**SQL Drills**

**sgdjones**

**1.2.3**

Let's confirm some of this new knowledge with a few basic exercises. Write SQL queries to return:

* The IDs and durations for all trips of duration greater than 500, ordered by duration.
* Every column of the stations table for station id 84.
* The min temperatures of all the occurrences of rain in zip 94301.

1. The IDs and durations for all trips of duration greater than 500, ordered by duration.

SELECT trip\_id

FROM trips

WHERE duration > 500

ORDER BY duration;

1. Every column of the stations table for station id 84.

SELECT \*

FROM stations

WHERE station\_id = 84;

1. The min temperatures of all the occurrences of rain in zip 94301.

SELECT mintemperaturef, events

FROM weather

WHERE events = 'Rain'

AND zip = 94301;

**1.2.4**

**Drills**

1. What was the hottest day in our data set? Where was that?

SELECT zip, MAX(maxtemperaturef)

FROM weather

GROUP BY 1;

1. How many trips started at each station?

SELECT start\_station, COUNT(start\_station)

FROM trips

GROUP BY 1;

1. What's the shortest trip that happened?

SELECT MIN(duration)

FROM trips;

1. What is the average trip duration, by end station?

SELECT end\_station, AVG(duration)

FROM trips

GROUP BY end\_station;

1.2.5

Drills

1. What are the three longest trips on rainy days?

SELECT

weather.events,

weather.zip,

trips.zip\_code,

trips.duration

FROM

weather

JOIN

trips

ON

weather.zip = trips.zip\_code

WHERE

events = 'Rain'

ORDER BY duration DESC

;

ALTERNATIVE – BETTER RESULTS

WITH rainy as

(

SELECT

DATE(date) rain\_date

FROM weather

WHERE events = 'Rain'

GROUP BY 1

)

SELECT

trips.trip\_id,

trips.duration,

DATE(trips.start\_date)

FROM

trips

JOIN

rainy

ON

DATE(trips.start\_date) = rainy.rain\_date

ORDER BY duration DESC

;

1. Which station is full most often?

San Jose Diridon Caltrain Station

SELECT

status.station\_id,

status.bikes\_available,

stations.name

FROM status

JOIN stations

ON

stations.station\_id = status.station\_id

GROUP BY 1,2,3

ORDER BY bikes\_available DESC

;

CORRECT ANSWER – Santa Clara at Almaden

SELECT

status.station\_id,

stations.name,

COUNT (CASE WHEN docks\_available=0 then 1 END) empty\_count

FROM status

JOIN stations

on stations.station\_id = status.station\_id

GROUP BY 1,2

ORDER BY empty\_count DESC

;

1. Return a list of stations with a count of number of trips starting at that station but ordered by dock count.

SELECT start\_station, dockcount,

COUNT (.start\*)

FROM trips

JOIN stations

ON station.name=trips.start\_startion

GROUP BY 1,2

ORDER BY 2

1. (Challenge) What's the length of the longest trip for each day it rains anywhere?

To review