JewelJennings@gmail.com	Jennings123
51	Joseph	Wagner	JosephWagner@gmail.com	Wagner123
52	Tina	Rosser	TinaRosser@gmail.com	Rosser123
53	Alvin	Price	AlvinPrice@gmail.com	Price123
54	Matthew	Hong	MatthewHong@gmail.com	Hong123
55	David	Mcfee	DavidMcfee@gmail.com	Mcfee123
56	Stacy	Leon	StacyLeon@gmail.com	Leon123
57	Sherry	Laitila	SherryLaitila@gmail.com	Laitila123
58	Cornelia	Brooks	CorneliaBrooks@gmail.com	Brooks123
59	Mary	Nickles	MaryNickles@gmail.com	Nickles123

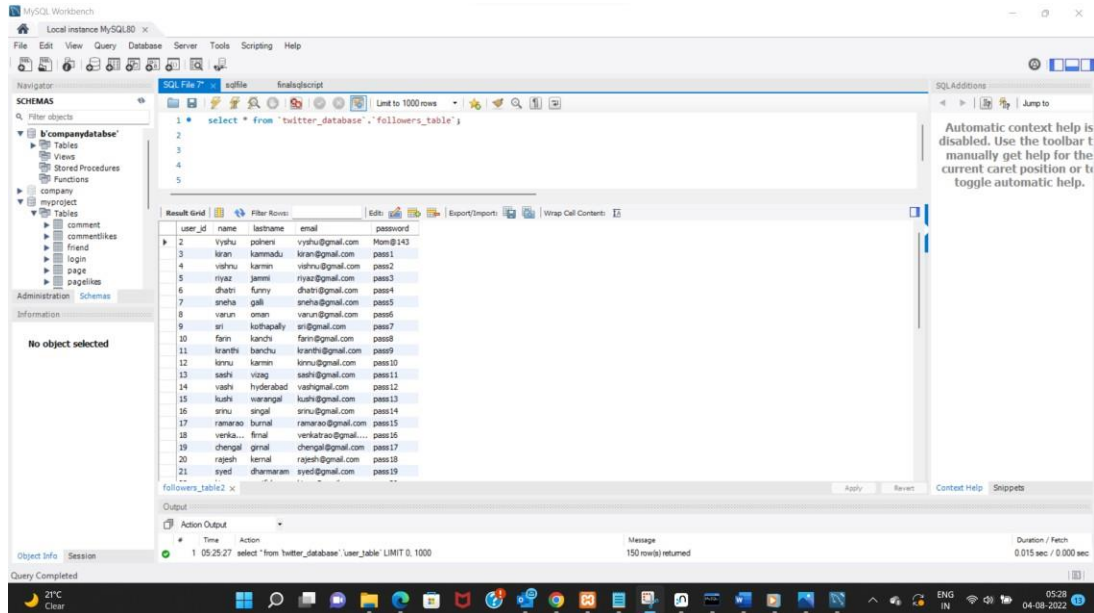
60	Jessica	Cardello	JessicaCardello@gmail.com	Cardello123
61	Serena	Raynor	SerenaRaynor@gmail.com	Raynor123
62	Walter	Dunham	WalterDunham@gmail.com	Dunham123
63	Claudine	Fala	ClaudineFala@gmail.com	Fala123
64	James	Scofield	JamesScofield@gmail.com	Scofield123
65	Kenneth	Webb	KennethWebb@gmail.com	Webb123
66	Beverly	Brown	BeverlyBrown@gmail.com	Brown123
67	Donald	Day	DonaldDay@gmail.com	Day123
68	Sharon	Miga	SharonMiga@gmail.com	Miga123
69	Linda	Huffman	LindaHuffman@gmail.com	Huffman123
70	Lesia	Degen	LesiaDegen@gmail.com	Degen123
71	Micah	Pena	MicahPena@gmail.com	Pena123
72	Kevin	Lopez	KevinLopez@gmail.com	Lopez123
73	Harold	Benner	HaroldBenner@gmail.com	Benner123
74	Patty	Davis	PattyDavis@gmail.com	Davis123
75	Bobby	Reed	BobbyReed@gmail.com	Reed123
76	Laura	Carey	LauraCarey@gmail.com	Carey123
77	Dorothy	Sanchez	DorothySanchez@gmail.com	Sanchez123
78	Jason	Perrez	JasonPerrez@gmail.com	Perrez123
79	Jesus	Rollins	JesusRollins@gmail.com	Rollins123
80	Rhonda	Duke	RhondaDuke@gmail.com	Duke123
81	Darlene	Brown	DarleneBrown@gmail.com	Brown123
82	Carla	Kain	CarlaKain@gmail.com	Kain123
83	Sharmaine	Faust	SharmaineFaust@gmail.com	Faust123
84	Ernie	Kelly	ErnieKelly@gmail.com	Kelly123
85	Estella	Bradley	EstellaBradley@gmail.com	Bradley123
86	David	Smith	DavidSmith@gmail.com	Smith123
87	Kimberly	Messersmith	KimberlyMessersmith@gmail.com	Messersmith123
88	Billy	Williams	BillyWilliams@gmail.com	Williams123
89	Patricia	Jackson	PatriciaJackson@gmail.com	Jackson123
90	Mary	Strong	MaryStrong@gmail.com	Strong123
91	Jonathan	Jones	JonathanJones@gmail.com	Jones123
92	Delia	Current	DeliaCurrent@gmail.com	Current123
93	Lloyd	Wilkes	LloydWilkes@gmail.com	Wilkes123
94	Dana	Harty	DanaHarty@gmail.com	Harty123
95	Lori	Tieng	LoriTieng@gmail.com	Tieng123
96	Alejandro	Guadagno	AlejandroGuadagno@gmail.com	Guadagno123
97	Briana	Rauch	BrianaRauch@gmail.com	Rauch123
98	Joseph	Gonzalez	JosephGonzalez@gmail.com	Gonzalez123
99	David	Gutierrez	DavidGutierrez@gmail.com	Gutierrez123
100	Jennifer	Ford	JenniferFord@gmail.com	Ford123
101	Gloria	Wright	GloriaWright@gmail.com	Wright123
102	Jeffrey	Flint	JeffreyFlint@gmail.com	Flint123
103	Gerald	Voyer	GeraldVoyer@gmail.com	Voyer123

104	Paul	Riley	PaulRiley@gmail.com	Riley123
105	Devin	Fisher	DevinFisher@gmail.com	Fisher123
106	Laura	McClean	LauraMcClean@gmail.com	McClean123
107	Donna	Lorentz	DonnaLorentz@gmail.com	Lorentz123
108	Willie	Smallidge	WillieSmallidge@gmail.com	Smallidge123
109	Gary	Mills	GaryMills@gmail.com	Mills123
110	Raquel	Pacheco	RaquelPacheco@gmail.com	Pacheco123
111	Randall	Rodgers	RandallRodgers@gmail.com	Rodgers123
112	Sean	Hudson	SeanHudson@gmail.com	Hudson123
113	Jose	Olson	JoseOlson@gmail.com	Olson123
114	John	Schafer	JohnSchafer@gmail.com	Schafer123
115	Hoa	Sajovic	HoaSajovic@gmail.com	Sajovic123
116	Teresa	Pearson	TeresaPearson@gmail.com	Pearson123
117	Teresa	Espinoza	TeresaEspinoza@gmail.com	Espinoza123
118	Margaret	Fadden	MargaretFadden@gmail.com	Fadden123
119	Brittany	Crayton	BrittanyCrayton@gmail.com	Crayton123
120	Barry	Wilt	BarryWilt@gmail.com	Wilt123
121	Patricia	Cahall	PatriciaCahall@gmail.com	Cahall123
122	Leon	McDonald	LeonMcDonald@gmail.com	McDonald123
123	George	Peoples	GeorgePeoples@gmail.com	Peoples123
124	Sandra	Butler	SandraButler@gmail.com	Butler123
125	Marvin	Stracener	MarvinStracener@gmail.com	Stracener123
126	Pamela	Beller	PamelaBeller@gmail.com	Beller123
127	Myrtle	Smith	MyrtleSmith@gmail.com	Smith123
128	Eric	Hatfield	EricHatfield@gmail.com	Hatfield123
129	Frank	Soriano	FrankSoriano@gmail.com	Soriano123
130	Randy	Rogers	RandyRogers@gmail.com	Rogers123
131	Sylvia	Tapp	SylviaTapp@gmail.com	Tapp123
132	Olga	Cato	OlgaCato@gmail.com	Cato123
133	Janie	Daggett	JanieDaggett@gmail.com	Daggett123
134	Paul	Chilton	PaulChilton@gmail.com	Chilton123
135	Dennis	Numbers	DennisNumbers@gmail.com	Numbers123
136	Angelina	Castellana	AngelinaCastellana@gmail.com	Castellana123
137	Beverly	Marcum	BeverlyMarcum@gmail.com	Marcum123
138	Inez	Kapper	InezKapper@gmail.com	Kapper123
139	Jesse	Barnett	JesseBarnett@gmail.com	Barnett123
140	Deborah	Kelley	DeborahKelley@gmail.com	Kelley123
141	Josie	Reynolds	JosieReynolds@gmail.com	Reynolds123
142	Jodi	Tanner	JodiTanner@gmail.com	Tanner123
143	Nancy	Casey	NancyCasey@gmail.com	Casey123
144	Timothy	Terry	TimothyTerry@gmail.com	Terry123
145	Carla	Wheeler	CarlaWheeler@gmail.com	Wheeler123
146	Seth	Stokes	SethStokes@gmail.com	Stokes123
147	Joseph	Bridges	JosephBridges@gmail.com	Bridges123
148	Sharon	Haynes	SharonHaynes@gmail.com	Haynes123



149	Donna	Cox	DonnaCox@gmail.com	Cox123
150	Mona	Adam	MonaAdam@gmail.com	Adam123

## 2. Followers\_table

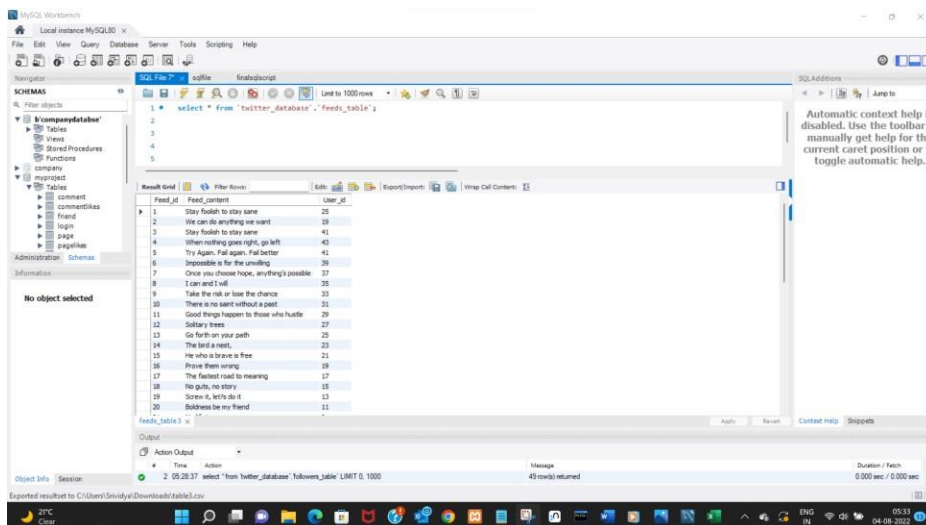


Values from followers\_table

user_id	name	lastname	email	password
2	Vyshu	polneni	vyshu@gmail.com	Mom@143
3	kiran	kammadu	kiran@gmail.com	pass1
4	vishnu	karmin	vishnu@gmail.com	pass2
5	riyaz	jammi	riyaz@gmail.com	pass3
6	dhatr	funny	dhatr@gmail.com	pass4
7	sneha	galli	sneha@gmail.com	pass5
8	varun	oman	varun@gmail.com	pass6
9	sri	kothapally	sri@gmail.com	pass7
10	farin	kanchi	farin@gmail.com	pass8
11	kranthi	banchu	kranthi@gmail.com	pass9
12	kinnu	karmin	kinnu@gmail.com	pass10
13	sashi	vizag	sashi@gmail.com	pass11
14	vashi	hyderabad	vashigmail.com	pass12
15	kushi	warangal	kushi@gmail.com	pass13
16	srinu	singal	srinu@gmail.com	pass14
17	ramarao	burnal	ramarao@gmail.com	pass15
18	venkatrao	firnal	venkatrao@gmail.com	pass16
19	chengal	girnal	chengal@gmail.com	pass17
20	rajesh	kernal	rajesh@gmail.com	pass18
21	syed	dharmaram	syed@gmail.com	pass19
22	kinnu	verifal	kinnu@gmail.com	pass20
23	chitti	mariyal	chitti@gmail.com	pass21

24	baby	gariyal	baby@gmail.com	pass22
25	kutti	dhuniyal	kutti@gmail.com	pass23
26	gundu	phonial	gundu@gmail.com	pass24
27	banda	cheniyal	banda@gmail.com	pass25
28	anu	varnial	anu@gmail.com	pass25
29	ravi	memphial	ravi@gmail.com	pass26
30	akhil	chunial	akhil@gmail.com	pass27
31	shainu	chickiyal	shainu@gmail.com	pass28
32	chinni	manial	chinni@gmail.com	pass29
33	punnu	dunial	punnu@gmail.com	pass30
34	kinnur	cheriyal	kinnur@gmail.com	pass31
35	banda	kominal	banda@gmail.com	pass32
36	chelli	hernial	chelli@gmail.com	pass33
37	sakiya	ijinal	sakiya@gmail.com	pass34
38	varyia	marignal	variya@gmail.com	pass35
39	gariya	dornial	gariya@gmail.com	pass36
40	cheruvu	umbinal	cheruvu@gmail.com	pass37
41	baruvu	chiginal	baruvu@gmail.com	pass38
42	komala	maphinal	komala@gmail.com	pass39
43	vimala	farinal	vimala@gmail.com	pass40
44	nyruthi	aginal	nyruthi@gmail.com	pass41
45	prakruthi	karinal	prakruthi@gmail.com	pass42
46	chanluthi	hernial	chanluthi@gmail.com	pass43
47	gamluthi	abunial	gamluthi@gmail.com	pass44
48	karluthi	eginal	karluthi@gmail.com	pass45
49	jailuthi	duginal	jailuthi@gmail.com	pass46
50	al nubhi	alunum	al nubhi@gmail.com	pass47

### 3. `twitter\_database`.`feeds\_table`

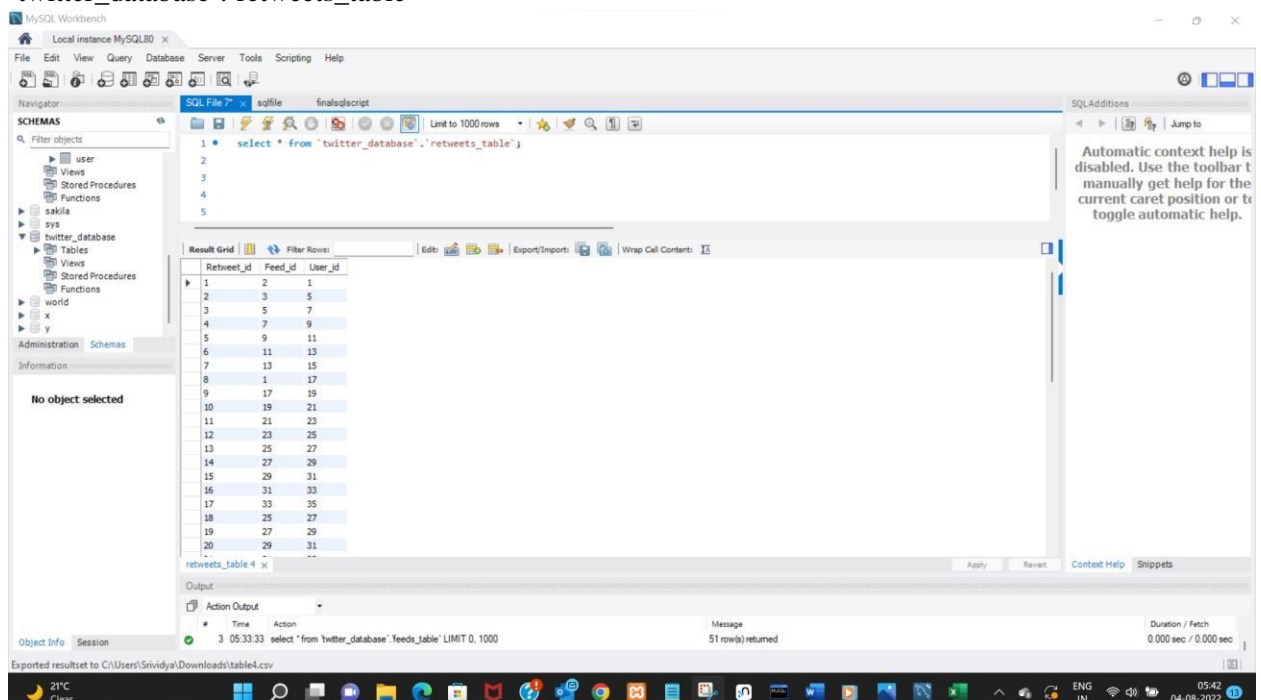


Values from feeds\_table

Feed_id	Feed_content	User_id
1	Stay foolish to stay sane	25
2	We can do anything we want	19
3	Stay foolish to stay sane	41
4	When nothing goes right, go left	43
5	Try Again. Fail again. Fail better	41
6	Impossible is for the unwilling	39
7	Once you choose hope, anythingâ€™s possible	37
8	I can and I will	35
9	Take the risk or lose the chance	33
10	There is no saint without a past	31
11	Good things happen to those who hustle	29
12	Solitary trees	27
13	Go forth on your path	25
14	The bird a nest,	23
15	He who is brave is free	21
16	Prove them wrong	19
17	The fastest road to meaning	17
18	No guts, no story	15
19	Screw it, let's do it	13
20	Boldness be my friend	11
21	My life is my message	9
22	Keep going	7
23	Dream big	3
24	Dream big	1
25	Boldness be my friend	2
26	Screw it, let's do it	4
27	Boldness be my friend	6
28	My life is my message	8
29	brave is free	10
30	I wasnâ€™t unable to enjoy	12
31	In a way.	14
32	The more	16
33	Eventually, I started my own website	18
34	And so the adventure begins	20
35	If you want it, work for it	22
36	And so the adventure begins	24
37	Grow through what you go through	26
38	Do it with passion or not at all	28
39	Forget about style; worry about results	30
40	Success is the child of audacity	32
41	Whatever you do, do with all your might	34

