RUTGERS | CODING BOOTCAMP

Session 12.2 - Prompt + MySQL + Node

Prompt + MySQL + Node

Objectives

- Students will create a MySQL relational database, and create tables inside of it
- Students will use the JOIN clause in SQL to combine data from different tables
- Students will make a Node.js script connecting to their MySQL Database.
- Students will write code inside of a Node.js script to perform C.R.U.D on a MySQL database

Create a TABLE

```
CREATE TABLE cities
(
    id int AUTO_INCREMENT,
    city varchar(30) NOT NULL,
    hipsters char(30) NOT NULL,
    country_id int NOT NULL,
    FOREIGN KEY(country_id) REFERENCES countries(id),
    PRIMARY KEY(id)
);
```

C.R.U.D.

C - CREATE - INSERT INTO pets (name, type, age) VALUES ('fido', 'dog', 3);
R - READ - SELECT * FROM pets;
U - UDPATE - UPDATE pets SET name='under dog' WHERE type = 'dog';
D - DELETE - DELETE FROM pets WHERE type = 'mouse';

CREATE Record

```
INSERT INTO cities
(city, hipsters, country_id) VALUES ('san francisco',290000, 1);
```

UPDATE Record

```
UPDATE cities SET hipsters = 320000 WHERE
city = ‘san francisco’;
```

Read (SELECT) Record

```
SELECT city, hipsters FROM cities WHERE hipsters > 100000;
```

DELETE Record

```
DELETE FROM cities WHERE city = ‘san francisco’;
```

Join (SQL)

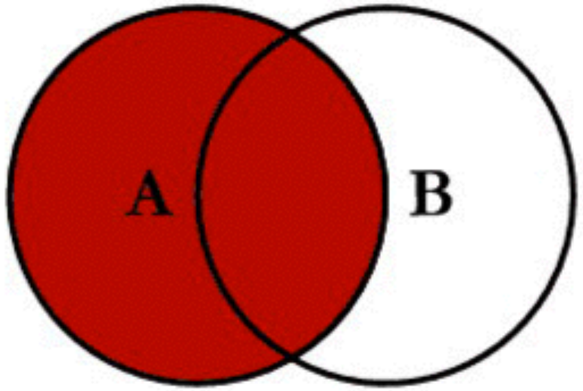
A join is a query that combines rows from two or more tables, views, or materialized views.

The select list of the query can select any columns from any of these tables.

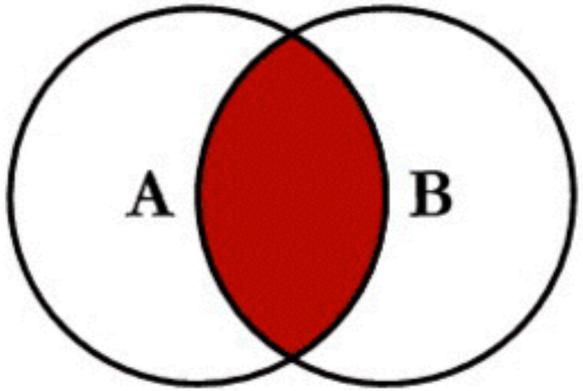
Types of Joins

INNER JOIN: Returns all rows when there is at least one match in BOTH tables
LEFT JOIN: Return all rows from the left table, and the matched rows from the right table
RIGHT JOIN: Return all rows from the right table, and the matched rows from the left table
FULL JOIN: Return all rows when there is a match in ONE of the tables

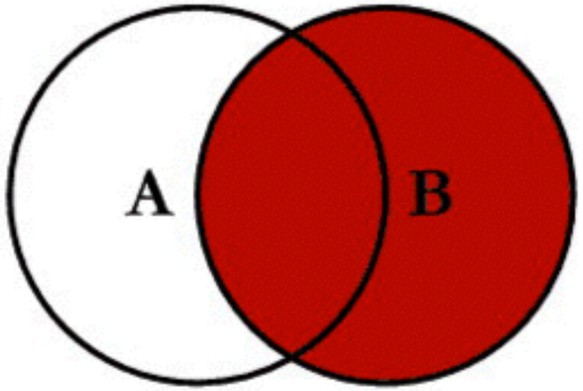
SQL JOINS




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

Types of Joins

Employee

EmpID	EmpName
13	Jason
8	Alex
3	Ram
17	Babu
25	Johnson

Location

EmpID	EmpLoc
13	San Jose
8	Los Angeles
3	Pune, India
17	Chennai, India
39	Bangalore, India

