CSE 344: Section 7
SQL++, Cost Estimation
February 15th, 2018
SQL++ Crash Course
What is SQL++?

Just like SQL but parsed for processing JSON data

SQL++ has keywords to handle collections of data (i.e. non-flat data)
Motivation for SQL++?

Why SQL++? Why not some other query language?

People are used to/like specifying data through SQL syntax (like C++/Java)

SQL-like language enforces idea of physical data independence
Useful Keywords/Syntax

`is_array( ... )` ------> checks if value is an array

`split(s, d)` ------> splits string `s` on delimiter `d`

`[ ... ]` ------> explicitly construct array

`(CASE WHEN ... THEN ... ELSE ... END)` ------> combine with "`is_array(...)`"

`MISSING` ------> reserved keyword like "`NULL`"

`
` ... `` ------> backtick needed for accessing keys with names containing "`-`"
Cost Estimation
Query optimization is a complicated task

What good is it for us to know these “implementation details?”

Indexes! Design your DB instance to speed up critical queries.

For each relation we have > (number of attributes)! possible indexes.

Real-world tables can have 50+ attributes = quindecillion indexes