42	Whatever you do, do with all your might	34
43	We are twice armed if we fight with faith	36
44	Be faithful	38
45	Let him do	40
46	Persistence guarantees	42
47	The wisest mind has done	44
48	Fall seven times, stand up eight	46
49	Seek the seeker	48
50	Silence is an answer too	50
51	Every wall is a door	51

#### 4. `twitter\_database`.`retweets\_table`



Values to retweet\_tables

Retweet_id	Feed_id	User_id
1	2	1
2	3	5
3	5	7
4	7	9
5	9	11
6	11	13
7	13	15
8	1	17
9	17	19
10	19	21
11	21	23

12	23	25
13	25	27
14	27	29
15	29	31
16	31	33
17	33	35
18	25	27
19	27	29
20	29	31
21	31	33
22	35	37
23	37	39
24	39	41
25	41	43
26	43	45
27	45	47
28	47	49
29	49	51
30	2	53
31	4	55
32	6	57
33	8	59
34	10	61
35	12	63
36	14	65
37	16	67
38	18	69
39	20	71
40	22	73
41	24	75
42	26	77
44	28	79
45	30	81
46	32	83
47	34	85
48	36	87
49	38	89
50	40	91

## 5. comments\_table

The screenshot shows the MySQL Workbench interface. The SQL editor at the top contains the query: `select * from 'twitter_database'. 'comments_table';`. The 'Result Grid' pane displays the data from the 'comments\_table'. The table has four columns: 'Comment\_id', 'Comment\_content', 'Feed\_id', and 'User\_id'. The data is as follows:

Comment_id	Comment_content	Feed_id	User_id
1	Good work	1	2
3	Good work	5	6
4	Sorry!Bad work	7	8
5	Good work	9	10
6	Sorry!Bad work	11	12
7	Good work	13	14
8	Sorry!Bad work	15	16
9	Good work	17	18
10	Sorry!Bad work	18	19
11	Sorry!Bad work	19	20
12	Good work	21	22
13	Sorry!Bad work	23	24
14	Good work	25	26
15	Sorry!Bad work	27	28
16	Good work	29	30
17	Sorry!Bad work	31	32
18	Good work	33	34
19	Sorry!Bad work	35	36
20	Good work	37	38
21	Sorry!Bad work	39	40

The 'Output' pane at the bottom shows the query execution details: '4 05:41:05 select \* from 'twitter\_database'. 'retweets\_table' LIMIT 0, 1000' and '49 row(s) returned'.

Values in the table

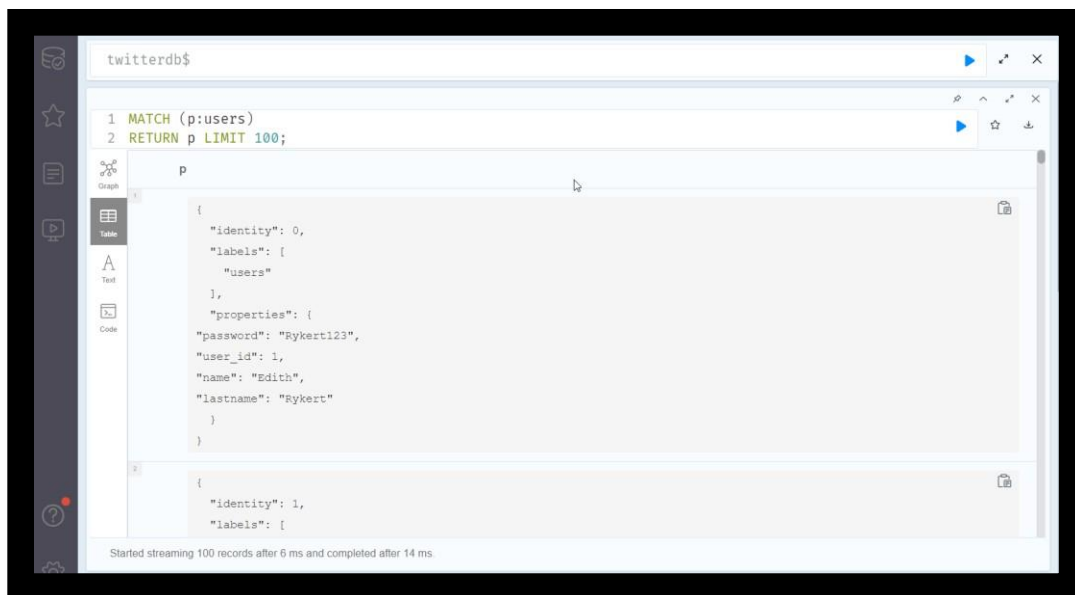
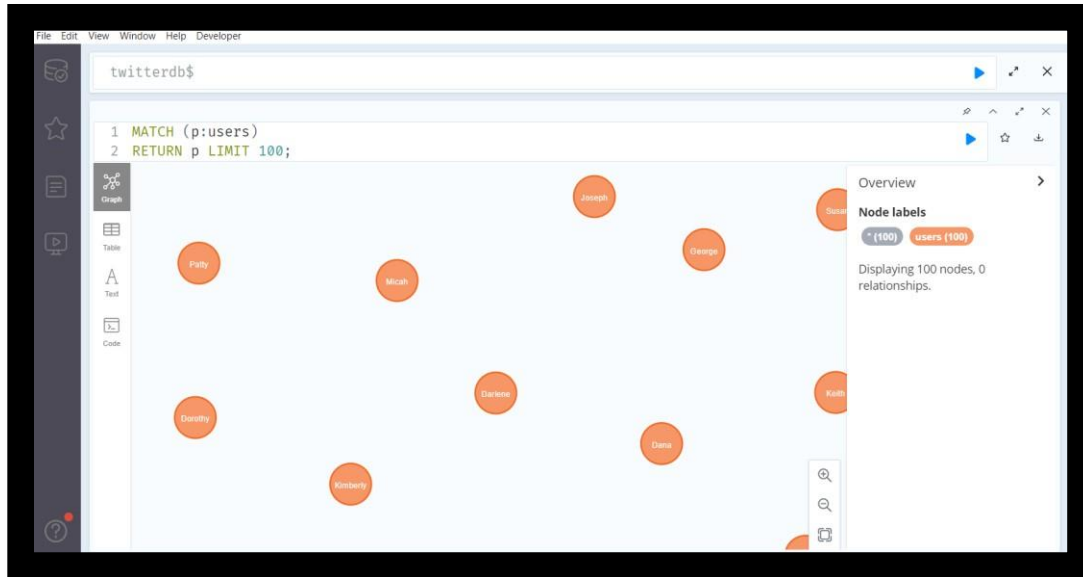
Comment_id	Comment_content	Feed_id	User_id
1	Good work	1	2
3	Good work	5	6
4	Sorry!Bad work	7	8
5	Good work	9	10
6	Sorry!Bad work	11	12
7	Good work	13	14
8	Sorry!Bad work	15	16
9	Good work	17	18
10	Sorry!Bad work	18	19
11	Sorry!Bad work	19	20
12	Good work	21	22
13	Sorry!Bad work	23	24
14	Good work	25	26
15	Sorry!Bad work	27	28
16	Good work	29	30
17	Sorry!Bad work	31	32
18	Good work	33	34
19	Sorry!Bad work	35	36
20	Good work	37	38
21	Sorry!Bad work	39	40
22	Good work	41	42
23	Sorry!Bad work	43	44

24	Good work	45	46
25	Sorry!Bad work	47	48
26	Good work	48	49
27	Sorry!Bad work	50	51
28	Good work	2	53
29	Sorry!Bad work	4	55
30	Good work	6	57
31	Sorry!Bad work	8	59
32	Sorry!Bad work	10	61
33	Good work	12	63
34	Sorry!Bad work	14	65
35	Good work	16	67
36	Sorry!Bad work	18	69
37	Good work	20	71
38	Sorry!Bad work	21	73
39	Good work	22	75
40	Sorry!Bad work	24	77
41	Good work	26	79
42	Good work	30	83
43	Sorry!Bad work	32	85
44	Good work	34	87
45	Sorry!Bad work	36	89
46	Good work	38	91
47	Sorry!Bad work	40	93
48	Good work	42	95
49	Sorry!Bad work	44	97
50	Good work	46	99

## ➤ *Neo4J*

Neo4j is a graph database management system developed by Neo4j, Inc. Neo4j delivers the lightning-fast read and write performance you need, while still protecting your data integrity. It is the only enterprise-strength graph database that combines native graph storage, scalable architecture optimized for speed, and ACID compliance to ensure predictability of relationship-based queries.

