

# Introduction to MySQL

## Session IV

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Coalition for Queens

Dan Goldin  
dan@dangoldin.com

# Agenda

- Quick review
- Updating data
- Inserting data
- Deleting data
- Modifying tables
- Creating tables
- Dropping tables

# Survey time

- <https://c4qnyc.wufoo.com/forms/sql-workshop-survey/>

# Quick review

- What does this query do?

```
SELECT t.name as team_name,  
        q.name as position,  
        sum(points) as total_points  
FROM players p  
JOIN positions q ON p.position_id = q.id  
JOIN stats s ON p.id = s.player_id  
JOIN teams t on p.team_id = t.id  
GROUP BY t.name, q.name;
```

# Quick review

- How about this one?

```
SELECT name
FROM players
WHERE id IN (
  SELECT player_id
  FROM stats
  GROUP BY player_id
  HAVING AVG(passing_tds) > 1
  AND AVG(rushing_yds) > 20
);
```

# Updating data

- Modify existing rows in a table
- UPDATE [table] SET [field1] = [value1],  
[field2] = [value2] WHERE [condition];

# Updating data

```
UPDATE players SET name = 'Dan Goldin'  
WHERE id = 11;
```

```
UPDATE players SET name = 'Dan Goldin',  
team_id = 2 WHERE id = 11;
```

```
UPDATE schedule SET week = 18  
WHERE week > 10 AND week < 11;
```

# Exercises

- Write queries to do the following:
  - Put everyone with the last name Johnson on team\_id 10
  - Update Eli Manning's record to use his birth name: "Elisha Nelson Manning"



# Inserting data

- Insert new rows into a table
- INSERT INTO [table] VALUES ([values]);
- INSERT INTO [table] ([fields]) VALUES ([values]);
- INSERT INTO [table] ([fields]) VALUES ([values]),([values]);

# Inserting data

```
INSERT INTO positions VALUES (5, 'K');
```

```
INSERT INTO positions (name) VALUES ('K');
```

```
INSERT INTO players (name, position_id, team_id)  
VALUES ('Dan Goldin', 1, 22);
```

```
INSERT INTO players (name, position_id, team_id)  
VALUES ('Dan Goldin', 1, 22),  
('Someone Else', 2, 10);
```

# Exercises

- Write queries to do the following:
  - Create a new NFL team
  - Add a week 18 game to the schedule
  - Add a player named after you to the players table

# Deleting data

- Delete row(s) from a table
- DELETE FROM [table] WHERE [condition];

# Deleting data

```
DELETE FROM positions WHERE name = 'QB';
```

```
DELETE FROM schedule  
WHERE week IN (1,3,5,7);
```

```
DELETE FROM schedule  
WHERE home_id IN (  
    SELECT id FROM teams  
    WHERE name in ('Ari', 'Atl')  
);
```

# Exercises

- Write queries to do the following:
  - Delete the player you created
  - Delete all players with the first name 'Ryan'
  - Delete all players that average less than 10 points a week

# Modifying tables

- Modify the columns in a table
- ALTER [table] ADD COLUMN [column\_name] [column\_definition];
- ALTER [table] MODIFY [column\_name] [new\_column\_definition];
- ALTER [table] DROP COLUMN [column\_name];

# Modifying tables

```
ALTER TABLE teams ADD COLUMN  
    long_name VARCHAR(20);
```

```
ALTER TABLE teams MODIFY  
    long_name VARCHAR(40);
```

```
ALTER TABLE teams DROP COLUMN  
    long_name;
```



# Exercises

- Add a first name and a last name column to the players table
- Add a price\_per\_ticket column to the schedule table

# Creating tables

- Create new tables
- `CREATE TABLE [table] AS (fields);`

# Creating tables

```
CREATE TABLE stadiums (  
  id int(10) unsigned NOT NULL AUTO_INCREMENT,  
  team_id int(10) unsigned NOT NULL,  
  name varchar(100) NOT NULL  
);
```

# Exercises

- Think of a useful or interesting table and add it to the database.

# Dropping tables

- Remove a table from our database
- DROP TABLE [table];

# Dropping tables

```
DROP TABLE positions;
```

```
DROP TABLE stadiums;
```

# Questions?