CMSC 398z
Effective use of AI Coding Assistants and Agents

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Databases and SQL review

How many people have taken CMSC 424 Database Design?

How many people have some familiarity with SQL?

SQL data is stored in tables

With multiple tables, you can create something like objects in programming languages

the primary key of a table is the "address" of each row

a foreign key is a reference to the address of another row
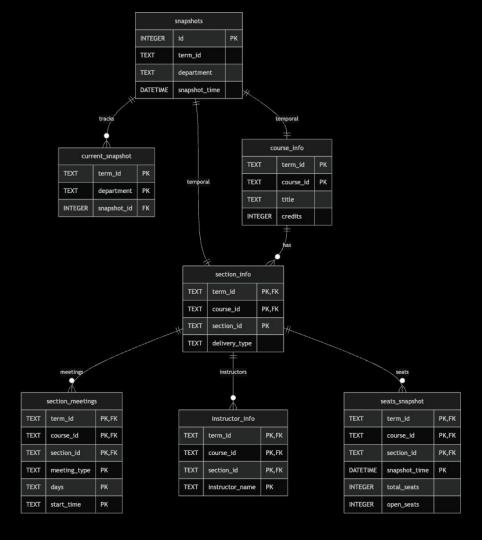
typically in another table

Testudo course scraper

Scrapes Testudo to extract information about courses, including

- Sections
- Section meetings
- Section seats
- Instructors

Feature we won't be using

- Ability to scrape data across multiple terms
- Scrape data for a term & department multiple times
  - to keep track of changes in number of seats
  - Check for added or dropped courses or sections
- This is kept track of by having multiple snapshots
  - keeping track of the current snapshot for any term and course
  - seats_snapshot tells you how many seats were seen in a specific snapshot
  - other entities, such as course_info and section_info keep track of first and last snapshot when that item was seen
  - Currently not tracking changes to things such as course description
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Mermaid diagram - extension to Markdown