Example for a Neo4j Query





# Queries

```
CREATE SCHEMA `twitter_database`;

CREATE TABLE `twitter_database`.`user_table` (
  `user_id` INT NOT NULL,
  `name` VARCHAR(45) NOT NULL,
  `lastname` VARCHAR(45) NULL,
  `email` VARCHAR(45) NOT NULL,
  `password` VARCHAR(45) NOT NULL,
  PRIMARY KEY (`user_id`));

CREATE TABLE `twitter_database`.`followers_table` (
  `user_id` INT NOT NULL,
  `name` VARCHAR(45) NOT NULL,
  `lastname` VARCHAR(45) NULL,
  `email` VARCHAR(45) NOT NULL,
  `password` VARCHAR(45) NOT NULL,
  PRIMARY KEY (`user_id`),
  FOREIGN KEY (user_id) REFERENCES user_table(user_id));

CREATE TABLE `twitter_database`.`feeds_table` (
  `Feed_id` INT NOT NULL,
  `Feed_content` VARCHAR(45) NULL,
  `User_id` INT NOT NULL,
  PRIMARY KEY (`Feed_id`),
  FOREIGN KEY (User_id) REFERENCES user_table(user_id));
```

```
select * from `twitter_database`.`feeds_table`;
```

```
CREATE TABLE `twitter_database`.`retweets_table` (  
  `Retweet_id` INT NOT NULL,  
  `Feed_id` INT NOT NULL,  
  `User_id` INT NOT NULL,  
  PRIMARY KEY (`Retweet_id`),  
  FOREIGN KEY (User_id) REFERENCES user_table(user_id),  
  FOREIGN KEY (Feed_id) REFERENCES feeds_table(Feed_id)  
);
```

```
CREATE TABLE `twitter_database`.`comments_table` (  
  `Comment_id` INT NOT NULL,  
  `Comment_content` LONGTEXT NULL,  
  `Feed_id` INT NOT NULL,  
  `User_id` INT NOT NULL,  
  PRIMARY KEY (`Comment_id`),  
  FOREIGN KEY (User_id) REFERENCES user_table(user_id),  
  FOREIGN KEY (Feed_id) REFERENCES feeds_table(Feed_id));
```

```
#select * from 'twitter_database'. 'comments_table';
```

```
SELECT * FROM twitter_database.user_table;
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES  
('1', 'Edith', 'Rykert', 'EdithRykert@gmail.com', 'Rykert123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('2', 'Steven', 'Preston', 'StevenPreston@gmail.com', 'Preston123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('3', 'Hazel', 'Sanchez', 'HazelSanchez@gmail.com', 'Sanchez123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('4', 'Tammara', 'Dorsey', 'TammaraDorsey@gmail.com', 'Dorsey123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('5', 'Rodney', 'Lizarraga', 'RodneyLizarraga@gmail.com', 'Lizarraga123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('6', 'Lee', 'Flores', 'LeeFlores@gmail.com', 'Flores123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('7', 'Jo', 'Thompson', 'JoThompson@gmail.com', 'Thompson123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('8', 'Patricia', 'Siler', 'PatriciaSiler@gmail.com', 'Siler123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('9', 'Takisha', 'Crowe', 'TakishaCrowe@gmail.com', 'Crowe123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('10', 'Miguel', 'Johnson', 'MiguelJohnson@gmail.com', 'Johnson123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('11', 'Dana', 'Nery', 'DanaNery@gmail.com', 'Nery123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('12', 'Ivan', 'Gillis', 'IvanGillis@gmail.com', 'Gillis123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('13', 'Vernon', 'Rogers', 'VernonRogers@gmail.com', 'Rogers123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('14', 'Ryan', 'Young', 'RyanYoung@gmail.com', 'Young123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('15', 'Linda', 'Vanhoy', 'LindaVanhoy@gmail.com', 'Vanhoy123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('16', 'James', 'Taylor', 'JamesTaylor@gmail.com', 'Taylor123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('17', 'Betsy', 'Franklin', 'BetsyFranklin@gmail.com', 'Franklin123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('18', 'Vickie', 'Freeman', 'VickieFreeman@gmail.com', 'Freeman123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('19', 'Nicole', 'Mcdonald', 'NicoleMcdonald@gmail.com', 'Mcdonald123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('20', 'Mary', 'Savarese', 'MarySavarese@gmail.com', 'Savarese123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('21', 'Christy', 'Chin', 'ChristyChin@gmail.com', 'Chin123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('22', 'Sharon', 'Briggs', 'SharonBriggs@gmail.com', 'Briggs123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('23', 'Ronald', 'Apo', 'RonaldApo@gmail.com', 'Apo123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('24', 'Keith', 'Lowe', 'KeithLowe@gmail.com', 'Lowe123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('25', 'Scott', 'Morales', 'ScottMorales@gmail.com', 'Morales123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('26', 'Cameron', 'Cogar', 'CameronCogar@gmail.com', 'Cogar123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('27', 'Amy', 'Price', 'AmyPrice@gmail.com', 'Price123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('28', 'Charles', 'Archie', 'CharlesArchie@gmail.com', 'Archie123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('29', 'Mark', 'Kerwood', 'MarkKerwood@gmail.com', 'Kerwood123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('30', 'Beverly', 'Schulz', 'BeverlySchulz@gmail.com', 'Schulz123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('31', 'Joan', 'Rivera', 'JoanRivera@gmail.com', 'Rivera123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('32', 'Margo', 'Vecker', 'MargoVecker@gmail.com', 'Vecker123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('33', 'Richard', 'Tyson', 'RichardTyson@gmail.com', 'Tyson123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('34', 'Susan', 'Carr', 'SusanCarr@gmail.com', 'Carr123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('35', 'Lisa', 'Brown', 'LisaBrown@gmail.com', 'Brown123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('36', 'Rebecca', 'Massie', 'RebeccaMassie@gmail.com', 'Massie123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('37', 'Sidney', 'Scott', 'SidneyScott@gmail.com', 'Scott123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('38', 'Glenda', 'Warrington', 'GlendaWarrington@gmail.com', 'Warrington123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('39', 'Sarah', 'Walk', 'SarahWalk@gmail.com', 'Walk123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('40', 'Sherrie', 'Gaters', 'SherrieGaters@gmail.com', 'Gaters123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('41', 'George', 'Thomas', 'GeorgeThomas@gmail.com', 'Thomas123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('42', 'Pat', 'Johnson', 'PatJohnson@gmail.com', 'Johnson123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('43', 'Phillip', 'Garza', 'PhillipGarza@gmail.com', 'Garza123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('44', 'Kevin', 'Johnson', 'KevinJohnson@gmail.com', 'Johnson123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('45', 'Carolyn', 'Modlin', 'CarolynModlin@gmail.com', 'Modlin123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('46', 'Robert', 'Bare', 'RobertBare@gmail.com', 'Bare123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('47', 'Benjamin', 'Smith', 'BenjaminSmith@gmail.com', 'Smith123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('48', 'Walter', 'Shaw', 'WalterShaw@gmail.com', 'Shaw123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('49', 'Laura', 'Carrillo', 'LauraCarrillo@gmail.com', 'Carrillo123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('50', 'Jewel', 'Jennings', 'JewelJennings@gmail.com', 'Jennings123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('51', 'Joseph', 'Wagner', 'JosephWagner@gmail.com', 'Wagner123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('52', 'Tina', 'Rosser', 'TinaRosser@gmail.com', 'Rosser123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('53', 'Alvin', 'Price', 'AlvinPrice@gmail.com', 'Price123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('54', 'Matthew', 'Hong', 'MatthewHong@gmail.com', 'Hong123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('55', 'David', 'Mcfee', 'DavidMcfee@gmail.com', 'Mcfee123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('56', 'Stacy', 'Leon', 'StacyLeon@gmail.com', 'Leon123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('57', 'Sherry', 'Laitila', 'SherryLaitila@gmail.com', 'Laitila123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('58', 'Cornelia', 'Brooks', 'CorneliaBrooks@gmail.com', 'Brooks123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('59', 'Mary', 'Nickles', 'MaryNickles@gmail.com', 'Nickles123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('60', 'Jessica', 'Cardello', 'JessicaCardello@gmail.com', 'Cardello123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('61', 'Serena', 'Raynor', 'SerenaRaynor@gmail.com', 'Raynor123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('62', 'Walter', 'Dunham', 'WalterDunham@gmail.com', 'Dunham123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('63', 'Claudine', 'Fala', 'ClaudineFala@gmail.com', 'Fala123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('64', 'James', 'Scofield', 'JamesScofield@gmail.com', 'Scofield123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('65', 'Kenneth', 'Webb', 'KennethWebb@gmail.com', 'Webb123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('66', 'Beverly', 'Brown', 'BeverlyBrown@gmail.com', 'Brown123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('67', 'Donald', 'Day', 'DonaldDay@gmail.com', 'Day123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('68', 'Sharon', 'Miga', 'SharonMiga@gmail.com', 'Miga123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('69', 'Linda', 'Huffman', 'LindaHuffman@gmail.com', 'Huffman123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('70', 'Lesia', 'Degen', 'LesiaDegen@gmail.com', 'Degen123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('71', 'Micah', 'Pena', 'MicahPena@gmail.com', 'Pena123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('72', 'Kevin', 'Lopez', 'KevinLopez@gmail.com', 'Lopez123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('73', 'Harold', 'Benner', 'HaroldBenner@gmail.com', 'Benner123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('74', 'Patty', 'Davis', 'PattyDavis@gmail.com', 'Davis123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('75', 'Bobby', 'Reed', 'BobbyReed@gmail.com', 'Reed123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('76', 'Laura', 'Carey', 'LauraCarey@gmail.com', 'Carey123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('77', 'Dorothy', 'Sanchez', 'DorothySanchez@gmail.com', 'Sanchez123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('78', 'Jason', 'Perrez', 'JasonPerrez@gmail.com', 'Perrez123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('79', 'Jesus', 'Rollins', 'JesusRollins@gmail.com', 'Rollins123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('80', 'Rhonda', 'Duke', 'RhondaDuke@gmail.com', 'Duke123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('81', 'Darlene', 'Brown', 'DarleneBrown@gmail.com', 'Brown123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('82', 'Carla', 'Kain', 'CarlaKain@gmail.com', 'Kain123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('83', 'Sharmaine', 'Faust', 'SharmaineFaust@gmail.com', 'Faust123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('84', 'Ernie', 'Kelly', 'ErnieKelly@gmail.com', 'Kelly123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('85', 'Estella', 'Bradley', 'EstellaBradley@gmail.com', 'Bradley123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('86', 'David', 'Smith', 'DavidSmith@gmail.com', 'Smith123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('87', 'Kimberly', 'Messersmith', 'KimberlyMessersmith@gmail.com', 'Messersmith123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('88', 'Billy', 'Williams', 'BillyWilliams@gmail.com', 'Williams123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('89', 'Patricia', 'Jackson', 'PatriciaJackson@gmail.com', 'Jackson123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('90', 'Mary', 'Strong', 'MaryStrong@gmail.com', 'Strong123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('91', 'Jonathan', 'Jones', 'JonathanJones@gmail.com', 'Jones123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('92', 'Delia', 'Current', 'DeliaCurrent@gmail.com', 'Current123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('93', 'Lloyd', 'Wilkes', 'LloydWilkes@gmail.com', 'Wilkes123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('94', 'Dana', 'Harty', 'DanaHarty@gmail.com', 'Harty123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('95', 'Lori', 'Tieng', 'LoriTieng@gmail.com', 'Tieng123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('96', 'Alejandro', 'Guadagno', 'AlejandroGuadagno@gmail.com', 'Guadagno123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('97', 'Briana', 'Rauch', 'BrianaRauch@gmail.com', 'Rauch123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('98', 'Joseph', 'Gonzalez', 'JosephGonzalez@gmail.com', 'Gonzalez123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('99', 'David', 'Gutierrez', 'DavidGutierrez@gmail.com', 'Gutierrez123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('100', 'Jennifer', 'Ford', 'JenniferFord@gmail.com', 'Ford123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('101', 'Gloria', 'Wright', 'GloriaWright@gmail.com', 'Wright123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('102', 'Jeffrey', 'Flint', 'JeffreyFlint@gmail.com', 'Flint123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('103', 'Gerald', 'Voyer', 'GeraldVoyer@gmail.com', 'Voyer123');
```



```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('104', 'Paul', 'Riley', 'PaulRiley@gmail.com', 'Riley123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('105', 'Devin', 'Fisher', 'DevinFisher@gmail.com', 'Fisher123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('106', 'Laura', 'Mclean', 'LauraMclean@gmail.com', 'Mclean123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('107', 'Donna', 'Lorentz', 'DonnaLorentz@gmail.com', 'Lorentz123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('108', 'Willie', 'Smallidge', 'WillieSmallidge@gmail.com', 'Smallidge123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('109', 'Gary', 'Mills', 'GaryMills@gmail.com', 'Mills123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('110', 'Raquel', 'Pacheco', 'RaquelPacheco@gmail.com', 'Pacheco123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('111', 'Randall', 'Rodgers', 'RandallRodgers@gmail.com', 'Rodgers123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('112', 'Sean', 'Hudson', 'SeanHudson@gmail.com', 'Hudson123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('113', 'Jose', 'Olson', 'JoseOlson@gmail.com', 'Olson123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('114', 'John', 'Schafer', 'JohnSchafer@gmail.com', 'Schafer123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('115', 'Hoa', 'Sajovic', 'HoaSajovic@gmail.com', 'Sajovic123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('116', 'Teresa', 'Pearson', 'TeresaPearson@gmail.com', 'Pearson123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('117', 'Teresa', 'Espinoza', 'TeresaEspinoza@gmail.com', 'Espinoza123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('118', 'Margaret', 'Fadden', 'MargaretFadden@gmail.com', 'Fadden123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('119', 'Brittany', 'Crayton', 'BrittanyCrayton@gmail.com', 'Crayton123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('120', 'Barry', 'Wilt', 'BarryWilt@gmail.com', 'Wilt123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('121', 'Patricia', 'Cahall', 'PatriciaCahall@gmail.com', 'Cahall123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('122', 'Leon', 'Mcdonald', 'LeonMcdonald@gmail.com', 'Mcdonald123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('123', 'George', 'Peoples', 'GeorgePeoples@gmail.com', 'Peoples123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('124', 'Sandra', 'Butler', 'SandraButler@gmail.com', 'Butler123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('125', 'Marvin', 'Stracener', 'MarvinStracener@gmail.com', 'Stracener123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('126', 'Pamela', 'Beller', 'PamelaBeller@gmail.com', 'Beller123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('127', 'Myrtle', 'Smith', 'MyrtleSmith@gmail.com', 'Smith123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('128', 'Eric', 'Hatfield', 'EricHatfield@gmail.com', 'Hatfield123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('129', 'Frank', 'Soriano', 'FrankSoriano@gmail.com', 'Soriano123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('130', 'Randy', 'Rogers', 'RandyRogers@gmail.com', 'Rogers123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('131', 'Sylvia', 'Tapp', 'SylviaTapp@gmail.com', 'Tapp123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('132', 'Olga', 'Cato', 'OlgaCato@gmail.com', 'Cato123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('133', 'Janie', 'Daggett', 'JanieDaggett@gmail.com', 'Daggett123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('134', 'Paul', 'Chilton', 'PaulChilton@gmail.com', 'Chilton123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('135', 'Dennis', 'Numbers', 'DennisNumbers@gmail.com', 'Numbers123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('136', 'Angelina', 'Castellana', 'AngelinaCastellana@gmail.com', 'Castellana123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('137', 'Beverly', 'Marcum', 'BeverlyMarcum@gmail.com', 'Marcum123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('138', 'Inez', 'Kapper', 'InezKapper@gmail.com', 'Kapper123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('139', 'Jesse', 'Barnett', 'JesseBarnett@gmail.com', 'Barnett123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('140', 'Deborah', 'Kelley', 'DeborahKelley@gmail.com', 'Kelley123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('141', 'Josie', 'Reynolds', 'JosieReynolds@gmail.com', 'Reynolds123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('142', 'Jodi', 'Tanner', 'JodiTanner@gmail.com', 'Tanner123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('143', 'Nancy', 'Casey', 'NancyCasey@gmail.com', 'Casey123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('144', 'Timothy', 'Terry', 'TimothyTerry@gmail.com', 'Terry123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('145', 'Carla', 'Wheeler', 'CarlaWheeler@gmail.com', 'Wheeler123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('146', 'Seth', 'Stokes', 'SethStokes@gmail.com', 'Stokes123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('147', 'Joseph', 'Bridges', 'JosephBridges@gmail.com', 'Bridges123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('148', 'Sharon', 'Haynes', 'SharonHaynes@gmail.com', 'Haynes123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('149', 'Donna', 'Cox', 'DonnaCox@gmail.com', 'Cox123');
```

```
INSERT INTO `twitter_database`.`user_table` (`user_id`, `name`, `lastname`, `email`, `password`) VALUES ('150', 'Mona', 'Adam', 'MonaAdam@gmail.com', 'Adam123');
```

```
insert into `twitter_database`.`followers_table` values (1, 'Srividya', 'polneni', 'sri@gmail.com', 'Momdad@123');
```

```
insert into `twitter_database`.`followers_table` values (2, 'Vyshu', 'polneni', 'vyshu@gmail.com', 'Mom@143');
```

```
insert into `twitter_database`.`followers_table` values (3, 'kiran', 'kammadu', 'kiran@gmail.com', 'pass1');
```

```
insert into `twitter_database`.`followers_table` values (4, 'vishnu', 'karmin', 'vishnu@gmail.com', 'pass2');
```

```
insert into `twitter_database`.`followers_table` values (5, 'riyaz', 'jammi', 'riyaz@gmail.com', 'pass3');
```

```
insert into `twitter_database`.`followers_table` values ('6','dhatri','funny','dhatri@gmail.com','pass4');
insert into `twitter_database`.`followers_table` values ('7','sneha','galli','sneha@gmail.com','pass5');
insert into `twitter_database`.`followers_table` values ('8','varun','oman','varun@gmail.com','pass6');
insert into `twitter_database`.`followers_table` values ('9','sri','kothapally','sri@gmail.com','pass7');
insert into `twitter_database`.`followers_table` values ('10','farin','kanchi','farin@gmail.com','pass8');
insert into `twitter_database`.`followers_table` values
('11','kranthi','banchu','kranthi@gmail.com','pass9');
insert into `twitter_database`.`followers_table` values
('12','kinnu','karmin','kinnu@gmail.com','pass10');
insert into `twitter_database`.`followers_table` values ('13','sashi','vizag','sashi@gmail.com','pass11');
insert into `twitter_database`.`followers_table` values
('14','vashi','hyderabad','vashigmail.com','pass12');
insert into `twitter_database`.`followers_table` values
('15','kushi','warangal','kushi@gmail.com','pass13');
insert into `twitter_database`.`followers_table` values ('16','srinu','singal','srinu@gmail.com','pass14');
insert into `twitter_database`.`followers_table` values
('17','ramarao','burnal','ramarao@gmail.com','pass15');
insert into `twitter_database`.`followers_table` values
('18','venkatrao','firnal','venkatrao@gmail.com','pass16');
insert into `twitter_database`.`followers_table` values
('19','chengal','girnall','chengal@gmail.com','pass17');
insert into `twitter_database`.`followers_table` values
('20','rajesh','kernal','rajesh@gmail.com','pass18');
insert into `twitter_database`.`followers_table` values
('21','syed','dharmaram','syed@gmail.com','pass19');
insert into `twitter_database`.`followers_table` values ('22','kinnu','verifal','kinnu@gmail.com','pass20');
insert into `twitter_database`.`followers_table` values
('23','chitti','mariyal','chitti@gmail.com','pass21');
insert into `twitter_database`.`followers_table` values ('24','baby','gariyal','baby@gmail.com','pass22');
insert into `twitter_database`.`followers_table` values
('25','kutti','dhuniyal','kutti@gmail.com','pass23');
insert into `twitter_database`.`followers_table` values
('26','gundu','phonial','gundu@gmail.com','pass24');
```

```
insert into `twitter_database`.`followers_table` values
('27','banda','cheniyal','banda@gmail.com','pass25');

insert into `twitter_database`.`followers_table` values ('28','anu','varnial','anu@gmail.com','pass25');

insert into `twitter_database`.`followers_table` values ('29','ravi','memphial','ravi@gmail.com','pass26');

insert into `twitter_database`.`followers_table` values ('30','akhil','chunial','akhil@gmail.com','pass27');

insert into `twitter_database`.`followers_table` values
('31','shainu','chickiyal','shainu@gmail.com','pass28');

insert into `twitter_database`.`followers_table` values
('32','chinni','manial','chinni@gmail.com','pass29');

insert into `twitter_database`.`followers_table` values
('33','punnu','dunial','punnu@gmail.com','pass30');

insert into `twitter_database`.`followers_table` values
('34','kinnur','cheriyal','kinnur@gmail.com','pass31');

insert into `twitter_database`.`followers_table` values
('35','banda','kominal','banda@gmail.com','pass32');

insert into `twitter_database`.`followers_table` values ('36','chelli','hernial','chelli@gmail.com','pass33');

insert into `twitter_database`.`followers_table` values ('37','sakiya','ijinal','sakiya@gmail.com','pass34');

insert into `twitter_database`.`followers_table` values
('38','varyia','marignal','variya@gmail.com','pass35');

insert into `twitter_database`.`followers_table` values
('39','gariya','dornial','gariya@gmail.com','pass36');

insert into `twitter_database`.`followers_table` values
('40','cheruvu','umbinal','cheruvu@gmail.com','pass37');

insert into `twitter_database`.`followers_table` values
('41','baruvu','chiginal','baruvu@gmail.com','pass38');

insert into `twitter_database`.`followers_table` values
('42','komala','maphinal','komala@gmail.com','pass39');

insert into `twitter_database`.`followers_table` values
('43','vimala','farinal','vimala@gmail.com','pass40');

insert into `twitter_database`.`followers_table` values
('44','nyruthi','aginal','nyruthi@gmail.com','pass41');

insert into `twitter_database`.`followers_table` values
('45','prakruthi','karinal','prakruthi@gmail.com','pass42');
```

```
insert into `twitter_database`.`followers_table` values  
('46','chanluthi','hernial','chanluthi@gmail.com','pass43');
```

```
insert into `twitter_database`.`followers_table` values  
('47','gamluthi','abunal','gamluthi@gmail.com','pass44');
```

```
insert into `twitter_database`.`followers_table` values  
('48','karluthi','eginal','karluthi@gmail.com','pass45');
```

```
insert into `twitter_database`.`followers_table` values  
('49','jailuthi','duginal','jailuthi@gmail.com','pass46');
```

```
insert into `twitter_database`.`followers_table` values  
('50','alubhi','alunum','alubhi@gmail.com','pass47');
```

```
##insert into `twitter_database`.`feeds_table` values ('1',"Don't tell people your plans",'1' ),
```

```
insert into `twitter_database`.`feeds_table` values('1',"Stay foolish to stay ", '25' );
```

```
insert into `twitter_database`.`feeds_table` values('2',"We can do anything we want", '19' );
```

```
insert into `twitter_database`.`feeds_table` values ('3',"Stay foolish to stay sane", '41' );
```

```
insert into `twitter_database`.`feeds_table` values ('4',"When nothing goes right, go left", '43' );
```

```
insert into `twitter_database`.`feeds_table` values('5',"Try Again. Fail again. Fail better", '41' );
```

```
insert into `twitter_database`.`feeds_table` values('6',"Impossible is for the unwilling", '39' );
```

```
insert into `twitter_database`.`feeds_table` values('7',"Once you choose hope, anything's possible", '37'  
);
```

```
insert into `twitter_database`.`feeds_table` values('8',"I can and I will", '35' );
```

```
insert into `twitter_database`.`feeds_table` values('9',"Take the risk or lose the chance", '33' );
```

```
insert into `twitter_database`.`feeds_table` values('10',"There is no saint without a past", '31' );
```

```
insert into `twitter_database`.`feeds_table` values('11',"Good things happen to those who hustle", '29' );
```

```
insert into `twitter_database`.`feeds_table` values('12',"Solitary trees", '27' );
```

```
insert into `twitter_database`.`feeds_table` values('13',"Go forth on your path", '25' );
```

```
insert into `twitter_database`.`feeds_table` values('14',"The bird a nest", '23' );
```

```
insert into `twitter_database`.`feeds_table` values('15',"He who is brave is free", '21' );
```

```
insert into `twitter_database`.`feeds_table` values('16',"Prove them wrong", '19' );
```

```
insert into `twitter_database`.`feeds_table` values('17',"The fastest road to meaning", '17' );
```

```
insert into `twitter_database`.`feeds_table` values('18',"No guts, no story", '15' );
```

```
insert into `twitter_database`.`feeds_table` values('19',"Screw it, let's do it",'13' );
insert into `twitter_database`.`feeds_table` values('20',"Boldness be my friend",'11' );
insert into `twitter_database`.`feeds_table` values('21',"My life is my message",'9' );
insert into `twitter_database`.`feeds_table` values('22',"Keep going",'7' );
insert into `twitter_database`.`feeds_table` values('23',"Dream big",'3' );
insert into `twitter_database`.`feeds_table` values('24',"Dream big",'1' );
insert into `twitter_database`.`feeds_table` values('25',"Boldness be my friend",'2' );
insert into `twitter_database`.`feeds_table` values('26',"Screw it, let's do it",'4' );
insert into `twitter_database`.`feeds_table` values('27',"Boldness be my friend",'6' );
insert into `twitter_database`.`feeds_table` values('28',"My life is my message",'8' );
insert into `twitter_database`.`feeds_table` values('29',"brave is free",'10' );
insert into `twitter_database`.`feeds_table` values('30',"I wasn't unable to enjoy ","'12' );
insert into `twitter_database`.`feeds_table` values('31',"In a way.",'14' );
insert into `twitter_database`.`feeds_table` values('32',"The more ","'16' );
insert into `twitter_database`.`feeds_table` values('33',"Eventually, I started my own website ","'18' );
insert into `twitter_database`.`feeds_table` values('34',"And so the adventure begins",'20' );
insert into `twitter_database`.`feeds_table` values('35',"If you want it, work for it",'22' );
insert into `twitter_database`.`feeds_table` values('36',"And so the adventure begins",'24' );
insert into `twitter_database`.`feeds_table` values('37',"Grow through what you go through",'26' );
insert into `twitter_database`.`feeds_table` values('38',"Do it with passion or not at all",'28' );
insert into `twitter_database`.`feeds_table` values('39',"Forget about style; worry about results",'30' );
insert into `twitter_database`.`feeds_table` values('40',"Success is the child of audacity",'32' );
insert into `twitter_database`.`feeds_table` values('41',"Whatever you do, do with all your might",'34' );
insert into `twitter_database`.`feeds_table` values('43',"We are twice armed if we fight with faith",'36' );
insert into `twitter_database`.`feeds_table` values('44',"Be faithful ","'38' );
insert into `twitter_database`.`feeds_table` values('45',"Let him do",'40' );
insert into `twitter_database`.`feeds_table` values('46',"Persistence guarantees ","'42' );
insert into `twitter_database`.`feeds_table` values('47',"The wisest mind has done",'44' );
insert into `twitter_database`.`feeds_table` values('48',"Fall seven times, stand up eight",'46' );
```

```
insert into `twitter_database`.`feeds_table` values('49',"Seek the seeker",'48' );  
insert into `twitter_database`.`feeds_table` values('50',"Silence is an answer too",'50' );  
insert into `twitter_database`.`feeds_table` values('51',"Every wall is a door",'51' );
```

```
insert into `twitter_database`.`retweets_table` values('1','2','1');  
insert into `twitter_database`.`retweets_table` values('2','3','5');  
insert into `twitter_database`.`retweets_table` values('3','5','7');  
insert into `twitter_database`.`retweets_table` values('4','7','9');  
insert into `twitter_database`.`retweets_table` values('5','9','11');  
insert into `twitter_database`.`retweets_table` values('6','11','13');  
insert into `twitter_database`.`retweets_table` values('7','13','15');  
insert into `twitter_database`.`retweets_table` values('8','1','17');  
insert into `twitter_database`.`retweets_table` values('9','17','19');  
insert into `twitter_database`.`retweets_table` values('10','19','21');  
insert into `twitter_database`.`retweets_table` values('11','21','23');  
insert into `twitter_database`.`retweets_table` values('12','23','25');  
insert into `twitter_database`.`retweets_table` values('13','25','27');  
insert into `twitter_database`.`retweets_table` values('14','27','29');  
insert into `twitter_database`.`retweets_table` values('15','29','31');  
insert into `twitter_database`.`retweets_table` values('16','31','33');  
insert into `twitter_database`.`retweets_table` values('17','33','35');  
insert into `twitter_database`.`retweets_table` values('18','25','27');  
insert into `twitter_database`.`retweets_table` values('19','27','29');  
insert into `twitter_database`.`retweets_table` values('20','29','31');  
insert into `twitter_database`.`retweets_table` values('21','31','33');  
insert into `twitter_database`.`retweets_table` values('22','35','37');  
insert into `twitter_database`.`retweets_table` values('23','37','39');  
insert into `twitter_database`.`retweets_table` values('24','39','41');  
insert into `twitter_database`.`retweets_table` values('25','41','43');
```



```
insert into `twitter_database`.`retweets_table` values('26','43','45');
insert into `twitter_database`.`retweets_table` values('27','45','47');
insert into `twitter_database`.`retweets_table` values('28','47','49');
insert into `twitter_database`.`retweets_table` values('29','49','51');
insert into `twitter_database`.`retweets_table` values('30','2','53');
insert into `twitter_database`.`retweets_table` values('31','4','55');
insert into `twitter_database`.`retweets_table` values('32','6','57');
insert into `twitter_database`.`retweets_table` values('33','8','59');
insert into `twitter_database`.`retweets_table` values('34','10','61');
insert into `twitter_database`.`retweets_table` values('35','12','63');
insert into `twitter_database`.`retweets_table` values('36','14','65');
insert into `twitter_database`.`retweets_table` values('37','16','67');
insert into `twitter_database`.`retweets_table` values('38','18','69');
insert into `twitter_database`.`retweets_table` values('39','20','71');
insert into `twitter_database`.`retweets_table` values('40','22','73');
insert into `twitter_database`.`retweets_table` values('41','24','75');
insert into `twitter_database`.`retweets_table` values('42','26','77');
insert into `twitter_database`.`retweets_table` values('44','28','79');
insert into `twitter_database`.`retweets_table` values('45','30','81');
insert into `twitter_database`.`retweets_table` values('46','32','83');
insert into `twitter_database`.`retweets_table` values('47','34','85');
insert into `twitter_database`.`retweets_table` values('48','36','87');
insert into `twitter_database`.`retweets_table` values('49','38','89');
insert into `twitter_database`.`retweets_table` values('50','40','91');
```

```
CREATE TABLE `twitter_database`.`comments_table` (
  `Comment_id` INT NOT NULL,
  `Comment_content` LONGTEXT NULL,
  `Feed_id` INT NOT NULL,
```

```
`User_id` INT NOT NULL,  
PRIMARY KEY (`Comment_id`),  
FOREIGN KEY (User_id) REFERENCES user_table(user_id),  
FOREIGN KEY (Feed_id) REFERENCES feeds_table(Feed_id));
```

```
insert into `twitter_database`.`comments_table` values('1','Good work','1','2');  
insert into `twitter_database`.`comments_table` values('2','Sorry!Bad work','3','4');  
insert into `twitter_database`.`comments_table` values('3','Good work','5','6');  
insert into `twitter_database`.`comments_table` values('4','Sorry!Bad work','7','8');  
insert into `twitter_database`.`comments_table` values('5','Good work','9','10');  
insert into `twitter_database`.`comments_table` values('6','Sorry!Bad work','11','12');  
insert into `twitter_database`.`comments_table` values('7','Good work','13','14');  
insert into `twitter_database`.`comments_table` values('8','Sorry!Bad work','15','16');  
insert into `twitter_database`.`comments_table` values('9','Good work','17','18');  
insert into `twitter_database`.`comments_table` values('10','Sorry!Bad work','18','19');  
insert into `twitter_database`.`comments_table` values('11','Sorry!Bad work','19','20');  
insert into `twitter_database`.`comments_table` values('12','Good work','21','22');  
insert into `twitter_database`.`comments_table` values('13','Sorry!Bad work','23','24');  
insert into `twitter_database`.`comments_table` values('14','Good work','25','26');  
insert into `twitter_database`.`comments_table` values('15','Sorry!Bad work','27','28');  
insert into `twitter_database`.`comments_table` values('16','Good work','29','30');  
insert into `twitter_database`.`comments_table` values('17','Sorry!Bad work','31','32');  
insert into `twitter_database`.`comments_table` values('18','Good work','33','34');  
insert into `twitter_database`.`comments_table` values('19','Sorry!Bad work','35','36');  
insert into `twitter_database`.`comments_table` values('20','Good work','37','38');  
insert into `twitter_database`.`comments_table` values('21','Sorry!Bad work','39','40');  
insert into `twitter_database`.`comments_table` values('22','Good work','41','42');  
insert into `twitter_database`.`comments_table` values('23','Sorry!Bad work','43','44');  
insert into `twitter_database`.`comments_table` values('24','Good work','45','46');
```

```
insert into `twitter_database`.`comments_table` values('25','Sorry!Bad work','47','48');
insert into `twitter_database`.`comments_table` values('26','Good work','48','49');
insert into `twitter_database`.`comments_table` values('27','Sorry!Bad work','50','51');
insert into `twitter_database`.`comments_table` values('28','Good work','2','53');
insert into `twitter_database`.`comments_table` values('29','Sorry!Bad work','4','55');
insert into `twitter_database`.`comments_table` values('30','Good work','6','57');
insert into `twitter_database`.`comments_table` values('31','Sorry!Bad work','8','59');
insert into `twitter_database`.`comments_table` values('32','Sorry!Bad work','10','61');
insert into `twitter_database`.`comments_table` values('33','Good work','12','63');
insert into `twitter_database`.`comments_table` values('34','Sorry!Bad work','14','65');
insert into `twitter_database`.`comments_table` values('35','Good work','16','67');
insert into `twitter_database`.`comments_table` values('36','Sorry!Bad work','18','69');
insert into `twitter_database`.`comments_table` values('37','Good work','20','71');
insert into `twitter_database`.`comments_table` values('38','Sorry!Bad work','21','73');
insert into `twitter_database`.`comments_table` values('39','Good work','22','75');
insert into `twitter_database`.`comments_table` values('40','Sorry!Bad work','24','77');
insert into `twitter_database`.`comments_table` values('41','Good work','26','79');
insert into `twitter_database`.`comments_table` values('41','Sorry!Bad work','28','81');
insert into `twitter_database`.`comments_table` values('42','Good work','30','83');
insert into `twitter_database`.`comments_table` values('43','Sorry!Bad work','32','85');
insert into `twitter_database`.`comments_table` values('44','Good work','34','87');
insert into `twitter_database`.`comments_table` values('45','Sorry!Bad work','36','89');
insert into `twitter_database`.`comments_table` values('46','Good work','38','91');
insert into `twitter_database`.`comments_table` values('47','Sorry!Bad work','40','93');
insert into `twitter_database`.`comments_table` values('48','Good work','42','95');
insert into `twitter_database`.`comments_table` values('49','Sorry!Bad work','44','97');
insert into `twitter_database`.`comments_table` values('50','Good work','46','99');
```

