**SQL, RDMS, and Data Visualization - introduction**

**SQL:**

* What is SQL?
  + Structured Query Language
  + Easy retrieval of data from database
* Query:
  + Another word for question
  + First step is to clarify the question
* Language:
  + Developed in the 70s
  + Became the dominant language for databases

**Database:**

* Can store a CSV, TXT, JSON, XML, GSheet files

**Relational Database Management System (RDBMS):**

* Data organized into tables
* Columns have data types (number, varchar, date, etc).
* Data types enforced
* Tables have relationships
* Relationships enforced

**Data Types SQL:**

* Boolean
* Character String (varchar)
* Datetime
* Character
* Date/Time
* Null
* Not a complete list – every SQL implementation has different types

**Data Integrities Concepts:**

* Entity integrity
* Domain integrity
* Referential Integrity
* User-Defined Integrity

**Entity Integrity:**

* Indexes
* UNIQUE command
* PRIMARY KEY constraint

**Referential Integrity:**

* FOREIGN KEY (a PK value on another table) and CHECK constraint
* CHECK constraint
* PRIMARY KEY constraint