

MANY:MANY

The Tiny Bit Trickier Relationship

Some Examples

Books <-> Authors

Blog Post <-> Tags

Students <-> Classes

Imagine we're building
a tv show reviewing
application

Series Data

Reviews Data

Reviewers Data



Reviewers

id
first_name
last_name

Reviews

id
rating
series_id
reviewer_id

Series

id
title
released_year
genre



Reviewers

id	first_name	last_name
1	Blue	Steele
2	Wyatt	Earp

Series

id	title	released_year	genre
1	Archer	2009	Animation
2	Fargo	2014	Drama

Reviews

id	rating	reviewer_id	series_id
1	8.9	1	2
2	9.5	2	2

INSERT SERIES

```
INSERT INTO series (title, released_year, genre) VALUES
('Archer', 2009, 'Animation'),
('Arrested Development', 2003, 'Comedy'),
('Bob's Burgers', 2011, 'Animation'),
('Bojack Horseman', 2014, 'Animation'),
('Breaking Bad', 2008, 'Drama'),
('Curb Your Enthusiasm', 2000, 'Comedy'),
('Fargo', 2014, 'Drama'),
('Freaks and Geeks', 1999, 'Comedy'),
('General Hospital', 1963, 'Drama'),
('Halt and Catch Fire', 2014, 'Drama'),
('Malcolm In The Middle', 2000, 'Comedy'),
('Pushing Daisies', 2007, 'Comedy'),
('Seinfeld', 1989, 'Comedy'),
('Stranger Things', 2016, 'Drama');
```

INSERT REVIEWERS

```
INSERT INTO reviewers (first_name, last_name) VALUES
    ('Thomas', 'Stoneman'),
    ('Wyatt', 'Skaggs'),
    ('Kimbra', 'Masters'),
    ('Domingo', 'Cortes'),
    ('Colt', 'Steele'),
    ('Pinkie', 'Petit'),
    ('Marlon', 'Crafford');
```


INSERT REVIEWS

```
INSERT INTO reviews(series_id, reviewer_id, rating) VALUES
  (1,1,8.0), (1,2,7.5), (1,3,8.5), (1,4,7.7), (1,5,8.9),
  (2,1,8.1), (2,4,6.0), (2,3,8.0), (2,6,8.4), (2,5,9.9),
  (3,1,7.0), (3,6,7.5), (3,4,8.0), (3,3,7.1), (3,5,8.0),
  (4,1,7.5), (4,3,7.8), (4,4,8.3), (4,2,7.6), (4,5,8.5),
  (5,1,9.5), (5,3,9.0), (5,4,9.1), (5,2,9.3), (5,5,9.9),
  (6,2,6.5), (6,3,7.8), (6,4,8.8), (6,2,8.4), (6,5,9.1),
  (7,2,9.1), (7,5,9.7),
  (8,4,8.5), (8,2,7.8), (8,6,8.8), (8,5,9.3),
  (9,2,5.5), (9,3,6.8), (9,4,5.8), (9,6,4.3), (9,5,4.5),
  (10,5,9.9),
  (13,3,8.0), (13,4,7.2),
  (14,2,8.5), (14,3,8.9), (14,4,8.9);
```

NOW LET'S
DO STUFF

+-----+-----+	
title	rating
+-----+-----+	
Archer	8.0
Archer	7.5
Archer	8.5
Archer	7.7
Archer	8.9
Arrested Development	8.1
Arrested Development	6.0
Arrested Development	8.0
Arrested Development	8.4
Arrested Development	9.9
Bob's Burgers	7.0
Bob's Burgers	7.5
Bob's Burgers	8.0
Bob's Burgers	7.1
Bob's Burgers	8.0
+-----+-----+	

+-----+-----+	
title	avg_rating
+-----+-----+	
General Hospital	5.38000
Bob's Burgers	7.52000
Seinfeld	7.60000
Bojack Horseman	7.94000
Arrested Development	8.08000
Curb Your Enthusiasm	8.12000
Archer	8.12000
Freaks and Geeks	8.60000
Stranger Things	8.76667
Breaking Bad	9.36000
Fargo	9.40000
Halt and Catch Fire	9.90000
+-----+-----+	

first_name	last_name	rating
Thomas	Stoneman	8.0
Thomas	Stoneman	8.1
Thomas	Stoneman	7.0
Thomas	Stoneman	7.5
Thomas	Stoneman	9.5
Wyatt	Skaggs	7.5
Wyatt	Skaggs	7.6
Wyatt	Skaggs	9.3
Wyatt	Skaggs	6.5
Wyatt	Skaggs	8.4
Wyatt	Skaggs	9.1
Wyatt	Skaggs	7.8
Wyatt	Skaggs	5.5
Wyatt	Skaggs	8.5
Kimbra	Masters	8.5
Kimbra	Masters	8.0
Kimbra	Masters	7.1
Kimbra	Masters	7.8
Kimbra	Masters	9.0
Kimbra	Masters	7.8

+	-----	+
	unreviewed_series	
+	-----	+
	Malcolm In The Middle	
	Pushing Daisies	
+	-----	+

genre	avg_rating
Animation	7.86000
Comedy	8.16250
Drama	8.04375

first_name	last_name	COUNT	MIN	MAX	AVG	STATUS
Thomas	Stoneman	5	7.0	9.5	8.02000	ACTIVE
Wyatt	Skaggs	9	5.5	9.3	7.80000	ACTIVE
Kimbra	Masters	9	6.8	9.0	7.98889	ACTIVE
Domingo	Cortes	10	5.8	9.1	7.83000	ACTIVE
Colt	Steele	10	4.5	9.9	8.77000	ACTIVE
Pinkie	Petit	4	4.3	8.8	7.25000	ACTIVE
Marlon	Crafford	0	0.0	0.0	0.00000	INACTIVE

title	rating	reviewer
Archer	8.0	Thomas Stoneman
Archer	7.7	Domingo Cortes
Archer	8.5	Kimbra Masters
Archer	7.5	Wyatt Skaggs
Archer	8.9	Colt Steele
Arrested Development	8.4	Pinkie Petit
Arrested Development	9.9	Colt Steele
Arrested Development	8.1	Thomas Stoneman
Arrested Development	6.0	Domingo Cortes
Arrested Development	8.0	Kimbra Masters
Bob's Burgers	7.0	Thomas Stoneman
Bob's Burgers	8.0	Domingo Cortes
Bob's Burgers	7.1	Kimbra Masters
Bob's Burgers	7.5	Pinkie Petit
Bob's Burgers	8.0	Colt Steele

MySQL

VIEWS

GROUP BY
HAVING

GROUP BY
ROLL UP

SQL MODES

Viewing Modes

```
1  SELECT @@GLOBAL.sql_mode;  
2  SELECT @@SESSION.sql_mode;
```

SETTING Modes

```
1 SET GLOBAL sql_mode = 'modes';  
2 SET SESSION sql_mode = 'modes';
```