- Neo4J

The below code helps you to load data easily in to the neo4j

```
LOAD CSV WITH HEADERS FROM 'file:///datatwitter.csv' AS row
WITH toInteger(row.user_id) AS user_id, row.name AS name, row.lastname AS lastname, row.password
AS password
RETURN user_id, name, lastname, password
LIMIT 100;
```

```
LOAD CSV WITH HEADERS FROM 'file:///datatwitter.csv' AS row
WITH toInteger(row.user_id) AS user_id, row.name AS name, row.lastname AS lastname, row.password
AS password
MERGE (p:user_table {user_id: user_id})
SET p.name = name, p.lastname = lastname, p.password = password
```

```
MATCH (p:user_table)
RETURN p LIMIT 150;
```

## Neo4J Cypher Queries: (directly without using CSV)

```
CREATE (user0:User{
user_id:'5006',name:'Diane',last_name:'Peaslee',email:'mDNzDJyYuxgmail.com',password:'uUtadcvvPJL
pXJR' })
CREATE (follower0:Follower{
user_id:'5006',name:'Betty',last_name:'Lawson',email:'OgpMyuyTtsgmail.com',password:'OgKNxBfRhQb
RXae' })CREATE (user1:User{
user_id:'4801',name:'Marcus',last_name:'Fitch',email:'QcatspoJqCgmail.com',password:'GyexuemynAxN
nNf' })
CREATE (follower1:Follower{
user_id:'4801',name:'Audra',last_name:'King',email:'rTmzThxiRfgmail.com',password:'diKepimEmXwWH
fW' })CREATE (user2:User{
user_id:'4355',name:'Heriberto',last_name:'Lukas',email:'fscblQEvErgmail.com',password:'RyydPNZRCK
QwDYF' })
CREATE (follower2:Follower{
user_id:'4355',name:'Bradley',last_name:'Reyes',email:'CtaZJomkkegmail.com',password:'coRUMyXeVA
FnULW' })CREATE (user3:User{
user_id:'9599',name:'Pearl',last_name:'Thurman',email:'wOxlqzCbLqgmail.com',password:'PinujTbJebcX
zzy' })
CREATE (follower3:Follower{
user_id:'9599',name:'George',last_name:'Beason',email:'AIGhNTewhKgmail.com',password:'eNXsQLCoT
ZIGwaz' })CREATE (user4:User{
```

```

user_id:'4026',name:'Timmy',last_name:'Jensen',email:'TIFoQzeJNfgmail.com',password:'fZzwmWqXHuj
KENY' }}
CREATE (follower4:Follower{
user_id:'4026',name:'John',last_name:'Aronow',email:'labwwjJrcigmail.com',password:'NMZROyLDXmPi
SMW' })CREATE (user5:User{
user_id:'8285',name:'Dong',last_name:'Carbone',email:'xqWMIromNngmail.com',password:'zECDFRZbL
Nngftk' })
CREATE (follower5:Follower{
user_id:'8285',name:'Violet',last_name:'Stewart',email:'QHeyWdYOVKgmail.com',password:'MRysmaIV
VBjOxQt' })CREATE (user6:User{
user_id:'1215',name:'Robert',last_name:'Sanders',email:'eLdPxLShgYgmail.com',password:'wTtKppenuS
KKKMo' })
CREATE (follower6:Follower{
user_id:'1215',name:'Samuel',last_name:'Wiley',email:'nybAcRARLJgmail.com',password:'VNoBowWrml
OoXha' })CREATE (user7:User{
user_id:'2591',name:'Robert',last_name:'Klein',email:'LxntLLuqvfgmail.com',password:'zykyqIhBSpowup
k' })
CREATE (follower7:Follower{
user_id:'2591',name:'Deadra',last_name:'Mashack',email:'cNSgPVozfTgmail.com',password:'mXsjgUxeDI
sApAP' })CREATE (user8:User{
user_id:'2382',name:'Tom',last_name:'Klein',email:'MfPOcNHuDugmail.com',password:'gtAUyBfHrrCcD
z' })
CREATE (follower8:Follower{
user_id:'2382',name:'Linda',last_name:'Corp',email:'aqDMXYlxWzgmail.com',password:'dOCSThbrsOWN
ZhD' })CREATE (user9:User{
user_id:'7225',name:'Levi',last_name:'Dillman',email:'FuUIHESTEDgmail.com',password:'CivZOaTJiMzhv
ah' })
CREATE (follower9:Follower{
user_id:'7225',name:'Karen',last_name:'Ellis',email:'rjwioZcMwfgmail.com',password:'DJQjXHirXYymAHf
' })CREATE (user10:User{
user_id:'7311',name:'Kermit',last_name:'Lapointe',email:'QXCZMAypFlgmail.com',password:'LSJWeVzDi
RorXMk' })
CREATE (follower10:Follower{
user_id:'7311',name:'Jose',last_name:'Alonzo',email:'YCzlgmfUohgmail.com',password:'ezhtNoxWOHkT
KBh' })CREATE (user11:User{
user_id:'9956',name:'Jackie',last_name:'Sargent',email:'CfvcfvnEkhgmail.com',password:'SkKhswrYNRaD
iTd' })
CREATE (follower11:Follower{
user_id:'9956',name:'Stanley',last_name:'Bilski',email:'GvMDoDzDUwgmail.com',password:'NSXhGQYTa
pCGkga' })CREATE (user12:User{
user_id:'3848',name:'Debra',last_name:'Harriss',email:'RubVTerTexgmail.com',password:'zujsvvPunbIUu
IR' })
CREATE (follower12:Follower{
user_id:'3848',name:'Nanette',last_name:'Moor',email:'RZCKIFhsNxgmail.com',password:'ZxZKBinJRFeXx
Kj' })CREATE (user13:User{
user_id:'2864',name:'James',last_name:'Glass',email:'IhJJwAzDATgmail.com',password:'SiAAcFJhTSimfvA
' })

```

```

CREATE (follower13:Follower{
  user_id:'2864',name:'Milford',last_name:'Harris',email:'tKnTeJUzPSgmail.com',password:'bjtPOTidVQHT
VqN' })CREATE (user14:User{
  user_id:'1623',name:'Deborah',last_name:'Baker',email:'zQPHeGJUhRgmail.com',password:'CiLIPUwOxfz
qmle' })
CREATE (follower14:Follower{
  user_id:'1623',name:'Barry',last_name:'Edwards',email:'sbDScyHIwOgmail.com',password:'iYxZWBUwxQ
iceUQ' })CREATE (user15:User{
  user_id:'9859',name:'Joseph',last_name:'Hawes',email:'BfJDMzUVywgmail.com',password:'kmHVNvrlDn
JxSJe' })
CREATE (follower15:Follower{
  user_id:'9859',name:'Greg',last_name:'Schreckengost',email:'QzXvAqMNzugmail.com',password:'zWIUt
dMvwQqanvf' })CREATE (user16:User{
  user_id:'9703',name:'Chris',last_name:'Desmith',email:'vKLxztPRNkgmail.com',password:'uiOuWDCkGT
WXhIQ' })
CREATE (follower16:Follower{
  user_id:'9703',name:'Jamie',last_name:'Heim',email:'UxQpCxDdYdgmail.com',password:'PslvJjCGeoOjrSi
' })CREATE (user17:User{
  user_id:'1185',name:'Anne',last_name:'Walter',email:'SQONwloEjvgmail.com',password:'eNcshIOYCuxIV
YD' })
CREATE (follower17:Follower{
  user_id:'1185',name:'Victoria',last_name:'Saas',email:'ilpkdunpuVgmail.com',password:'eZsQUooSfwjcT
Yj' })CREATE (user18:User{
  user_id:'4415',name:'Julio',last_name:'Madson',email:'HHmnJpdfUEgmail.com',password:'PCiglswwaKcr
SpH' })
CREATE (follower18:Follower{
  user_id:'4415',name:'Natalie',last_name:'Armitage',email:'bllKnngrZgmail.com',password:'kJdwKxOBIA
kVHne' })CREATE (user19:User{
  user_id:'6766',name:'Berry',last_name:'Breceda',email:'nrJIKevJGwgmail.com',password:'FYIMfPeNSsnI
qu' })
CREATE (follower19:Follower{
  user_id:'6766',name:'John',last_name:'Smith',email:'kacwtrhGhUgmail.com',password:'wxJkmWObefcuz
tA' })CREATE (user20:User{
  user_id:'5252',name:'William',last_name:'Hill',email:'lxzmoKlpTogmail.com',password:'cFXswugXkCVUC
Am' })
CREATE (follower20:Follower{
  user_id:'5252',name:'Cynthia',last_name:'Cantella',email:'gfeMTfPQRMgmail.com',password:'klemMkxK
XpljmRh' })CREATE (user21:User{
  user_id:'5091',name:'Marcelina',last_name:'Evans',email:'lvVtFeozJjgmail.com',password:'QVAWOZVpq
UpKYYc' })
CREATE (follower21:Follower{
  user_id:'5091',name:'Christopher',last_name:'Flores',email:'qmYjqkYDYBgmail.com',password:'uuLVsrw
YLJzYnvP' })CREATE (user22:User{
  user_id:'4996',name:'Carolyn',last_name:'Burrows',email:'vezNgYZzdlgmail.com',password:'psOpZfVlyBJ
hreS' })
CREATE (follower22:Follower{
  user_id:'4996',name:'Esther',last_name:'Guzman',email:'nZEMTMrHIAgmail.com',password:'xAlCIVpvkt
RslZf' })CREATE (user23:User{

