

## Illustrating Group By and Having

Q8 Answer without HAVING or COUNT: Find the names of all reviewers who have contributed three or more ratings. (As an extra challenge, try writing the query without HAVING or without COUNT.)

```

SELECT Re.name
FROM Reviewer Re, Rating Ra
WHERE Re.rID = Ra.rID
GROUP BY Re.rID, Re.name
HAVING COUNT(*) >= 3
    
```

```

FROM Reviewer Re, Rating Ra
WHERE Re.rID = Ra.rID
    
```

Pari	123	123	3	d
Mary	012	012	4	a
Mary	012	012	5	e
Mary	012	012	1	b
Hua	345	345	2	a
Hua	345	345	4	c
Hua	345	345	4	d



GROUP BY Re.rID, Re.name

Pari	123	123	3	d
Mary	012	012	4	a
Mary	012	012	5	e
Mary	012	012	1	b
Hua	345	345	2	a
Hua	345	345	4	c
Hua	345	345	4	d



HAVING COUNT(\*) >= 3

Mary	012	012	4	a
Mary	012	012	5	e
Mary	012	012	1	b
Hua	345	345	2	a
Hua	345	345	4	c
Hua	345	345	4	d

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GROUP BY Re.rID, Re.name
HAVING COUNT(*) >= 3
```



```
SELECT Re.name
Mary
Hua
```

Even if

```
FROM Reviewer Re, Rating Ra
WHERE Re.rID = Ra.rID
```

Hua	345	345	4	c
Pari	123	123	3	d
Mary	012	012	5	e
Mary	012	012	1	b
Hua	345	345	2	a
Hua	345	345	4	d
Mary	012	012	4	a



```
GROUP BY Re.rID, Re.name
```

Pari	123	123	3	d
Mary	012	012	4	a
Mary	012	012	5	e
Mary	012	012	1	b
Hua	345	345	2	a
Hua	345	345	4	c
Hua	345	345	4	d

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```
SELECT Re.name
FROM Reviewer Re, Rating Ra
WHERE Re.rID = Ra.rID
GROUP BY Re.rID, Re.name
HAVING COUNT(*) >= 3
```

SELECT DISTINCT Re.name

Mary  
Hua

SELECT Re.name

Mary  
Hua  
Mary

What if

```
FROM Reviewer Re, Rating Ra
WHERE Re.rID = Ra.rID
```

GROUP BY Re.rID, Re.name

Hua	345	345	4	c
Pari	123	123	3	d
Mary	012	012	5	e
Mary	012	012	1	b
Hua	345	345	2	a
Hua	345	345	4	d
Mary	012	012	4	a
Mary	567	567	1	a
Mary	567	567	1	b
Mary	567	567	1	c
Mary	567	567	1	d

Pari	123	123	3	d
Mary	012	012	4	a
Mary	012	012	5	e
Mary	012	012	1	b
Hua	345	345	2	a
Hua	345	345	4	c
Hua	345	345	4	d
Mary	567	567	1	a
Mary	567	567	1	b
Mary	567	567	1	c
Mary	567	567	1	d

HAVING COUNT(\*) >= 3

Mary	012	012	4	a
Mary	012	012	5	e
Mary	012	012	1	b
Hua	345	345	2	a
Hua	345	345	4	c
Hua	345	345	4	d
Mary	567	567	1	a
Mary	567	567	1	b
Mary	567	567	1	c
Mary	567	567	1	d



## Illustrating Group By and Having

Q8 Answer without HAVING or COUNT: Find the names of all reviewers who have contributed three or more ratings. (As an extra challenge, try writing the query without HAVING or without COUNT.)

Correct

```
SELECT Re.name
FROM Reviewer Re, Rating Ra
WHERE Re.rID = Ra.rID
GROUP BY Re.rID, Re.name
HAVING COUNT(*) >= 3
```

WHERE clause applies to rows

Incorrect

```
SELECT Re.name
FROM Reviewer Re, Rating Ra
WHERE Re.rID = Ra.rID AND COUNT(*) >= 3
GROUP BY Re.rID, Re.name
```

HAVING applies to groups (of rows)

```
SELECT Re.name
FROM Reviewer Re, Rating Ra
GROUP BY Re.rID, Re.name
HAVING Re.rID = Ra.rID AND COUNT(*) >= 3
```

## Illustrating Group By and Having

Q11 Find the movie(s) with the lowest average rating. Return the movie title(s) and average rating.

```
SELECT M.title, AVG(Ra.stars) AS aveRatings
FROM Movie M, Rating Ra
WHERE M.mID = Ra.mID
GROUP BY M.mID, M.title
HAVING AVG(Ra.stars) = <expr = 3>
```

```
FROM Movie M, Rating Ra
WHERE M.mID = Ra.mID
```

Movie		Rating		
M.title	M.mid	Ra.rid	Ra.stars	Ra.mid
D	d	012	4	a
A	a	345	2	a
B	b	012	3	d
E	e	012	5	e
G	g	012	1	b
		123	3	d
		345	4	c
		345	4	d

```
GROUP BY M.mID, M.title
```

```
HAVING AVG(Ra.stars) = <expr =3>
```

```
SELECT M.title,
AVG(Ra.stars) AS aveRatings
```

## Illustrating Group By and Having

Q11 Find the movie(s) with the lowest average rating. Return the movie title(s) and average rating.

```
SELECT M.title, AVG(Ra.stars) AS aveRatings
FROM Movie M, Rating Ra
WHERE M.mID = Ra.mID
GROUP BY M.mID, M.title
HAVING AVG(Ra.stars) = <expr = 3>
```

```
FROM Movie M, Rating Ra
WHERE M.mID = Ra.mID
```

```
D d d 3    E e e 5
D d d 3    C c c 4
D d d 4
A a a 4
A a a 2
B b b 1
```

Movie		Rating		
M.title	M.mid	Ra.rid	Ra.stars	Ra.mid
D	d	012	4	a
A	a	345	2	a
B	b	012	3	d
E	e	012	5	e
C	c	012	1	b
G	g	123	3	d
		345	4	c
		345	4	d

```
GROUP BY M.mID, M.title
```

```
HAVING AVG(Ra.stars) = <expr =3>
```

```
SELECT M.title,
AVG(Ra.stars) AS aveRatings
```

```
D d d 3    E e e 5
D d d 3    C c c 4
D d d 4
A a a 4
A a a 2
B b b 1
```

```
A a a 4
A a a 2
```

A 3