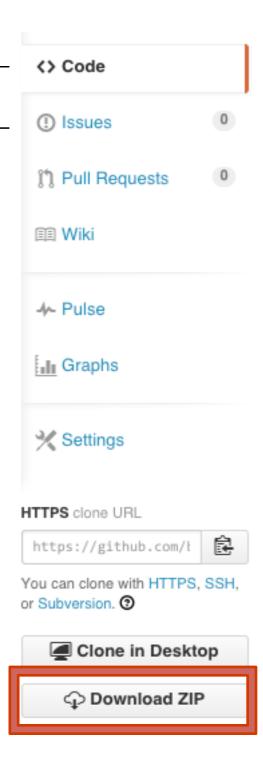
Brandon M. Burroughs, Associate Product Manager at Clarabridge

ADMINISTRATIVE STUFF

- → Wifi: GA-Guest
- Password: yellowpencil
- Files: https://github.com/brandonmburroughs/sql_bootcamp



HELLO!

BRANDON M. BURROUGHS



- ▶ BS Finance from Louisiana Tech University
- BS Mathematics & Statistics from Louisiana Tech University
- MS in Statistics from the University of North Carolina
- Data Analyst and IT Support at UNC ITS
- Associate Product Manager of Analytics & Linguistics at Clarabridge
- Expert in Residence for Data Science at General Assembly
- Cycling, Backcountry Camping, Climbing, Computers, the Internet, Literature

AGENDA

TODAY

- Introduction to Databases
- Creating Databases and Tables
- Adding, Querying, and Removing Data
- Exploring, Discovering, and Aggregating Data
- Joining Tables
- More Queries and Aggregations
- Case Statements
- More Joins
- Advanced Queries and Aggregations
- Review

INTRODUCTION TO DATABASES

WHAT IS A DATABASE?

- An organized collection of data
- Organized overall by a schema (like a blueprint of a database)
- Organized into tables with different sets of data
- If each family is a set of data, a house would be the table, and the neighborhood would be the schema.
- Think many Excel sheets, but without so many limitations

WHY USE A DATABASE?

- You can ask questions of the data
- Has a nice, structured language
- Access large amounts of data relatively quickly
- Reliable and scalable
- Many are ACID compliant ensures your transactions are safely processed or that you're notified otherwise

RELATIONAL VS. NOSQL

- Relational
- Traditional rows and columns data
- Strict structure
- Entire column for each feature
- → NoSQL
- No well defined data structure
- Works better for unstructured data
- Cheaper hardware

RELATIONAL VS. NOSQL

- Today, we'll be talking about relational databases.
- Still the most used and appropriate for a lot of data.
- Popular names
- MySQL
- Oracle
- Postgres
- Microsoft SQL Server
- SQLite

SQL

- Stands for Structured Query Language
- Used to ask questions of the database
- Many different functions
- Create data storage repo
- Add data
- Get data
- Transform data
- Aggregate data
- Delete data
- Standard language with some differences among "dialect".

DATA TYPES

- ▶ BOOLEAN/TINY INT- 0/1
- ▶ INT any whole number
- ► FLOAT(<n>,<m>) number with n digits before the decimal and m digits after the decimal
- DATETIME, TIMESTAMP, and DATE various date and time combinations
- ► CHAR(<length>) text with a fixed length
- ▶ VARCHAR(<length>) text with a given maximum length
- And many more...

CHECK SETUPS

CHECK SETUPS

- MySQL Community Server should be installed.
- Help your neighbors if you already have everything set up.
- Tools
- Command Line Client
- Windows: Open "MySQL Command Line Client"
- Mac: Open "Terminal" and type "/usr/local/mysql/bin/mysql"
- → SQL Workbench (or other GUI)
- SQL Editor Preferences: Turn off "Safe Updates".
- I'll be using the GUI today.

LET'S CODE

REVE

REVIEW

- Introduction to Databases
- Created Databases and Tables
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- Joining Tables
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THANKS!

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