```

```

user_id:'6039',name:'Gary',last_name:'Pixley',email:'ukQyjuGTnqgmail.com',password:'PSyWfnGVKxgeH
ge' })
CREATE (follower23:Follower{
user_id:'6039',name:'Matthew',last_name:'Gaines',email:'nxQLoeUcOIgmail.com',password:'zZUoNsGxs
eOSaOp' })CREATE (user24:User{
user_id:'4790',name:'Gene',last_name:'Tanksley',email:'calePQMbHEgmail.com',password:'LkipXbPwRS
PQAED' })
CREATE (follower24:Follower{
user_id:'4790',name:'Tommy',last_name:'Collins',email:'FSNKRHSIBygmail.com',password:'YuHkMSJTLlu
ZIZV' })CREATE (user25:User{
user_id:'5360',name:'Robert',last_name:'Pearce',email:'zQzOTtSQqigmail.com',password:'DYXfDOMhLec
zhxs' })
CREATE (follower25:Follower{
user_id:'5360',name:'Lorrie',last_name:'Connors',email:'FDXXniBmqJgmail.com',password:'YGpuiaFgBm
Pxixy' })CREATE (user26:User{
user_id:'9978',name:'Evangelina',last_name:'Fennel',email:'VpsillMgZigmail.com',password:'DzlbmZnaD
MRVpLX' })
CREATE (follower26:Follower{
user_id:'9978',name:'Arturo',last_name:'Serge',email:'MMjtQhLdlygmail.com',password:'oathzmLUhwD
KNfj' })CREATE (user27:User{
user_id:'4162',name:'Julie',last_name:'Smith',email:'qyCfsdKnkSgmail.com',password:'TKDHNvJUAGxTFb
e' })
CREATE (follower27:Follower{
user_id:'4162',name:'Jennifer',last_name:'Celestin',email:'GQpaavxnKAgmail.com',password:'WSPeFHL
mwROPRxn' })CREATE (user28:User{
user_id:'6142',name:'Edwina',last_name:'Lawrence',email:'aTQYCPNklWgmail.com',password:'yyGbpsNI
wAGhRyo' })
CREATE (follower28:Follower{
user_id:'6142',name:'Margarita',last_name:'Skinner',email:'JSjWeZmWkEgmail.com',password:'ycQMoY
rYkuzaJyu' })CREATE (user29:User{
user_id:'6047',name:'Scott',last_name:'Wilson',email:'xcRBsUiwUpgmail.com',password:'HJyYmptHejJyq
kg' })
CREATE (follower29:Follower{
user_id:'6047',name:'Lillie',last_name:'Thatcher',email:'FBquZijlXhgmail.com',password:'peYYXoFsVffqa
HF' })CREATE (user30:User{
user_id:'9742',name:'Carroll',last_name:'Villegas',email:'JjLePYuhQxgmail.com',password:'enRfaiRZnHMr
rba' })
CREATE (follower30:Follower{
user_id:'9742',name:'Lisa',last_name:'Lowery',email:'nlzAXIzFHSgmail.com',password:'OnPOIfyiGtcTwQ
B' })CREATE (user31:User{
user_id:'5281',name:'Lula',last_name:'Iverson',email:'BUyYWKjCtigmail.com',password:'LYFgsUFpqLcSfy
V' })
CREATE (follower31:Follower{
user_id:'5281',name:'Jesus',last_name:'Marquardt',email:'SuwbQttMOagmail.com',password:'dnACKnZ
qlDqPHJQ' })CREATE (user32:User{
user_id:'3879',name:'Elizabeth',last_name:'Arrington',email:'qMUilciSJRgmail.com',password:'DbumvKR
EgXBMQE' })

```

```

CREATE (follower32:Follower{
  user_id:'3879',name:'Melvin',last_name:'Herrera',email:'qbHDyFgfDigmail.com',password:'tKhjoXILNBTK
bGg' })CREATE (user33:User{
  user_id:'5289',name:'Carmen',last_name:'Bodrick',email:'yJafPsJWqWgmail.com',password:'UgxqrUcfjrB
JDsh' })
CREATE (follower33:Follower{
  user_id:'5289',name:'Nancy',last_name:'Dunlop',email:'PqllNtyrlgmail.com',password:'jAFTIpJnRxfoAK
M' })CREATE (user34:User{
  user_id:'7340',name:'Barbara',last_name:'Walters',email:'CYzwCjxoFfgmail.com',password:'FnZhulZtrHk
EUxr' })
CREATE (follower34:Follower{
  user_id:'7340',name:'Kelly',last_name:'Ledford',email:'nflInRgEPogmail.com',password:'LUqCPLGLbVQS
rDR' })CREATE (user35:User{
  user_id:'6560',name:'Dorothy',last_name:'Buckley',email:'bEPVFgxdwLgmail.com',password:'dXSVtqrIJlf
Yqu' })
CREATE (follower35:Follower{
  user_id:'6560',name:'Kimberly',last_name:'Crook',email:'lksYcUAQVbgmail.com',password:'zKtFizHeKkIX
PIL' })CREATE (user36:User{
  user_id:'1212',name:'William',last_name:'Brown',email:'zsmzUYkFUEgmail.com',password:'FxBINPNnVx
CfbSq' })
CREATE (follower36:Follower{
  user_id:'1212',name:'Caroline',last_name:'Hamilton',email:'wWKxqKqwZugmail.com',password:'tPVfzsG
lxeakwig' })CREATE (user37:User{
  user_id:'2718',name:'Willard',last_name:'Sanford',email:'ZfbtGxFrRmgmail.com',password:'WbwUKJHuT
aHPnQG' })
CREATE (follower37:Follower{
  user_id:'2718',name:'Lorena',last_name:'Lehrman',email:'apRUmMQJlogmail.com',password:'CsgSVyhG
WCcFuzM' })CREATE (user38:User{
  user_id:'5273',name:'Nancy',last_name:'Holzer',email:'jBusSksidcgmail.com',password:'yiDNfmyydHITN
GL' })
CREATE (follower38:Follower{
  user_id:'5273',name:'Rebecca',last_name:'Feasel',email:'aLJYDdwdTjgmail.com',password:'FScDrgZlgnIR
emw' })CREATE (user39:User{
  user_id:'6458',name:'Leroy',last_name:'Fox',email:'aHiJCNEKJhgmail.com',password:'TjbJmVoPjxGRXqe'
})
CREATE (follower39:Follower{
  user_id:'6458',name:'Robert',last_name:'Manchester',email:'NUowzTmvshgmail.com',password:'CpMd
WVdiTXWohWk' })CREATE (user40:User{
  user_id:'5968',name:'Kevin',last_name:'Horton',email:'ROxzcylLdygmail.com',password:'zapKqaljawcLUZ
N' })
CREATE (follower40:Follower{
  user_id:'5968',name:'Lela',last_name:'Ludlow',email:'GbqXfwPeQMgmail.com',password:'OjNWCWIwPt
SvPNI' })CREATE (user41:User{
  user_id:'5569',name:'Brian',last_name:'Tedder',email:'hoGDrmkFhugmail.com',password:'YlpyvzgLUKw
DCBS' })
CREATE (follower41:Follower{
  user_id:'5569',name:'Jack',last_name:'Rogers',email:'DLaMslKUyegmail.com',password:'YpNceMioJwxrH
EV' })CREATE (user42:User{

```



```

user_id:'6611',name:'Kevin',last_name:'Baumgartner',email:'wwKTauVLkxgmail.com',password:'RIYADtz
CLeCQAhs' })
CREATE (follower42:Follower{
user_id:'6611',name:'Jerry',last_name:'Casanova',email:'NhHnwLMjyugmail.com',password:'RFnKyMNH
UVtMltL' })CREATE (user43:User{
user_id:'5126',name:'Curtis',last_name:'Smith',email:'YbbizCeFoogmail.com',password:'bjMoKaYMDjwn
ArO' })
CREATE (follower43:Follower{
user_id:'5126',name:'Philip',last_name:'Severino',email:'zulwaFkvsugmail.com',password:'xyBEIerwEjxs
mZs' })CREATE (user44:User{
user_id:'8431',name:'Beverly',last_name:'Christie',email:'DuJayUVXmkgmail.com',password:'ZNBuHhDA
bwYYamL' })
CREATE (follower44:Follower{
user_id:'8431',name:'Mary',last_name:'Thacker',email:'ZhaoytliUQgmail.com',password:'DBfzqnyIYEhW
VpO' })CREATE (user45:User{
user_id:'4303',name:'Beulah',last_name:'Mulligan',email:'ohWgobCPsKgmail.com',password:'IDCiCSIdVX
pbqht' })
CREATE (follower45:Follower{
user_id:'4303',name:'Edward',last_name:'Martin',email:'HNBDgMtOrigmail.com',password:'tISAzBgZEcR
ASmu' })CREATE (user46:User{
user_id:'7326',name:'Zachary',last_name:'Council',email:'vKZuPladzggmail.com',password:'eiejybLZTcnKl
dD' })
CREATE (follower46:Follower{
user_id:'7326',name:'Christopher',last_name:'Billups',email:'LhgYyaxYFFgmail.com',password:'wDOAxnn
GVPprmBK' })CREATE (user47:User{
user_id:'2484',name:'Anna',last_name:'Caberto',email:'KkrfZJYwEpgmail.com',password:'STwFdnmzOFJ
PMKA' })
CREATE (follower47:Follower{
user_id:'2484',name:'Nancy',last_name:'Mayer',email:'slCtyUAogqgmail.com',password:'trSgTDZPPWoP
cQj' })CREATE (user48:User{
user_id:'8515',name:'Richard',last_name:'Cronk',email:'aqUEtWqgWwgmail.com',password:'vBVFXdOg
WuVkXSS' })
CREATE (follower48:Follower{
user_id:'8515',name:'Martha',last_name:'Hukill',email:'lCMAvjMGhtgmail.com',password:'bKzRMSzLUP
MaQhl' })CREATE (user49:User{
user_id:'8175',name:'Florence',last_name:'Bower',email:'knBdggPNfJgmail.com',password:'QMIYKifnFI
WTlzs' })
CREATE (follower49:Follower{
user_id:'8175',name:'Robert',last_name:'Nelson',email:'MoZtPfduezgmail.com',password:'nJsqeZPgHW
QYtxp' })

CREATE (follower0) -[:FOLLOWS]->(user0)
CREATE (user0) -[:FOLLOWED_BY]->(follower0)CREATE (follower1) -[:FOLLOWS]->(user0)
CREATE (user0) -[:FOLLOWED_BY]->(follower1)CREATE (follower2) -[:FOLLOWS]->(user0)
CREATE (user0) -[:FOLLOWED_BY]->(follower2)CREATE (follower3) -[:FOLLOWS]->(user0)
CREATE (user0) -[:FOLLOWED_BY]->(follower3)CREATE (follower4) -[:FOLLOWS]->(user0)
CREATE (user0) -[:FOLLOWED_BY]->(follower4)CREATE (follower5) -[:FOLLOWS]->(user0)
CREATE (user0) -[:FOLLOWED_BY]->(follower5)CREATE (follower6) -[:FOLLOWS]->(user0)

```

```
CREATE (user0) -[:FOLLOWED_BY]->(follower6)CREATE (follower7) -[:FOLLOWS]->(user0)
CREATE (user0) -[:FOLLOWED_BY]->(follower7)CREATE (follower8) -[:FOLLOWS]->(user0)
CREATE (user0) -[:FOLLOWED_BY]->(follower8)CREATE (follower9) -[:FOLLOWS]->(user0)
CREATE (user0) -[:FOLLOWED_BY]->(follower9)
```

```
CREATE (follower10) -[:FOLLOWS]->(user1)
CREATE (user1) -[:FOLLOWED_BY]->(follower10)CREATE (follower11) -[:FOLLOWS]->(user1)
CREATE (user1) -[:FOLLOWED_BY]->(follower11)CREATE (follower12) -[:FOLLOWS]->(user1)
CREATE (user1) -[:FOLLOWED_BY]->(follower12)CREATE (follower13) -[:FOLLOWS]->(user1)
CREATE (user1) -[:FOLLOWED_BY]->(follower13)CREATE (follower14) -[:FOLLOWS]->(user1)
CREATE (user1) -[:FOLLOWED_BY]->(follower14)CREATE (follower15) -[:FOLLOWS]->(user1)
CREATE (user1) -[:FOLLOWED_BY]->(follower15)CREATE (follower16) -[:FOLLOWS]->(user1)
CREATE (user1) -[:FOLLOWED_BY]->(follower16)CREATE (follower17) -[:FOLLOWS]->(user1)
CREATE (user1) -[:FOLLOWED_BY]->(follower17)CREATE (follower18) -[:FOLLOWS]->(user1)
CREATE (user1) -[:FOLLOWED_BY]->(follower18)CREATE (follower19) -[:FOLLOWS]->(user1)
CREATE (user1) -[:FOLLOWED_BY]->(follower19)
```

```
CREATE (feed0:Feed{ feed_id:'5259',content:'ojxKxtGmmtwlaHXJxXda',user_id:'6047' })
CREATE (user29) -[:HAS_POSTED]->(feed0)CREATE (feed1:Feed{
feed_id:'3518',content:'JGfqgdBcztZmjXyXfBCX',user_id:'4801' })
CREATE (user1) -[:HAS_POSTED]->(feed1)CREATE (feed2:Feed{
feed_id:'2701',content:'FnhQPsvAWZulwXZpObZL',user_id:'6611' })
CREATE (user42) -[:HAS_POSTED]->(feed2)CREATE (feed3:Feed{
feed_id:'6409',content:'cUBfZwltZtJrZkuqJzhm',user_id:'8515' })
CREATE (user48) -[:HAS_POSTED]->(feed3)CREATE (feed4:Feed{
feed_id:'8081',content:'ljBMhXXqwVNsQfZKslbp',user_id:'7326' })
CREATE (user46) -[:HAS_POSTED]->(feed4)CREATE (feed5:Feed{
feed_id:'6894',content:'sGIDgUWBRgDRcMYzGKGw',user_id:'9956' })
CREATE (user11) -[:HAS_POSTED]->(feed5)CREATE (feed6:Feed{
feed_id:'8963',content:'czOWPOQGkVpTjDcinSCV',user_id:'5252' })
CREATE (user20) -[:HAS_POSTED]->(feed6)CREATE (feed7:Feed{
feed_id:'5309',content:'wBNRLougDumDatAfPnTO',user_id:'4026' })
CREATE (user4) -[:HAS_POSTED]->(feed7)CREATE (feed8:Feed{
feed_id:'7462',content:'jsTKSnzQkqBFxqfgPYWS',user_id:'9742' })
CREATE (user30) -[:HAS_POSTED]->(feed8)CREATE (feed9:Feed{
feed_id:'1463',content:'zRfltRkeFhSjayEoKtZQ',user_id:'4801' })
CREATE (user1) -[:HAS_POSTED]->(feed9)CREATE (feed10:Feed{
feed_id:'3673',content:'UABwpEJXTnXakobfnyvY',user_id:'3848' })
CREATE (user12) -[:HAS_POSTED]->(feed10)CREATE (feed11:Feed{
feed_id:'8699',content:'pSamTRDNkHGInxeMSVGe',user_id:'8431' })
CREATE (user44) -[:HAS_POSTED]->(feed11)CREATE (feed12:Feed{
feed_id:'9451',content:'KYPchhgdNVHctaDQZROA',user_id:'4355' })
CREATE (user2) -[:HAS_POSTED]->(feed12)CREATE (feed13:Feed{
feed_id:'7792',content:'zGwfVodulXNGhjQZMDcl',user_id:'2484' })
CREATE (user47) -[:HAS_POSTED]->(feed13)CREATE (feed14:Feed{
feed_id:'7781',content:'ABqfTCcZOBfslOzBwPWa',user_id:'9599' })
CREATE (user3) -[:HAS_POSTED]->(feed14)CREATE (feed15:Feed{
feed_id:'1600',content:'pGuigTbIOkuZFjtIOIYu',user_id:'1215' })
```

```

CREATE (user6) -[:HAS_POSTED]->(feed15)CREATE (feed16:Feed{
feed_id:'2817',content:'QJGfXqRJWcQpuJvJtVq',user_id:'1185' })
CREATE (user17) -[:HAS_POSTED]->(feed16)CREATE (feed17:Feed{
feed_id:'4329',content:'XRmOCJYKISIROEMpZNfw',user_id:'4801' })
CREATE (user1) -[:HAS_POSTED]->(feed17)CREATE (feed18:Feed{
feed_id:'2267',content:'mQvWGAIUpIYwOMePNkb',user_id:'9703' })
CREATE (user16) -[:HAS_POSTED]->(feed18)CREATE (feed19:Feed{
feed_id:'6210',content:'yAOGNSlCafUYdPGidtxD',user_id:'4303' })
CREATE (user45) -[:HAS_POSTED]->(feed19)CREATE (feed20:Feed{
feed_id:'4334',content:'YnBfyohadYwUYNnUnQhp',user_id:'4355' })
CREATE (user2) -[:HAS_POSTED]->(feed20)CREATE (feed21:Feed{
feed_id:'7146',content:'diWYpLPANSgRPQombofw',user_id:'7326' })
CREATE (user46) -[:HAS_POSTED]->(feed21)CREATE (feed22:Feed{
feed_id:'3191',content:'TiBJPRTcKVghNzICKREW',user_id:'3879' })
CREATE (user32) -[:HAS_POSTED]->(feed22)CREATE (feed23:Feed{
feed_id:'3563',content:'jJbEcESeVpWZPmADjKAQ',user_id:'8175' })
CREATE (user49) -[:HAS_POSTED]->(feed23)CREATE (feed24:Feed{
feed_id:'7906',content:'XPOFhvOXOQSSftlGPnoe',user_id:'9956' })
CREATE (user11) -[:HAS_POSTED]->(feed24)CREATE (feed25:Feed{
feed_id:'5351',content:'qogXOtkJXGxImACeTMPc',user_id:'5289' })
CREATE (user33) -[:HAS_POSTED]->(feed25)CREATE (feed26:Feed{
feed_id:'2616',content:'xkNUdXpGbVpoCmNsgzwl',user_id:'2382' })
CREATE (user8) -[:HAS_POSTED]->(feed26)CREATE (feed27:Feed{
feed_id:'2189',content:'qCXsPBpBBBBBOFnRvRlvc',user_id:'1623' })
CREATE (user14) -[:HAS_POSTED]->(feed27)CREATE (feed28:Feed{
feed_id:'5592',content:'HaDSIJfiUvogQAtahqRY',user_id:'9956' })
CREATE (user11) -[:HAS_POSTED]->(feed28)CREATE (feed29:Feed{
feed_id:'2798',content:'paftuHZxWEglOMRcAhk',user_id:'7311' })
CREATE (user10) -[:HAS_POSTED]->(feed29)CREATE (feed30:Feed{
feed_id:'1122',content:'NkaKJeeTpoRForlKpFVH',user_id:'6039' })
CREATE (user23) -[:HAS_POSTED]->(feed30)CREATE (feed31:Feed{
feed_id:'2908',content:'IdCjNDzYwyRvFakFmAsR',user_id:'8515' })
CREATE (user48) -[:HAS_POSTED]->(feed31)CREATE (feed32:Feed{
feed_id:'3669',content:'CtvVyhmChTPpQrbUStrB',user_id:'4355' })
CREATE (user2) -[:HAS_POSTED]->(feed32)CREATE (feed33:Feed{
feed_id:'7105',content:'bfufGjOAgPaEDBLRDxAS',user_id:'9742' })
CREATE (user30) -[:HAS_POSTED]->(feed33)CREATE (feed34:Feed{
feed_id:'9549',content:'LAzNAzmaHmviVsWRSzxC',user_id:'9742' })
CREATE (user30) -[:HAS_POSTED]->(feed34)CREATE (feed35:Feed{
feed_id:'3498',content:'rieSnFiTtniQQNZKbgvj',user_id:'9978' })
CREATE (user26) -[:HAS_POSTED]->(feed35)CREATE (feed36:Feed{
feed_id:'2796',content:'LztPCMsldNSakCvxHSWd',user_id:'9956' })
CREATE (user11) -[:HAS_POSTED]->(feed36)CREATE (feed37:Feed{
feed_id:'2237',content:'dihVsSBBagBHGAQledhS',user_id:'7311' })
CREATE (user10) -[:HAS_POSTED]->(feed37)CREATE (feed38:Feed{
feed_id:'7068',content:'cACfiTNPnNcOBmoYlijq',user_id:'6039' })
CREATE (user23) -[:HAS_POSTED]->(feed38)CREATE (feed39:Feed{
feed_id:'7288',content:'mYlkBpMbQFErRhHchQAX',user_id:'4790' })

