



Lecture 11

Joins

Announcements

Project 1: World Progress

Video: <https://www.gapminder.org/videos/dont-panic-the-facts-about-population/>

Joins

Joining Two Tables

```
drinks.join('Cafe', discounts, 'Location')
```

Match rows in this table ...

... using values in this column ...

... with rows in that table ...

... using values in that column.

Columns from both tables

drinks

Drink	Cafe	Price
Milk Tea	Tea One	4
Espresso	Nefeli	2
Latte	Nefeli	3
Espresso	Abe's	2

discounts

Coupon	Location
25%	Tea One
50%	Nefeli
5%	Tea One

The joined column is sorted automatically

Cafe	Drink	Price	Coupon
Nefeli	Espresso	2	50%
Nefeli	Latte	3	50%
Tea One	Milk Tea	4	25%
Tea One	Milk Tea	4	5%

(Demo)

Bikes

(Demo)

Shortest Trips

(Demo)

Maps

(Demo)

Maps

A table containing columns of latitude and longitude values can be used to generate a map of markers

 .**map_table**(table, ...)

Either **Marker**
or **Circle**

Column 0: latitudes
Column 1: longitudes
Column 2: labels
Column 3: colors
Column 4: sizes

Applies to all
features:
color='blue'
size=200
