

Indexes - 10/23

Announcements

- Midterm will **not** be held in our normal classroom.
- Review session Tuesday at 11am in GDC.
- Final Project starts next week.

Reading Quiz

- Q1: Indexes reduce the number of rows that need to be searched.
- Q2: Indexes speeds up lookups but slows down operations such as updating, inserting, and deleting.
- Q3: Indexes must be created on columns in the same table.
- Q5: Since it accesses many rows but only a few attributes vertical partitioning would help in this case.

Indexes

Primary keys are automatically indexed in PSQL. This index cannot be dropped. You can create indexes on any column of your choosing but ultimately it is the query optimizer that decides which indexes to use during query execution. The idea is to create indexes on attributes used in the predicate (things you are searching/filtering on).

B+ Tree Properties

- The search speed would be the height of the tree.
- Each node stores several index entries, these point to either another node in the tree or in the case of a leaf node it points to the actual data in the table.
- See slides for other properties.

Practice Problem

It makes sense to index on attributes on both the inner query and the outer query.