```

```

CREATE (user24) -[:HAS_POSTED]->(feed39)CREATE (feed40:Feed{
feed_id:'9916',content:'xppHZgHBVJCXYkJuxsEZ',user_id:'8515' })
CREATE (user48) -[:HAS_POSTED]->(feed40)CREATE (feed41:Feed{
feed_id:'2938',content:'xKiSdrKcKacPCoiBFnGE',user_id:'5273' })
CREATE (user38) -[:HAS_POSTED]->(feed41)CREATE (feed42:Feed{
feed_id:'8174',content:'iISBFAMQJqdtRVdgdmoL',user_id:'4801' })
CREATE (user1) -[:HAS_POSTED]->(feed42)CREATE (feed43:Feed{
feed_id:'6551',content:'OsqNbDbCDtXIHJXMuCWE',user_id:'2484' })
CREATE (user47) -[:HAS_POSTED]->(feed43)CREATE (feed44:Feed{
feed_id:'3405',content:'EqRiUuSrajbCNLVQwxN',user_id:'5126' })
CREATE (user43) -[:HAS_POSTED]->(feed44)CREATE (feed45:Feed{
feed_id:'1771',content:'VIAAfZHMjZhWVBaKKPXl',user_id:'9956' })
CREATE (user11) -[:HAS_POSTED]->(feed45)CREATE (feed46:Feed{
feed_id:'9976',content:'tEvNzrPoxVuVAyuEvuYj',user_id:'5252' })
CREATE (user20) -[:HAS_POSTED]->(feed46)CREATE (feed47:Feed{
feed_id:'8103',content:'TKJkJrkLRYUsDvqEDDtB',user_id:'9978' })
CREATE (user26) -[:HAS_POSTED]->(feed47)CREATE (feed48:Feed{
feed_id:'6712',content:'CCZYvubrHEqDNSivjiUH',user_id:'4355' })
CREATE (user2) -[:HAS_POSTED]->(feed48)CREATE (feed49:Feed{
feed_id:'3805',content:'rPeGWXkWOjqRSlaVibim',user_id:'5360' })
CREATE (user25) -[:HAS_POSTED]->(feed49)

```

```

CREATE (comment0:Comment{
comment_id:'6186',content:'KMyhyjrVBtEXOfUhGOJJ',feed_id:'7781',user_id:'1623' })
CREATE (user14) -[:HAS_COMMENTED]->(comment0)
CREATE (feed14) -[:HAS_COMMENT]->(comment0)CREATE (comment1:Comment{
comment_id:'6995',content:'tcirbOtQFfOOdWrfAdhM',feed_id:'8963',user_id:'1215' })
CREATE (user6) -[:HAS_COMMENTED]->(comment1)
CREATE (feed6) -[:HAS_COMMENT]->(comment1)CREATE (comment2:Comment{
comment_id:'8341',content:'MlnSPqmdPQibhAzcwdG',feed_id:'3405',user_id:'8431' })
CREATE (user44) -[:HAS_COMMENTED]->(comment2)
CREATE (feed44) -[:HAS_COMMENT]->(comment2)CREATE (comment3:Comment{
comment_id:'5769',content:'QfXwuZLLskDjNrbWXpqH',feed_id:'7105',user_id:'5289' })
CREATE (user33) -[:HAS_COMMENTED]->(comment3)
CREATE (feed33) -[:HAS_COMMENT]->(comment3)CREATE (comment4:Comment{
comment_id:'2224',content:'zKOACDoUGtegREALhcph',feed_id:'8699',user_id:'9956' })
CREATE (user11) -[:HAS_COMMENTED]->(comment4)
CREATE (feed11) -[:HAS_COMMENT]->(comment4)CREATE (comment5:Comment{
comment_id:'8116',content:'gRDDebkriNDKbRFNHdgv',feed_id:'2189',user_id:'4162' })
CREATE (user27) -[:HAS_COMMENTED]->(comment5)
CREATE (feed27) -[:HAS_COMMENT]->(comment5)CREATE (comment6:Comment{
comment_id:'6481',content:'hleBlaxZWUNGIFBCYWlq',feed_id:'6551',user_id:'5126' })
CREATE (user43) -[:HAS_COMMENTED]->(comment6)
CREATE (feed43) -[:HAS_COMMENT]->(comment6)CREATE (comment7:Comment{
comment_id:'7812',content:'fBrhsHZnTZViQXJyDpCe',feed_id:'8081',user_id:'4026' })
CREATE (user4) -[:HAS_COMMENTED]->(comment7)
CREATE (feed4) -[:HAS_COMMENT]->(comment7)CREATE (comment8:Comment{
comment_id:'8087',content:'WPBALdhGWqvuaEIAhrhL',feed_id:'7792',user_id:'2864' })

```

```

CREATE (user13)-[:HAS_COMMENTED]->(comment8)
CREATE (feed13)-[:HAS_COMMENT]->(comment8)CREATE (comment9:Comment{
comment_id:'1136',content:'gcEQxJWXNxDYGfrgMget',feed_id:'1122',user_id:'9742' })
CREATE (user30)-[:HAS_COMMENTED]->(comment9)
CREATE (feed30)-[:HAS_COMMENT]->(comment9)CREATE (comment10:Comment{
comment_id:'9871',content:'fqxpfhwMaaBXLkdOxb',feed_id:'7146',user_id:'5091' })
CREATE (user21)-[:HAS_COMMENTED]->(comment10)
CREATE (feed21)-[:HAS_COMMENT]->(comment10)CREATE (comment11:Comment{
comment_id:'9530',content:'DEcrEJQoomfnhiLfpOlV',feed_id:'7288',user_id:'6458' })
CREATE (user39)-[:HAS_COMMENTED]->(comment11)
CREATE (feed39)-[:HAS_COMMENT]->(comment11)CREATE (comment12:Comment{
comment_id:'5861',content:'xzgwLHDwvElrUotJVSKE',feed_id:'8963',user_id:'1215' })
CREATE (user6)-[:HAS_COMMENTED]->(comment12)
CREATE (feed6)-[:HAS_COMMENT]->(comment12)CREATE (comment13:Comment{
comment_id:'6510',content:'wZTwXIVdgASvCHZKgpxs',feed_id:'2938',user_id:'5569' })
CREATE (user41)-[:HAS_COMMENTED]->(comment13)
CREATE (feed41)-[:HAS_COMMENT]->(comment13)CREATE (comment14:Comment{
comment_id:'5267',content:'mBIYbkPPCPcJXClrvRx',feed_id:'3669',user_id:'3879' })
CREATE (user32)-[:HAS_COMMENTED]->(comment14)
CREATE (feed32)-[:HAS_COMMENT]->(comment14)CREATE (comment15:Comment{
comment_id:'3568',content:'jNbZbqTphtxXvFeHWJyQ',feed_id:'9976',user_id:'7326' })
CREATE (user46)-[:HAS_COMMENTED]->(comment15)
CREATE (feed46)-[:HAS_COMMENT]->(comment15)CREATE (comment16:Comment{
comment_id:'2194',content:'iNUOPgVSaKvevNfZjZSy',feed_id:'8103',user_id:'2484' })
CREATE (user47)-[:HAS_COMMENTED]->(comment16)
CREATE (feed47)-[:HAS_COMMENT]->(comment16)CREATE (comment17:Comment{
comment_id:'3087',content:'eTZUDKlnquSGDrjSoAXK',feed_id:'8081',user_id:'4026' })
CREATE (user4)-[:HAS_COMMENTED]->(comment17)
CREATE (feed4)-[:HAS_COMMENT]->(comment17)CREATE (comment18:Comment{
comment_id:'7672',content:'cYwXxWycySUUapRSDGAB',feed_id:'8174',user_id:'6611' })
CREATE (user42)-[:HAS_COMMENTED]->(comment18)
CREATE (feed42)-[:HAS_COMMENT]->(comment18)CREATE (comment19:Comment{
comment_id:'2895',content:'rlhGYWqggPXqOetPHdmw',feed_id:'3563',user_id:'6039' })
CREATE (user23)-[:HAS_COMMENTED]->(comment19)
CREATE (feed23)-[:HAS_COMMENT]->(comment19)CREATE (comment20:Comment{
comment_id:'3331',content:'ZKnaXIEDefRjxfMllwSa',feed_id:'5309',user_id:'2591' })
CREATE (user7)-[:HAS_COMMENTED]->(comment20)
CREATE (feed7)-[:HAS_COMMENT]->(comment20)CREATE (comment21:Comment{
comment_id:'3976',content:'ZbRevZlmTVxybGMPgSeV',feed_id:'7068',user_id:'5273' })
CREATE (user38)-[:HAS_COMMENTED]->(comment21)
CREATE (feed38)-[:HAS_COMMENT]->(comment21)CREATE (comment22:Comment{
comment_id:'4856',content:'IGBVfJUhfAGCbyeHxmE',feed_id:'9976',user_id:'7326' })
CREATE (user46)-[:HAS_COMMENTED]->(comment22)
CREATE (feed46)-[:HAS_COMMENT]->(comment22)CREATE (comment23:Comment{
comment_id:'4985',content:'crSrsBayLleHIFtuedJv',feed_id:'3563',user_id:'6039' })
CREATE (user23)-[:HAS_COMMENTED]->(comment23)
CREATE (feed23)-[:HAS_COMMENT]->(comment23)CREATE (comment24:Comment{
comment_id:'9750',content:'yQWPKPtMThgqmUJbtefM',feed_id:'3673',user_id:'7311' })

```

```

CREATE (user10)-[:HAS_COMMENTED]->(comment24)
CREATE (feed10)-[:HAS_COMMENT]->(comment24)CREATE (comment25:Comment{
comment_id:'1768',content:'BmPJJoKQIKvehIzMxeuq',feed_id:'6210',user_id:'6766' })
CREATE (user19)-[:HAS_COMMENTED]->(comment25)
CREATE (feed19)-[:HAS_COMMENT]->(comment25)CREATE (comment26:Comment{
comment_id:'1206',content:'PTLZdpmoLmedESICPFfb',feed_id:'3673',user_id:'7311' })
CREATE (user10)-[:HAS_COMMENTED]->(comment26)
CREATE (feed10)-[:HAS_COMMENT]->(comment26)CREATE (comment27:Comment{
comment_id:'6581',content:'JJjFEVQjnhEfmOzbtRuG',feed_id:'2938',user_id:'5569' })
CREATE (user41)-[:HAS_COMMENTED]->(comment27)
CREATE (feed41)-[:HAS_COMMENT]->(comment27)CREATE (comment28:Comment{
comment_id:'1553',content:'cdfYansyRCpOEyWiKLHX',feed_id:'1771',user_id:'4303' })
CREATE (user45)-[:HAS_COMMENTED]->(comment28)
CREATE (feed45)-[:HAS_COMMENT]->(comment28)CREATE (comment29:Comment{
comment_id:'9227',content:'BQJVHwnaUwlTecyZHYfJ',feed_id:'2237',user_id:'2718' })
CREATE (user37)-[:HAS_COMMENTED]->(comment29)
CREATE (feed37)-[:HAS_COMMENT]->(comment29)CREATE (comment30:Comment{
comment_id:'1981',content:'tFlpzjeznkFcVROOHDlW',feed_id:'8963',user_id:'1215' })
CREATE (user6)-[:HAS_COMMENTED]->(comment30)
CREATE (feed6)-[:HAS_COMMENT]->(comment30)CREATE (comment31:Comment{
comment_id:'2502',content:'BCFErvclXsOsCKBRXqfg',feed_id:'1122',user_id:'9742' })
CREATE (user30)-[:HAS_COMMENTED]->(comment31)
CREATE (feed30)-[:HAS_COMMENT]->(comment31)CREATE (comment32:Comment{
comment_id:'2603',content:'WikIMGohusCEtggMXBhd',feed_id:'3498',user_id:'6560' })
CREATE (user35)-[:HAS_COMMENTED]->(comment32)
CREATE (feed35)-[:HAS_COMMENT]->(comment32)CREATE (comment33:Comment{
comment_id:'6116',content:'qyUcRjMpJlrvlSPuZfhL',feed_id:'8081',user_id:'4026' })
CREATE (user4)-[:HAS_COMMENTED]->(comment33)
CREATE (feed4)-[:HAS_COMMENT]->(comment33)CREATE (comment34:Comment{
comment_id:'1890',content:'PMkyuRcrkumJHjKocqpt',feed_id:'2817',user_id:'9703' })
CREATE (user16)-[:HAS_COMMENTED]->(comment34)
CREATE (feed16)-[:HAS_COMMENT]->(comment34)CREATE (comment35:Comment{
comment_id:'7102',content:'gYEMcgRfBQCwdCiVwTvN',feed_id:'9976',user_id:'7326' })
CREATE (user46)-[:HAS_COMMENTED]->(comment35)
CREATE (feed46)-[:HAS_COMMENT]->(comment35)CREATE (comment36:Comment{
comment_id:'8144',content:'YUtWjJTDstEWSbaiRmUJ',feed_id:'7105',user_id:'5289' })
CREATE (user33)-[:HAS_COMMENTED]->(comment36)
CREATE (feed33)-[:HAS_COMMENT]->(comment36)CREATE (comment37:Comment{
comment_id:'8695',content:'BDATyEzygtoUTgexlhJO',feed_id:'9916',user_id:'5968' })
CREATE (user40)-[:HAS_COMMENTED]->(comment37)
CREATE (feed40)-[:HAS_COMMENT]->(comment37)CREATE (comment38:Comment{
comment_id:'8620',content:'QeVgMjqOOofahflaxMGec',feed_id:'6409',user_id:'9599' })
CREATE (user3)-[:HAS_COMMENTED]->(comment38)
CREATE (feed3)-[:HAS_COMMENT]->(comment38)CREATE (comment39:Comment{
comment_id:'4381',content:'FQELAZwMIqhAVIfBgBfK',feed_id:'3518',user_id:'4801' })
CREATE (user1)-[:HAS_COMMENTED]->(comment39)
CREATE (feed1)-[:HAS_COMMENT]->(comment39)CREATE (comment40:Comment{
comment_id:'2972',content:'SGaoyTmgfxqUKnxqlzzC',feed_id:'1771',user_id:'4303' })

```

```

CREATE (user45)-[:HAS_COMMENTED]->(comment40)
CREATE (feed45)-[:HAS_COMMENT]->(comment40)CREATE (comment41:Comment{
comment_id:'1170',content:'awjDKVRoDzueyQzscCLQ',feed_id:'1771',user_id:'4303' })
CREATE (user45)-[:HAS_COMMENTED]->(comment41)
CREATE (feed45)-[:HAS_COMMENT]->(comment41)CREATE (comment42:Comment{
comment_id:'7860',content:'WZPbsEeSWyACdUJeZehS',feed_id:'3673',user_id:'7311' })
CREATE (user10)-[:HAS_COMMENTED]->(comment42)
CREATE (feed10)-[:HAS_COMMENT]->(comment42)CREATE (comment43:Comment{
comment_id:'4329',content:'VUUWvwvcADWLqCaneGFB',feed_id:'5309',user_id:'2591' })
CREATE (user7)-[:HAS_COMMENTED]->(comment43)
CREATE (feed7)-[:HAS_COMMENT]->(comment43)CREATE (comment44:Comment{
comment_id:'8226',content:'QlYwluTojuNMvCuVHBcX',feed_id:'9976',user_id:'7326' })
CREATE (user46)-[:HAS_COMMENTED]->(comment44)
CREATE (feed46)-[:HAS_COMMENT]->(comment44)CREATE (comment45:Comment{
comment_id:'6906',content:'RTCmMpufuISFcDuyzGMm',feed_id:'7288',user_id:'6458' })
CREATE (user39)-[:HAS_COMMENTED]->(comment45)
CREATE (feed39)-[:HAS_COMMENT]->(comment45)CREATE (comment46:Comment{
comment_id:'7763',content:'uhEylSKQcgOpqnlZAGvA',feed_id:'3805',user_id:'8175' })
CREATE (user49)-[:HAS_COMMENTED]->(comment46)
CREATE (feed49)-[:HAS_COMMENT]->(comment46)CREATE (comment47:Comment{
comment_id:'7500',content:'wthQHNTlHnfsnbMklXKx',feed_id:'2616',user_id:'9978' })
CREATE (user26)-[:HAS_COMMENTED]->(comment47)
CREATE (feed26)-[:HAS_COMMENT]->(comment47)CREATE (comment48:Comment{
comment_id:'3337',content:'hykowgyVYOxidrSwJZw',feed_id:'7068',user_id:'5273' })
CREATE (user38)-[:HAS_COMMENTED]->(comment48)
CREATE (feed38)-[:HAS_COMMENT]->(comment48)CREATE (comment49:Comment{
comment_id:'3151',content:'tbbGNsYvWepuUxlyFmX',feed_id:'7781',user_id:'1623' })
CREATE (user14)-[:HAS_COMMENTED]->(comment49)
CREATE (feed14)-[:HAS_COMMENT]->(comment49)