LEFT Join

aka LEFT OUTER JOIN (aka the opposite of a RIGHT JOIN)

SELECT * FROM employee LEFT JOIN location ON employee.empID = location.empID;

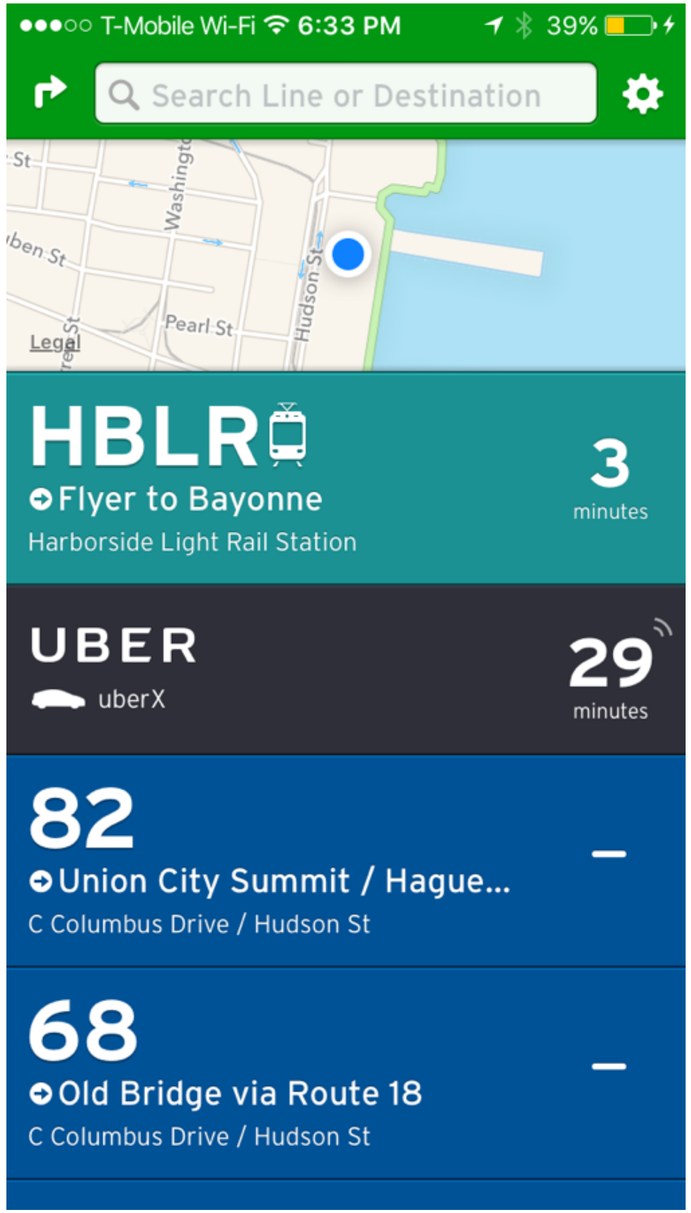
Employee.EmpID	Employee.EmpName	Location.EmpID	Location.EmpLoc
13	Jason	13	San Jose
8	Alex	8	Los Angeles
3	Ram	3	Pune, India
17	Babu	17	Chennai, India
25	Johnson	NULL	NULL

INNER Join

only the matched, aka JOIN

SELECT * FROM employee INNER JOIN location ON employee.empID = location.empID;

