

# Introduction to MySQL

## Session II

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Coalition for Queens

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# Quick review

- SELECT
  - How many games are being played in week 9?
  - How many players have projections in week 7?
  - What's the most projected passing touchdowns in week 11?
  - How many RBs do we have projected stats for in week 15?

# A useful WHERE function

- LIKE
  - `SELECT * FROM players WHERE name LIKE '%John%';`

# GROUP BY

- What if we want to run the aggregate functions over a group?
- Total points by player
- Number of games per week
- Number of players by position
- Number of games for each home/away team pair

# GROUP BY

- `SELECT [fields], [aggregate_function] FROM [table] GROUP BY [fields];`

# GROUP BY

- `SELECT player_id, sum(points) FROM stats  
GROUP BY player_id;`
- `SELECT week, count(*) FROM schedule GROUP  
BY week;`
- `SELECT position_id, count(*) FROM players  
GROUP BY position_id;`
- `SELECT home_id, away_id, count(*) FROM  
schedule GROUP BY home_id, away_id;`

# Exercises

- <https://github.com/dangoldin/mysql-class/blob/master/session2/exercises2.md>

# JOIN

- So far, we've only been doing queries on a single table.



# JOIN

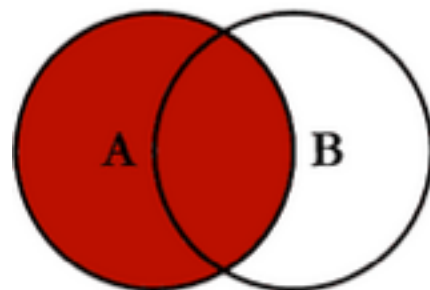
- Multiple table joins
- `SELECT [fields] FROM [table1] JOIN [table2] ON [join condition];`

# JOIN

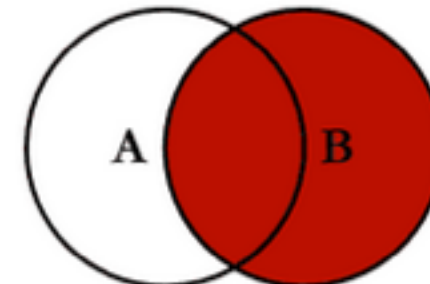
- `SELECT * FROM players JOIN positions ON players.position_id = positions.id;`

# Inner, Left, Right JOINS

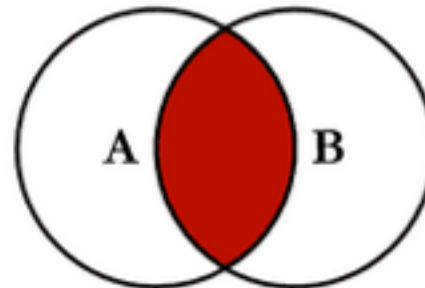
## SQL JOINS



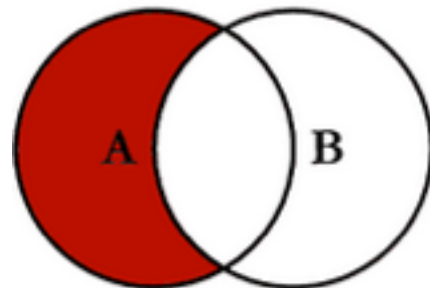
```
SELECT <select_list>  
FROM TableA A  
LEFT JOIN TableB B  
ON A.Key = B.Key
```



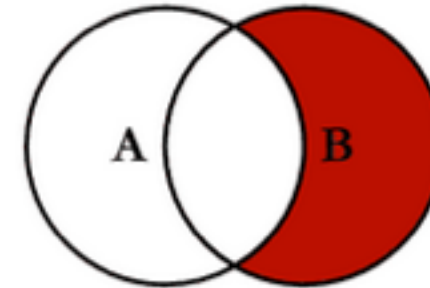
```
SELECT <select_list>  
FROM TableA A  
RIGHT JOIN TableB B  
ON A.Key = B.Key
```



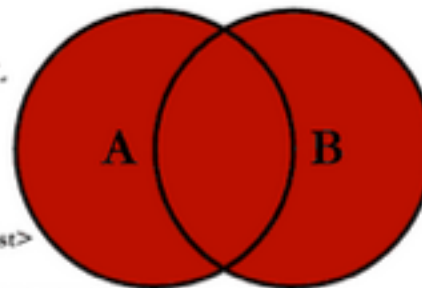
```
SELECT <select_list>  
FROM TableA A  
INNER JOIN TableB B  
ON A.Key = B.Key
```



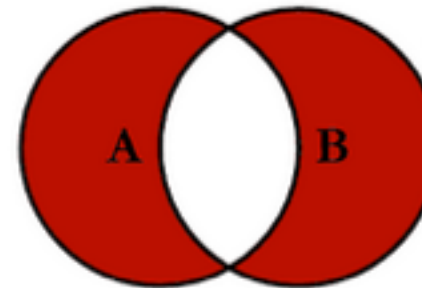
```
SELECT <select_list>  
FROM TableA A  
LEFT JOIN TableB B  
ON A.Key = B.Key  
WHERE B.Key IS NULL
```



```
SELECT <select_list>  
FROM TableA A  
RIGHT JOIN TableB B  
ON A.Key = B.Key  
WHERE A.Key IS NULL
```



```
SELECT <select_list>  
FROM TableA A  
FULL OUTER JOIN TableB B  
ON A.Key = B.Key
```



```
SELECT <select_list>  
FROM TableA A  
FULL OUTER JOIN TableB B  
ON A.Key = B.Key  
WHERE A.Key IS NULL  
OR B.Key IS NULL
```

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- From: <http://www.codeproject.com/Articles/33052/Visual-Representation-of-SQL-Joins>

# Exercises

- <https://github.com/dangoldin/mysql-class/blob/master/session2/exercises2.md>