```

```

CREATE (retweet0:Retweet{ retweet_id:'9772',user_id:'8431',feed_id:'5309' })
CREATE (user44)-[:HAS_RETWEETED]->(retweet0)
CREATE (feed7)-[:HAS_RETWEET]->(retweet0)CREATE (retweet1:Retweet{
retweet_id:'9264',user_id:'2484',feed_id:'9549' })
CREATE (user47)-[:HAS_RETWEETED]->(retweet1)
CREATE (feed34)-[:HAS_RETWEET]->(retweet1)CREATE (retweet2:Retweet{
retweet_id:'7473',user_id:'3848',feed_id:'7288' })
CREATE (user12)-[:HAS_RETWEETED]->(retweet2)
CREATE (feed39)-[:HAS_RETWEET]->(retweet2)CREATE (retweet3:Retweet{
retweet_id:'4623',user_id:'2591',feed_id:'8699' })
CREATE (user7)-[:HAS_RETWEETED]->(retweet3)
CREATE (feed11)-[:HAS_RETWEET]->(retweet3)CREATE (retweet4:Retweet{
retweet_id:'9942',user_id:'4415',feed_id:'3563' })
CREATE (user18)-[:HAS_RETWEETED]->(retweet4)
CREATE (feed23)-[:HAS_RETWEET]->(retweet4)CREATE (retweet5:Retweet{
retweet_id:'8730',user_id:'3848',feed_id:'1771' })
CREATE (user12)-[:HAS_RETWEETED]->(retweet5)

```

```
CREATE (feed45) -[:HAS_RETWEET]->(retweet5)CREATE (retweet6:Retweet{
retweet_id:'4567',user_id:'4355',feed_id:'3563' })
CREATE (user2) -[:HAS_RETWEETED]->(retweet6)
CREATE (feed23) -[:HAS_RETWEET]->(retweet6)CREATE (retweet7:Retweet{
retweet_id:'1672',user_id:'8431',feed_id:'7906' })
CREATE (user44) -[:HAS_RETWEETED]->(retweet7)
CREATE (feed24) -[:HAS_RETWEET]->(retweet7)CREATE (retweet8:Retweet{
retweet_id:'7973',user_id:'7340',feed_id:'3518' })
CREATE (user34) -[:HAS_RETWEETED]->(retweet8)
CREATE (feed1) -[:HAS_RETWEET]->(retweet8)CREATE (retweet9:Retweet{
retweet_id:'8593',user_id:'4790',feed_id:'2817' })
CREATE (user24) -[:HAS_RETWEETED]->(retweet9)
CREATE (feed16) -[:HAS_RETWEET]->(retweet9)CREATE (retweet10:Retweet{
retweet_id:'6904',user_id:'6047',feed_id:'2616' })
CREATE (user29) -[:HAS_RETWEETED]->(retweet10)
CREATE (feed26) -[:HAS_RETWEET]->(retweet10)CREATE (retweet11:Retweet{
retweet_id:'5633',user_id:'6458',feed_id:'2817' })
CREATE (user39) -[:HAS_RETWEETED]->(retweet11)
CREATE (feed16) -[:HAS_RETWEET]->(retweet11)CREATE (retweet12:Retweet{
retweet_id:'3481',user_id:'5252',feed_id:'7792' })
CREATE (user20) -[:HAS_RETWEETED]->(retweet12)
CREATE (feed13) -[:HAS_RETWEET]->(retweet12)CREATE (retweet13:Retweet{
retweet_id:'6327',user_id:'1215',feed_id:'9976' })
CREATE (user6) -[:HAS_RETWEETED]->(retweet13)
CREATE (feed46) -[:HAS_RETWEET]->(retweet13)CREATE (retweet14:Retweet{
retweet_id:'2836',user_id:'5968',feed_id:'7462' })
CREATE (user40) -[:HAS_RETWEETED]->(retweet14)
CREATE (feed8) -[:HAS_RETWEET]->(retweet14)CREATE (retweet15:Retweet{
retweet_id:'1258',user_id:'4162',feed_id:'8699' })
CREATE (user27) -[:HAS_RETWEETED]->(retweet15)
CREATE (feed11) -[:HAS_RETWEET]->(retweet15)CREATE (retweet16:Retweet{
retweet_id:'2753',user_id:'4162',feed_id:'1463' })
CREATE (user27) -[:HAS_RETWEETED]->(retweet16)
CREATE (feed9) -[:HAS_RETWEET]->(retweet16)CREATE (retweet17:Retweet{
retweet_id:'5240',user_id:'5968',feed_id:'1600' })
CREATE (user40) -[:HAS_RETWEETED]->(retweet17)
CREATE (feed15) -[:HAS_RETWEET]->(retweet17)CREATE (retweet18:Retweet{
retweet_id:'2993',user_id:'6560',feed_id:'3673' })
CREATE (user35) -[:HAS_RETWEETED]->(retweet18)
CREATE (feed10) -[:HAS_RETWEET]->(retweet18)CREATE (retweet19:Retweet{
retweet_id:'4857',user_id:'1185',feed_id:'8081' })
CREATE (user17) -[:HAS_RETWEETED]->(retweet19)
CREATE (feed4) -[:HAS_RETWEET]->(retweet19)CREATE (retweet20:Retweet{
retweet_id:'3092',user_id:'7326',feed_id:'2798' })
CREATE (user46) -[:HAS_RETWEETED]->(retweet20)
CREATE (feed29) -[:HAS_RETWEET]->(retweet20)CREATE (retweet21:Retweet{
retweet_id:'4252',user_id:'1212',feed_id:'5351' })
CREATE (user36) -[:HAS_RETWEETED]->(retweet21)
```



```
CREATE (feed25) -[:HAS_RETWEET]->(retweet21)CREATE (retweet22:Retweet{
retweet_id:'7514',user_id:'5289',feed_id:'1771' })
CREATE (user33) -[:HAS_RETWEETED]->(retweet22)
CREATE (feed45) -[:HAS_RETWEET]->(retweet22)CREATE (retweet23:Retweet{
retweet_id:'1465',user_id:'4996',feed_id:'9976' })
CREATE (user22) -[:HAS_RETWEETED]->(retweet23)
CREATE (feed46) -[:HAS_RETWEET]->(retweet23)CREATE (retweet24:Retweet{
retweet_id:'1557',user_id:'9978',feed_id:'5592' })
CREATE (user26) -[:HAS_RETWEETED]->(retweet24)
CREATE (feed28) -[:HAS_RETWEET]->(retweet24)CREATE (retweet25:Retweet{
retweet_id:'8546',user_id:'9599',feed_id:'1600' })
CREATE (user3) -[:HAS_RETWEETED]->(retweet25)
CREATE (feed15) -[:HAS_RETWEET]->(retweet25)CREATE (retweet26:Retweet{
retweet_id:'3489',user_id:'5252',feed_id:'4329' })
CREATE (user20) -[:HAS_RETWEETED]->(retweet26)
CREATE (feed17) -[:HAS_RETWEET]->(retweet26)CREATE (retweet27:Retweet{
retweet_id:'5400',user_id:'2591',feed_id:'7068' })
CREATE (user7) -[:HAS_RETWEETED]->(retweet27)
CREATE (feed38) -[:HAS_RETWEET]->(retweet27)CREATE (retweet28:Retweet{
retweet_id:'9872',user_id:'2382',feed_id:'9976' })
CREATE (user8) -[:HAS_RETWEETED]->(retweet28)
CREATE (feed46) -[:HAS_RETWEET]->(retweet28)CREATE (retweet29:Retweet{
retweet_id:'6089',user_id:'6611',feed_id:'6551' })
CREATE (user42) -[:HAS_RETWEETED]->(retweet29)
CREATE (feed43) -[:HAS_RETWEET]->(retweet29)CREATE (retweet30:Retweet{
retweet_id:'2706',user_id:'1215',feed_id:'7288' })
CREATE (user6) -[:HAS_RETWEETED]->(retweet30)
CREATE (feed39) -[:HAS_RETWEET]->(retweet30)CREATE (retweet31:Retweet{
retweet_id:'6608',user_id:'4996',feed_id:'5592' })
CREATE (user22) -[:HAS_RETWEETED]->(retweet31)
CREATE (feed28) -[:HAS_RETWEET]->(retweet31)CREATE (retweet32:Retweet{
retweet_id:'7797',user_id:'9859',feed_id:'7146' })
CREATE (user15) -[:HAS_RETWEETED]->(retweet32)
CREATE (feed21) -[:HAS_RETWEET]->(retweet32)CREATE (retweet33:Retweet{
retweet_id:'4140',user_id:'7340',feed_id:'2237' })
CREATE (user34) -[:HAS_RETWEETED]->(retweet33)
CREATE (feed37) -[:HAS_RETWEET]->(retweet33)CREATE (retweet34:Retweet{
retweet_id:'5627',user_id:'1212',feed_id:'3191' })
CREATE (user36) -[:HAS_RETWEETED]->(retweet34)
CREATE (feed22) -[:HAS_RETWEET]->(retweet34)CREATE (retweet35:Retweet{
retweet_id:'3058',user_id:'9742',feed_id:'6894' })
CREATE (user30) -[:HAS_RETWEETED]->(retweet35)
CREATE (feed5) -[:HAS_RETWEET]->(retweet35)CREATE (retweet36:Retweet{
retweet_id:'1570',user_id:'5252',feed_id:'7068' })
CREATE (user20) -[:HAS_RETWEETED]->(retweet36)
CREATE (feed38) -[:HAS_RETWEET]->(retweet36)CREATE (retweet37:Retweet{
retweet_id:'1905',user_id:'8431',feed_id:'8963' })
CREATE (user44) -[:HAS_RETWEETED]->(retweet37)
```

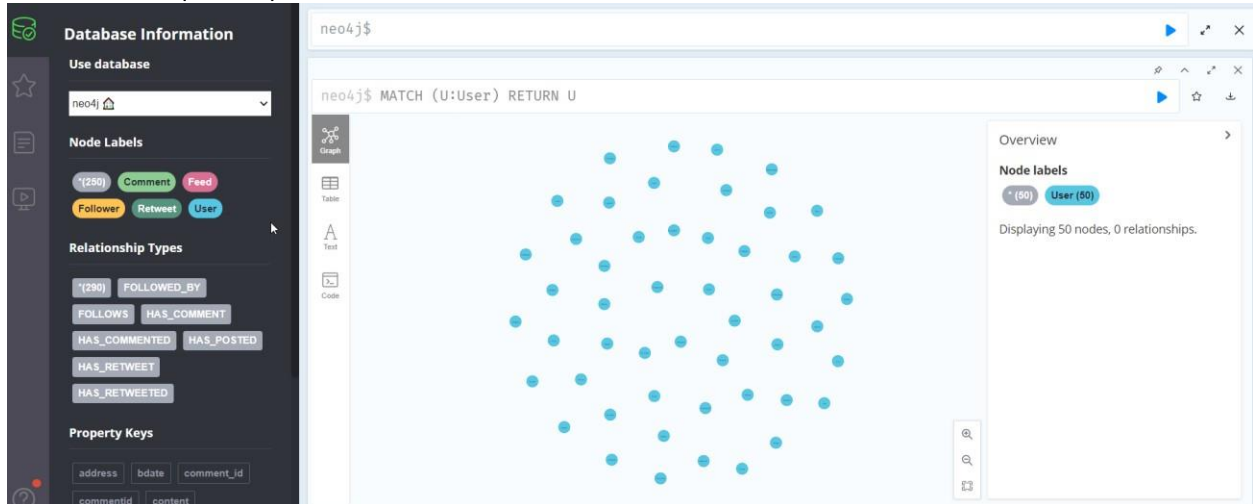
```
CREATE (feed6) -[:HAS_RETWEET]->(retweet37)CREATE (retweet38:Retweet{
retweet_id:'1559',user_id:'3879',feed_id:'1463' })
CREATE (user32) -[:HAS_RETWEETED]->(retweet38)
CREATE (feed9) -[:HAS_RETWEET]->(retweet38)CREATE (retweet39:Retweet{
retweet_id:'5102',user_id:'9859',feed_id:'8103' })
CREATE (user15) -[:HAS_RETWEETED]->(retweet39)
CREATE (feed47) -[:HAS_RETWEET]->(retweet39)CREATE (retweet40:Retweet{
retweet_id:'9983',user_id:'4415',feed_id:'2798' })
CREATE (user18) -[:HAS_RETWEETED]->(retweet40)
CREATE (feed29) -[:HAS_RETWEET]->(retweet40)CREATE (retweet41:Retweet{
retweet_id:'9461',user_id:'4162',feed_id:'6894' })
CREATE (user27) -[:HAS_RETWEETED]->(retweet41)
CREATE (feed5) -[:HAS_RETWEET]->(retweet41)CREATE (retweet42:Retweet{
retweet_id:'7560',user_id:'9978',feed_id:'1463' })
CREATE (user26) -[:HAS_RETWEETED]->(retweet42)
CREATE (feed9) -[:HAS_RETWEET]->(retweet42)CREATE (retweet43:Retweet{
retweet_id:'4652',user_id:'4415',feed_id:'2701' })
CREATE (user18) -[:HAS_RETWEETED]->(retweet43)
CREATE (feed2) -[:HAS_RETWEET]->(retweet43)CREATE (retweet44:Retweet{
retweet_id:'9584',user_id:'3879',feed_id:'7906' })
CREATE (user32) -[:HAS_RETWEETED]->(retweet44)
CREATE (feed24) -[:HAS_RETWEET]->(retweet44)CREATE (retweet45:Retweet{
retweet_id:'7008',user_id:'5126',feed_id:'2796' })
CREATE (user43) -[:HAS_RETWEETED]->(retweet45)
CREATE (feed36) -[:HAS_RETWEET]->(retweet45)CREATE (retweet46:Retweet{
retweet_id:'9654',user_id:'8285',feed_id:'6210' })
CREATE (user5) -[:HAS_RETWEETED]->(retweet46)
CREATE (feed19) -[:HAS_RETWEET]->(retweet46)CREATE (retweet47:Retweet{
retweet_id:'3090',user_id:'2382',feed_id:'2189' })
CREATE (user8) -[:HAS_RETWEETED]->(retweet47)
CREATE (feed27) -[:HAS_RETWEET]->(retweet47)CREATE (retweet48:Retweet{
retweet_id:'7692',user_id:'9978',feed_id:'4329' })
CREATE (user26) -[:HAS_RETWEETED]->(retweet48)
CREATE (feed17) -[:HAS_RETWEET]->(retweet48)CREATE (retweet49:Retweet{
retweet_id:'6613',user_id:'1212',feed_id:'3191' })
CREATE (user36) -[:HAS_RETWEETED]->(retweet49)
CREATE (feed22) -[:HAS_RETWEET]->(retweet49)
```

## Use Cases:

### Neo4J Use Cases:

#### 1. Return the information about all the users present.

#This would return all the users names present in the User table. `MATCH (U:User) RETURN U`



#### 2. Return the information about first name and the last name of all users present.

#This would return all the information about the first name, last name of all the

users `MATCH (U:User) RETURN U.name,U.last_name`

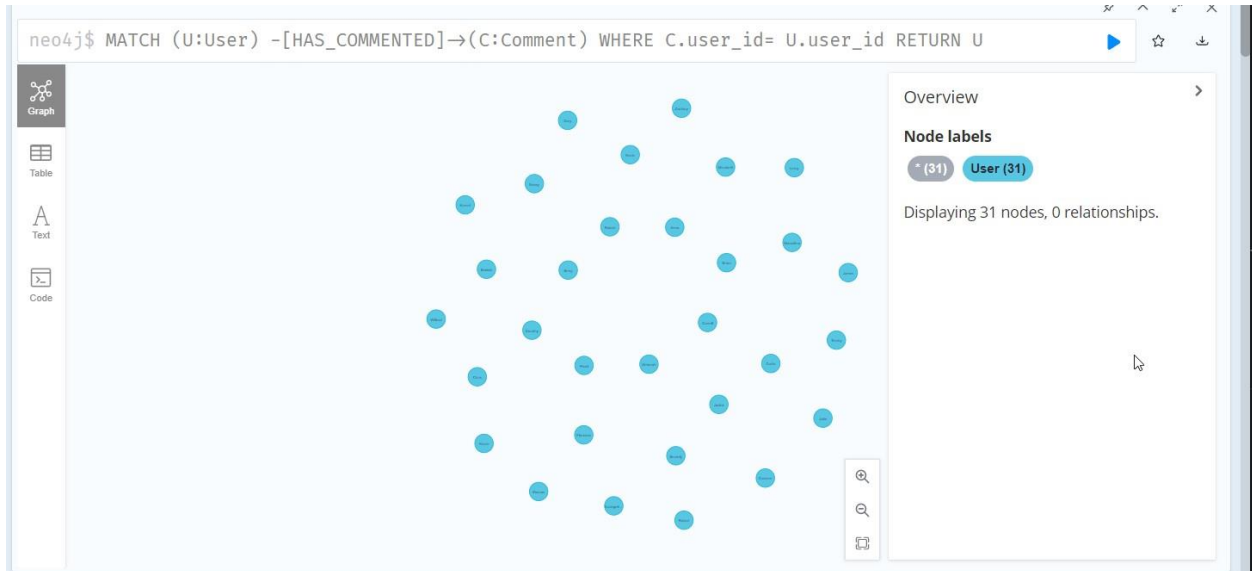
The screenshot shows the Neo4J web interface with the query `neo4j$ MATCH (U:User) RETURN U.name,U.last_name` executed. The results are displayed in a table view. The table has two columns: 'U.name' and 'U.last\_name'. It contains 7 rows of data. Below the table, a status message reads: 'Started streaming 50 records after 1 ms and completed after 3 ms.'