Employee.EmpID	Employee.EmpName	Location.EmpID	Location.EmpLoc
13	Jason	13	San Jose
8	Alex	8	Los Angeles
3	Ram	3	Pune, India
17	Babu	17	Chennai, India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Old Bridge via Route 18
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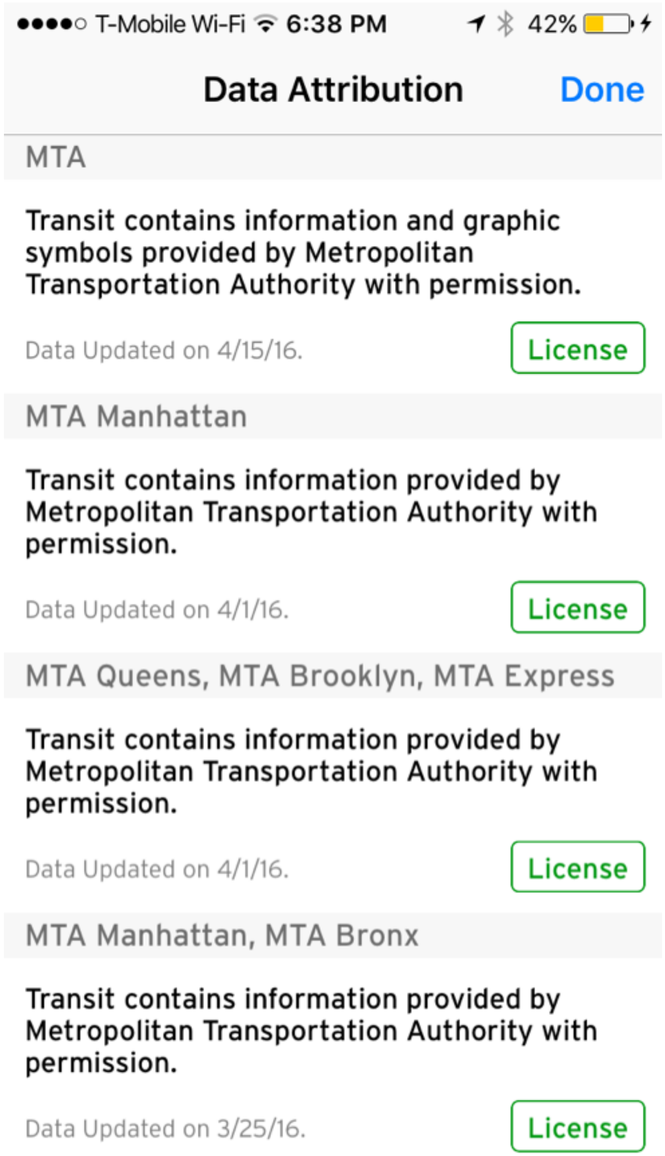
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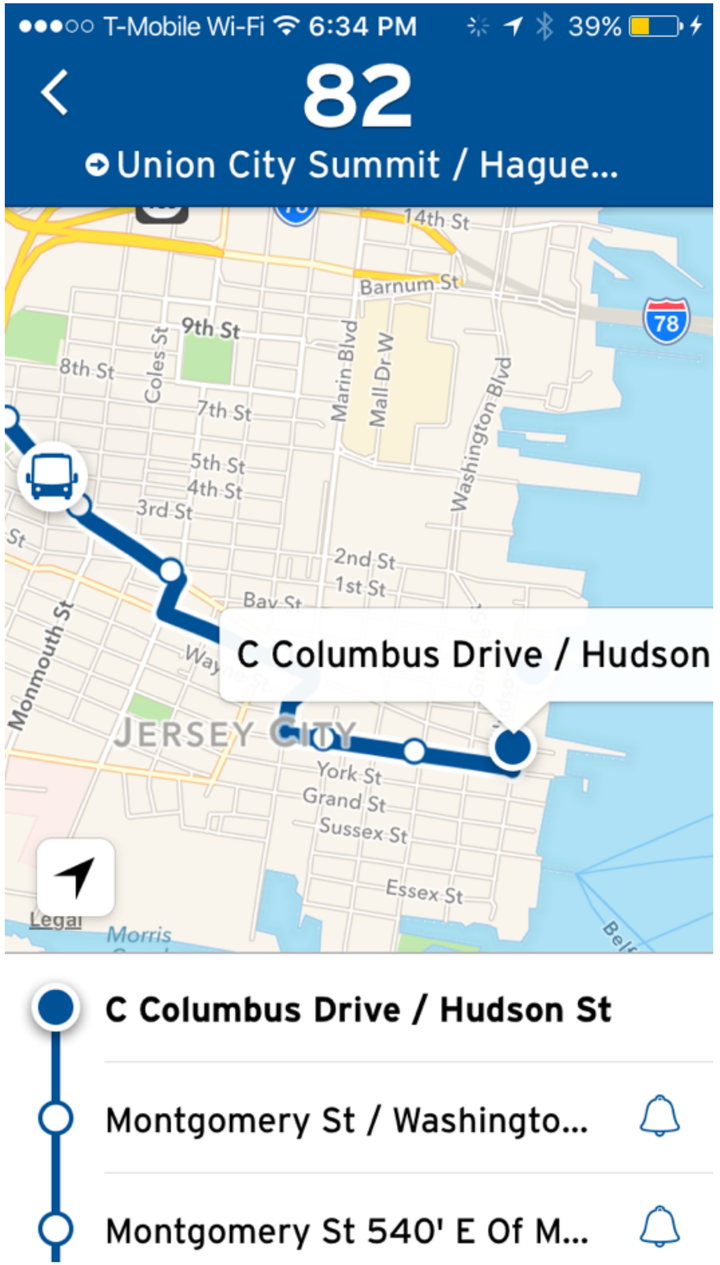
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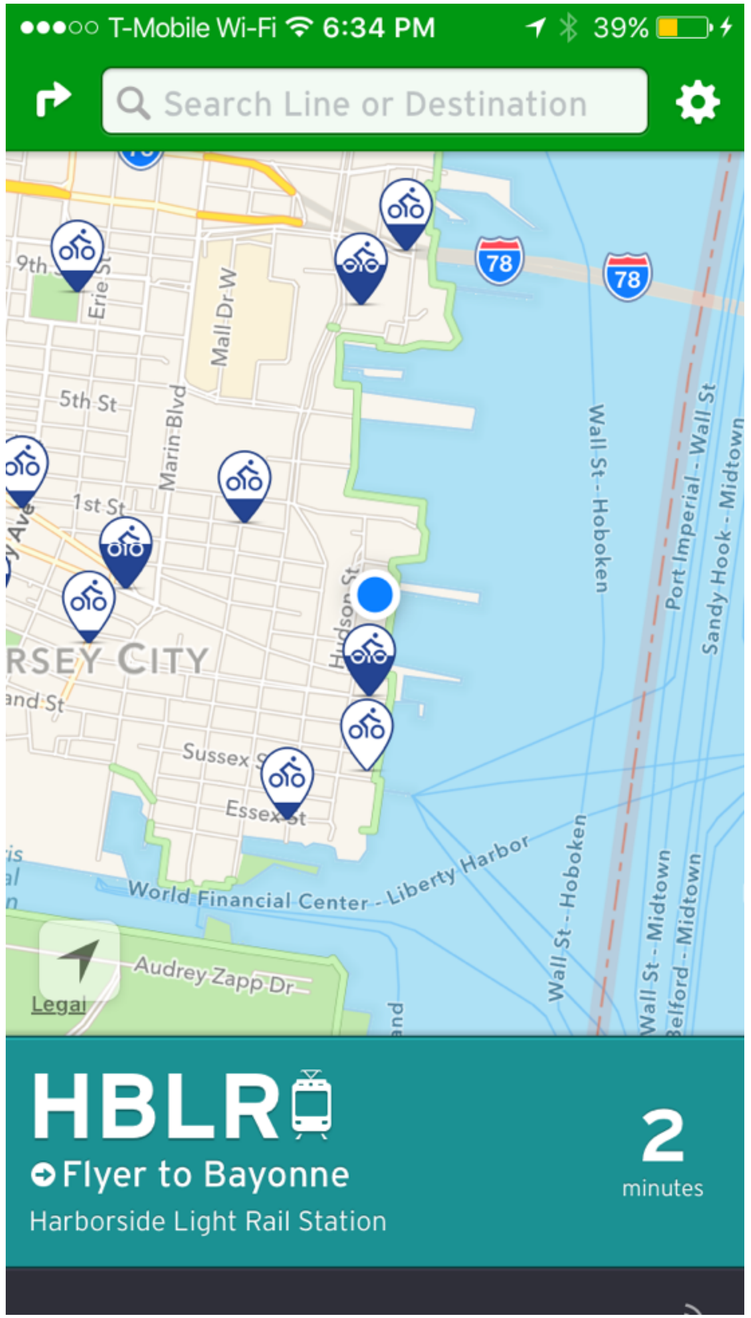
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Search Line or Destination
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Hudson St
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and St
Sussex St
Essex St
World Financial Center - Liberty Harbor
Audrey Zapp Dr
Legal
Wall St - Hoboken
Wall St - Midtown
Belford - Midtown
HBLR
Flyer to Bayonne
Harborside Light Rail Station
2
minutes

Podcast of the Week

Shop Talk Show

An internet radio show about the internet starring Dave Rupert and Chris Coyier.

http://shoptalkshow.com/

Coding Tips

- Create a Real Programming Environment
- Make Programs From Scratch
- Start Small
- Write Lots of Code
- Ask for Help
- Ask for Help the Right Way

http://www.programmingforbeginnersbook.com/blog/when_you_know_the_basics_but_you_still_cant_code/