	U.name	U.last_name
1	"Diane"	"Peaslee"
2	"Marcus"	"Fitch"
3	"Heriberto"	"Lukas"
4	"Pearl"	"Thurman"
5	"Timmy"	"Jensen"
6	"Dong"	"Carbone"
7	"Doherty"	"Sanders"

### 3. Return information of all users who have commented something.

#This would return the names of all users who has commented something.

```
MATCH (U:User) -[HAS_COMMENTED]->(C:Comment)
WHERE C.user_id= U.user_id
RETURN U
```



### 4. Return the information of all the users who have their last name as 'Lukas'

#This gets all the users who have all the last names as

```
Lukas MATCH (U:User) WHERE U.last_name='Lukas'
RETURN U
```

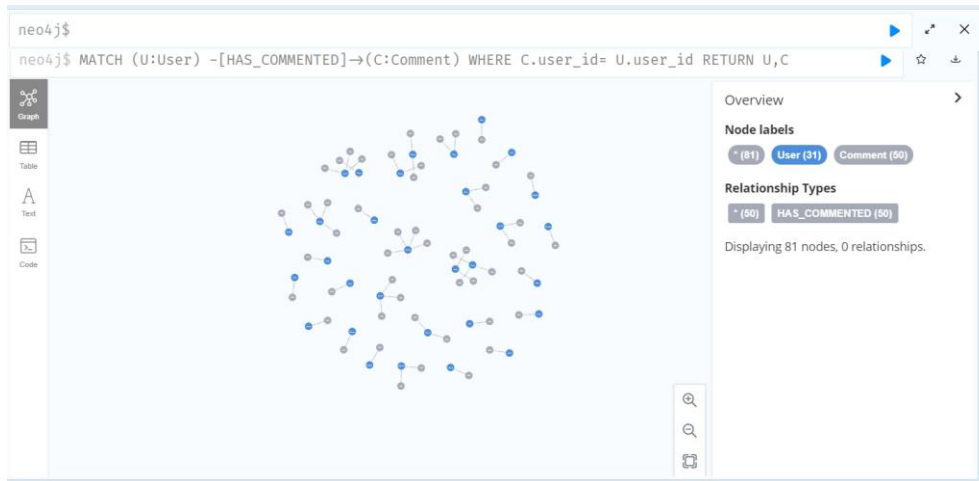


### 5. Retrieve all users (nodes) who have commented something and also return their relationship.

#This gets all the users who has all the people commented something and return

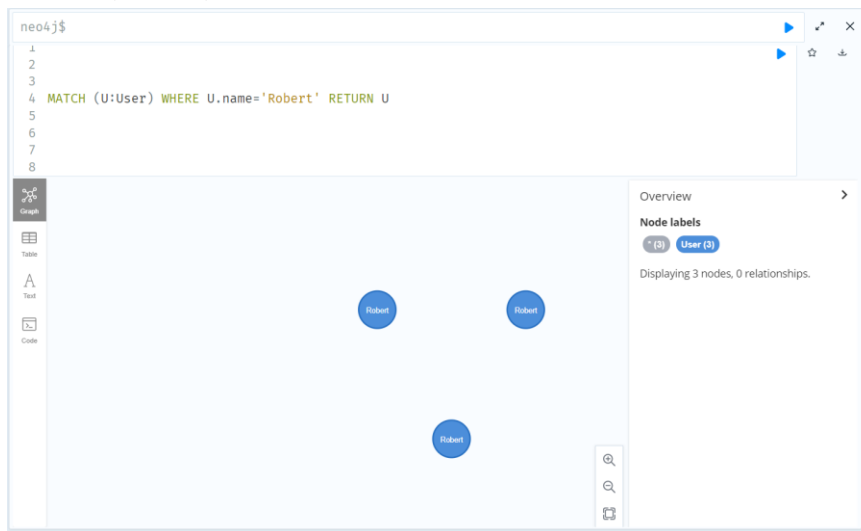
relationship `MATCH (U:User) -[HAS_COMMENTED]->(C:Comment)`

```
WHERE C.user_id= U.user_id
RETURN U,C
```



## 6. Return all the users who have “Robert” as their first name.

# This returns users whose name is Robert as their first name  
`MATCH (U:User) WHERE U.name='Robert' RETURN U`



## 7. Return the first names and last names of users and the feed content that they have posted.

#This would help you get the first names and feed content everyone has posted.

```
MATCH (U:User)-[HAS_POSTED]->(F:Feed)
WHERE U.user_id = F.user_id
RETURN U.fname, U.lname, F.content
```

```
neo4j$ MATCH (U:User)-[HAS_POSTED]->(F:Feed) WHERE U.user_id = F.user_id RETURN U.fname, U.lname,...
```

	U.fname	U.lname	F.content
1	null	null	"oJtKtGmmTwaHXJxXda"
2	null	null	"JGfgdBCztZmjXyXIBCX"
3	null	null	"FnHQPsVAwZulwXZpObZL"
4	null	null	"cUBIZwliZUrZkuqJzhm"
5	null	null	"jJBmXxqwVNsqtZKslbp"
6	null	null	"sGIDgUWBRgDRcMyzGKGw"
7	null	null	"cznWPCvGkVnTIDnSCU"

Started streaming 50 records after 9 ms and completed after 9 ms.

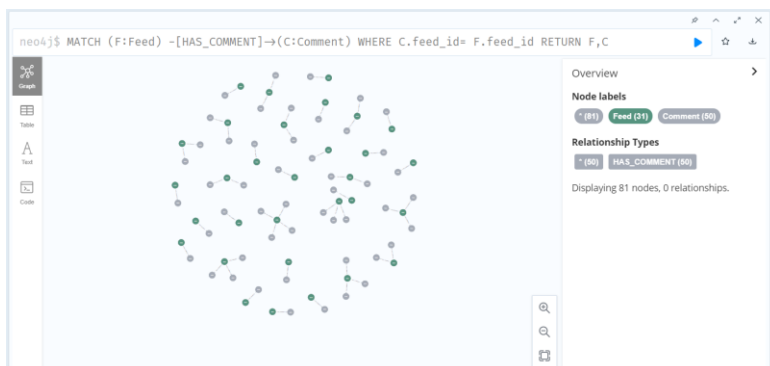
## 8. Return all the comments on all the feeds.

#This returns all the comments which are in the feed

```
MATCH (F:Feed) -[HAS_COMMENT]->(C:Comment)
```

```
WHERE C.feed_id= F.feed_id
```

```
RETURN F,C
```



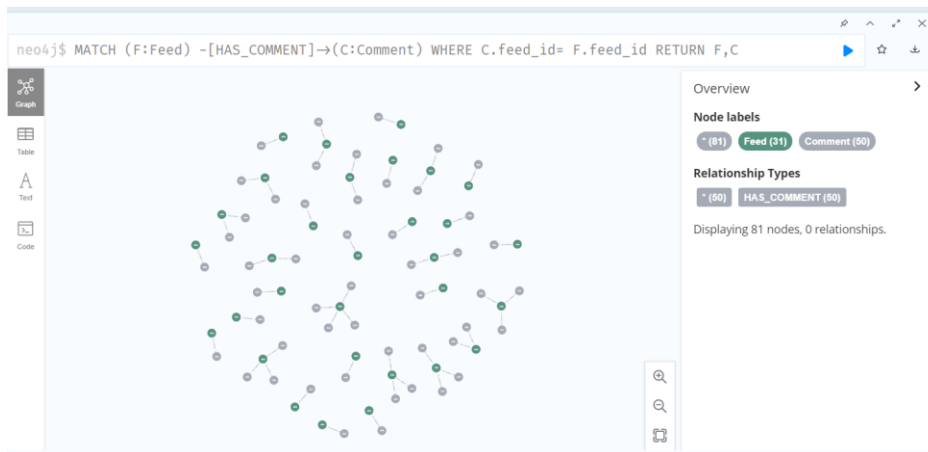
## 9. List all the comments on all the feeds and their relationship.

#This lists the all the comments on feeds and the relationships

```
MATCH (F:Feed) -[HAS_COMMENT]->(C:Comment)
```

```
WHERE C.feed_id= F.feed_id
```

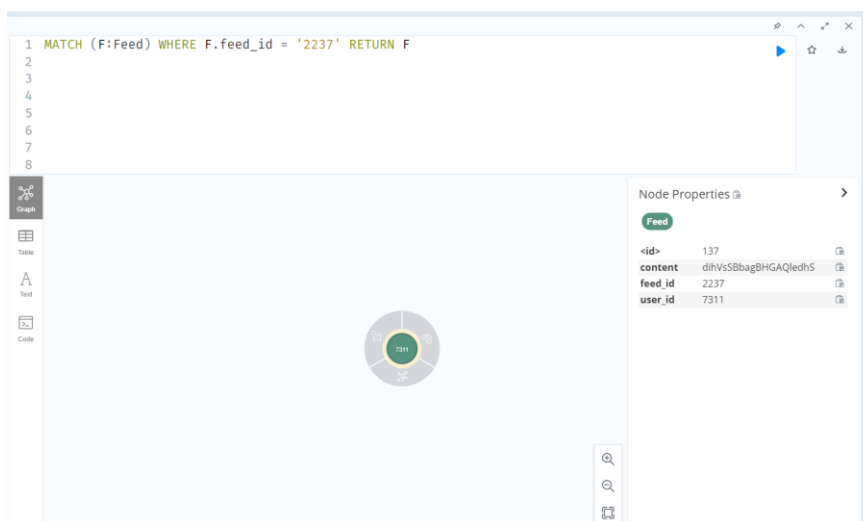
```
RETURN F,C
```



## 10. Retrive a particular feed with feed id = '1234'.

#This would retrieve all the feed with id = 1234

```
MATCH (F:Feed) WHERE F.feed_id = '2237' RETURN F
```



## 11. Return all the users and the feeds retweeted by them.

#This would return all the users and feeds which are retweeted by users

```
MATCH (U:User)-[HAS_RETWEETED]->(R:Retweet)
MATCH (F:Feed)-[HAS_RETWEET]->(R:Retweet)
WHERE F.feed_id = R.feed_id
and U.user_id = R.user_id
RETURN U.name, F.content
```

The screenshot shows the Neo4j Cypher query editor with the following query:

```
neo4j$ MATCH (U:User)-[HAS_RETWEETED]->(R:Retweet) MATCH (F:Feed)-[HAS_RETWEET]->(R:Retweet) WHERE F.feed_id = R.feed_id and U.user_id = R.user_id RETURN U.name, F.content
```

The results are displayed in a table:

U.name	F.content
"Benny"	"dBNLougUQwAPN10"
"Anna"	"LAzNkzmrHwWQSpC"
"Debra"	"mYABAgOFERHnGAG"
"Robert"	"dSanTRDnKQwVSVGd"
"Julia"	"jBdEElwyWZhaQKdQ"
"Debra"	"VAADHqDhVWbuxPp"
"Robert"	"hnduFfawwWbWvKvK"

Started streaming 50 records after 1 ms and completed after 2 ms

## 12. Return all the users and their followers.

#This would return all the users with their followers

```
MATCH (U:User) -[HAS_FOLLOWER]->(F:Follower)
WHERE U.user_id = F.user_id RETURN U.name, F.name
RETURN U.name, F.name
```



The screenshot shows a query execution interface with a code editor on the left and a results table on the right. The code editor contains the following Cypher query:

```
1 MATCH (U:User) -[HAS_FOLLOWER]->(F:Follower)
2 WHERE U.user_id = F.user_id RETURN U.name, F.name
3
4
5
6
7
8
9
10
11
```

The results table has two columns: U.name and F.name. It contains one row of data:

U.name	F.name
"Diane"	"Betty"

At the bottom of the interface, a status message reads: "Started streaming 1 records after 1 ms and completed after 1 ms."

## 13. Find a user with user id as '2865'

#This would return a user with Id = 2865

```
MATCH (U:User) WHERE U.user_id='7311' RETURN U.name
```



The screenshot shows a query execution interface with a code editor on the left and a results table on the right. The code editor contains the following Cypher query:

```
1 MATCH (U:User) WHERE U.user_id='7311' RETURN U.name
2
3
4
5
6
7
8
9
10
```

The results table has one column: U.name. It contains one row of data:

U.name
"Kermit"

At the bottom of the interface, a status message reads: "Started streaming 1 records after 2 ms and completed after 3 ms."

## 14. Find a user through email id.

#This would get a user name with emailid 'fscblQEvErgmail.com'

```
MATCH (U:User) WHERE U.email='fscblQEvErgmail.com' RETURN U.name
```



The screenshot shows a query execution interface with a code editor on the left and a results table on the right. The code editor contains the following Cypher query:

```
1 MATCH (U:User) WHERE U.email='fscblQEvErgmail.com' RETURN U.name
2
3
4
5
6
7
8
9
10
```

The results table has one column: U.name. It contains one row of data:

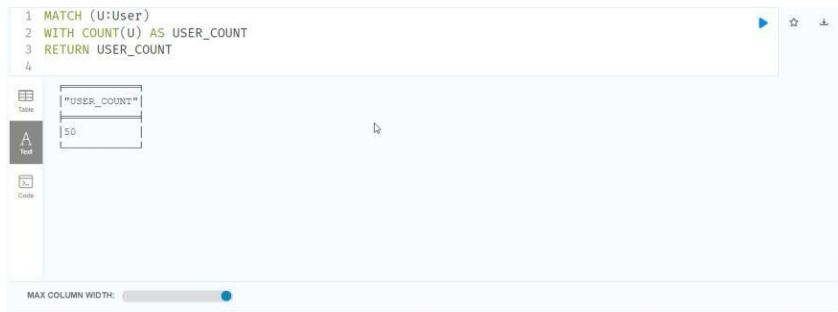
U.name
"Herbert"

At the bottom of the interface, a status message reads: "Started streaming 1 records after 1 ms and completed after 2 ms."



### 15. Count the total number of the users.

#This displays the count of all the users in the user  
table MATCH (U:User)  
WITH COUNT(U) AS USER\_COUNT  
RETURN USER\_COUNT



The screenshot shows a query editor with a code editor at the top and a results pane below. The code editor contains a Cypher query with four lines: 1. MATCH (U:User), 2. WITH COUNT(U) AS USER\_COUNT, 3. RETURN USER\_COUNT, and 4. (empty line). The results pane shows a table with one column named 'USER\_COUNT' and one row with the value '50'. The interface includes a left sidebar with icons for Table, Text, and Code, and a bottom status bar with a 'MAX COLUMN WIDTH' slider.

```
1 MATCH (U:User)
2 WITH COUNT(U) AS USER_COUNT
3 RETURN USER_COUNT
4
```

USER_COUNT
50

MAX COLUMN WIDTH:

# SQL Use Cases:

## **1. Return the information about all the users present.**

**This would return all the users names present in the User table.**

```
SELECT * FROM users_table
```

## **2. Return the information about first name and the last name of all users present.**

**This would return all the information about the first name, last name of all the users**

```
SELECT name, last_name FROM users_table
```

## **3. Return information of all users who have commented something.**

```
SELECT user_table.user_id, comment_table.user_id  
FROM user_table  
INNER JOIN comment_table ON comment_table.user_id=user_table.user_id;
```

## **4. Return the information about all users who have commented something and also their relationship.**

```
SELECT user_table.user_id, comment_table.user_id  
FROM user_table  
INNER JOIN comment_table ON comment_table.user_id=user_table.user_id;
```

## **5. Return the information of all the users who have their last name as 'Lukas'**

```
SELECT * FROM users_table  
WHERE last_name = 'Lukas';
```

**6. Return the information all the users who have their first name as 'Robert'**

```
SELECT * FROM users_table  
  
WHERE name = 'Robert';
```

**7. List the first names and last names of users and the feed content that they have posted.**

```
SELECT user_table.user_id, feed_table.user_id, feed_table.content  
  
FROM user_table  
  
INNER JOIN feeds_table ON feed_table.user_id=user_table.user_id;
```

**8. List all the comments on all the feeds.**

```
SELECT comment.feed_id, feeds_feed_id, comment_table.content  
  
FROM feed_table  
  
INNER JOIN comment_table ON feed_table.feed_id=comment_table.feed_id;
```

**9. List all the comments on all the feeds and their relationship.**

```
SELECT comment.feed_id, feeds_feed_id, comment_table.content  
  
FROM feed_table  
  
INNER JOIN comment_table ON feed_table.feed_id=comment_table.feed_id;
```

**10. Retrive a particular feed with feed id = '1234'.**

```
SELECT * FROM feed_table  
  
WHERE feed_id = '1234';
```

**11. List all the users and the feeds retweeted by them.**

```
SELECT user_table.user_id, feed_table.user_id, retweet_table.user_id  
  
FROM user_table  
  
INNER JOIN feeds_table ON feed_table.user_id=user_table.user_id AND retweet_table.user_id =  
user_table.user_id;
```

**12. List all the users and their followers.**

```
SELECT user_table.user_id, follower_table.user_id,  
FROM user_table  
INNER JOIN follower_table ON user_table.user_id=follower_table.user_id;
```

**13. Retrive a particular user with user id as '2345'**

```
SELECT * FROM user_table  
WHERE user_id = '2345';
```

**14. Find a user through his/her email id.**

```
SELECT * FROM user_table  
WHERE emailid = ' fscbIQEvErgmail.com ';
```

**15. Get the total number of the users.**

```
SELECT COUNT(user_id)  
FROM user_table;
```