WEEK 2

THE DATA ARCHIVES

Understanding **Databases** and **SQL**

PRESENTED BY **FILSAN MUSA & FADUMO DIRIYE**

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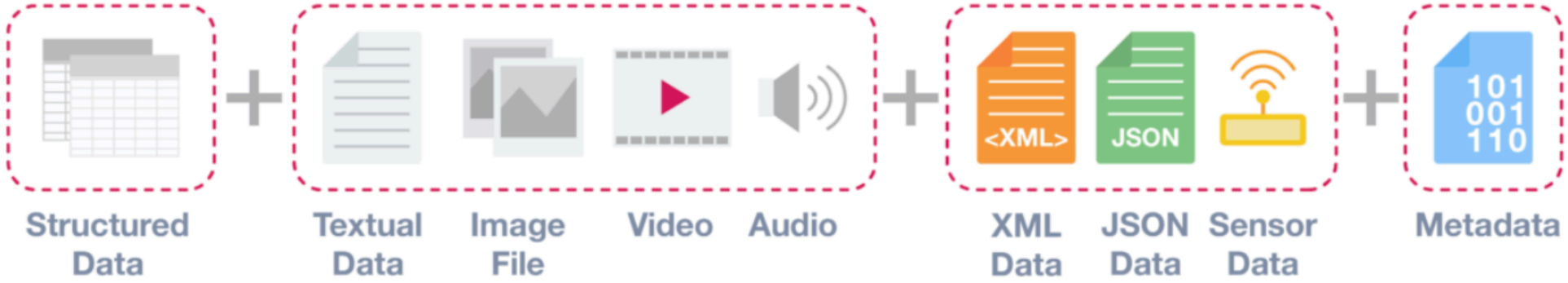
Database

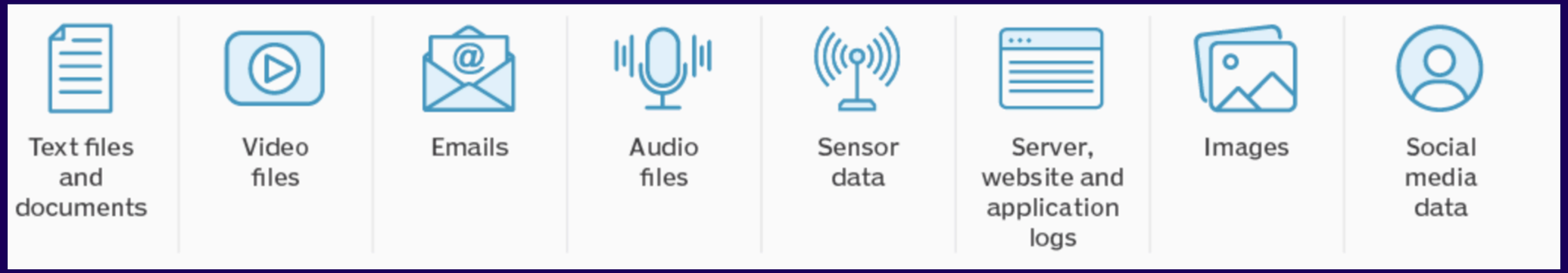
An organized collection of information stored systematically to allow efficient access, modification, and management. It can handle different types of content, such as text, images, and numbers, depending on its structure.

Structured Data



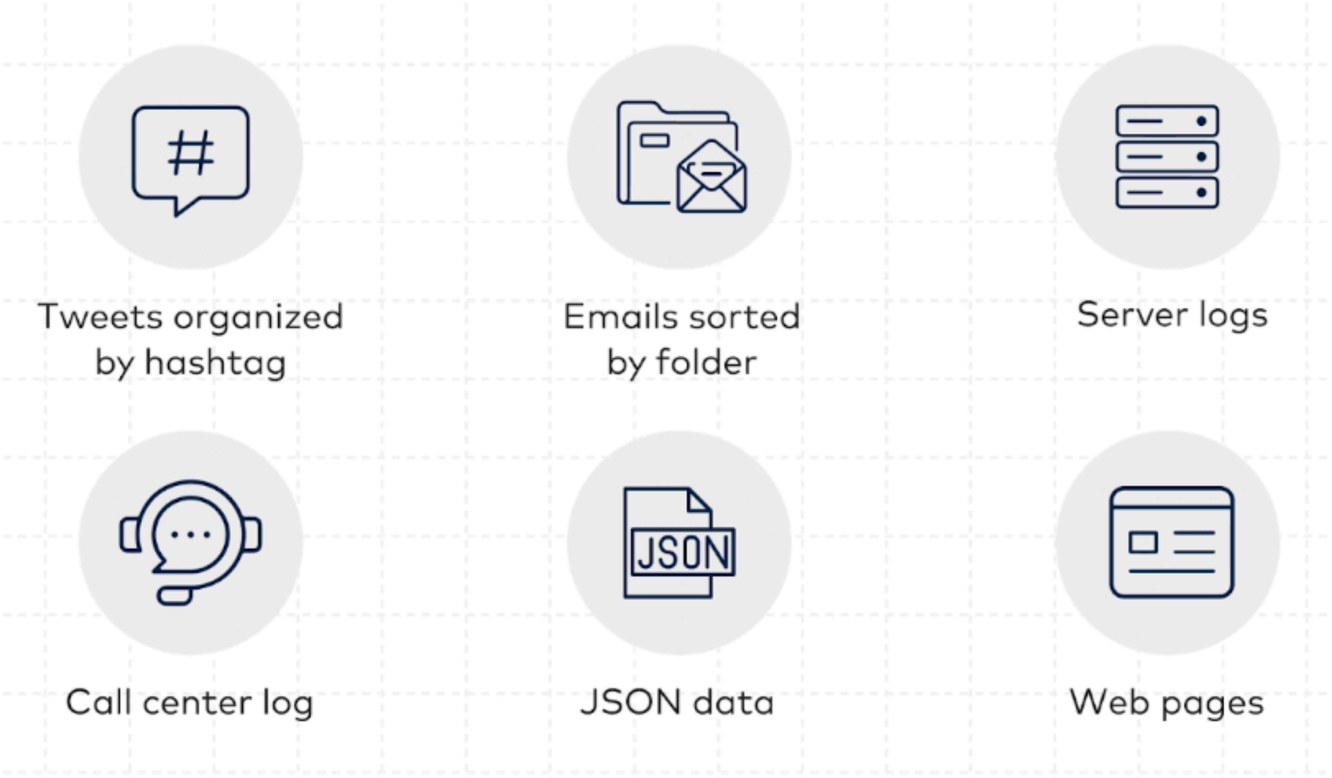
Information arranged in a defined format, typically in rows and columns. This format makes it easy to identify, analyze, and process individual pieces of information.

Unstructured Data



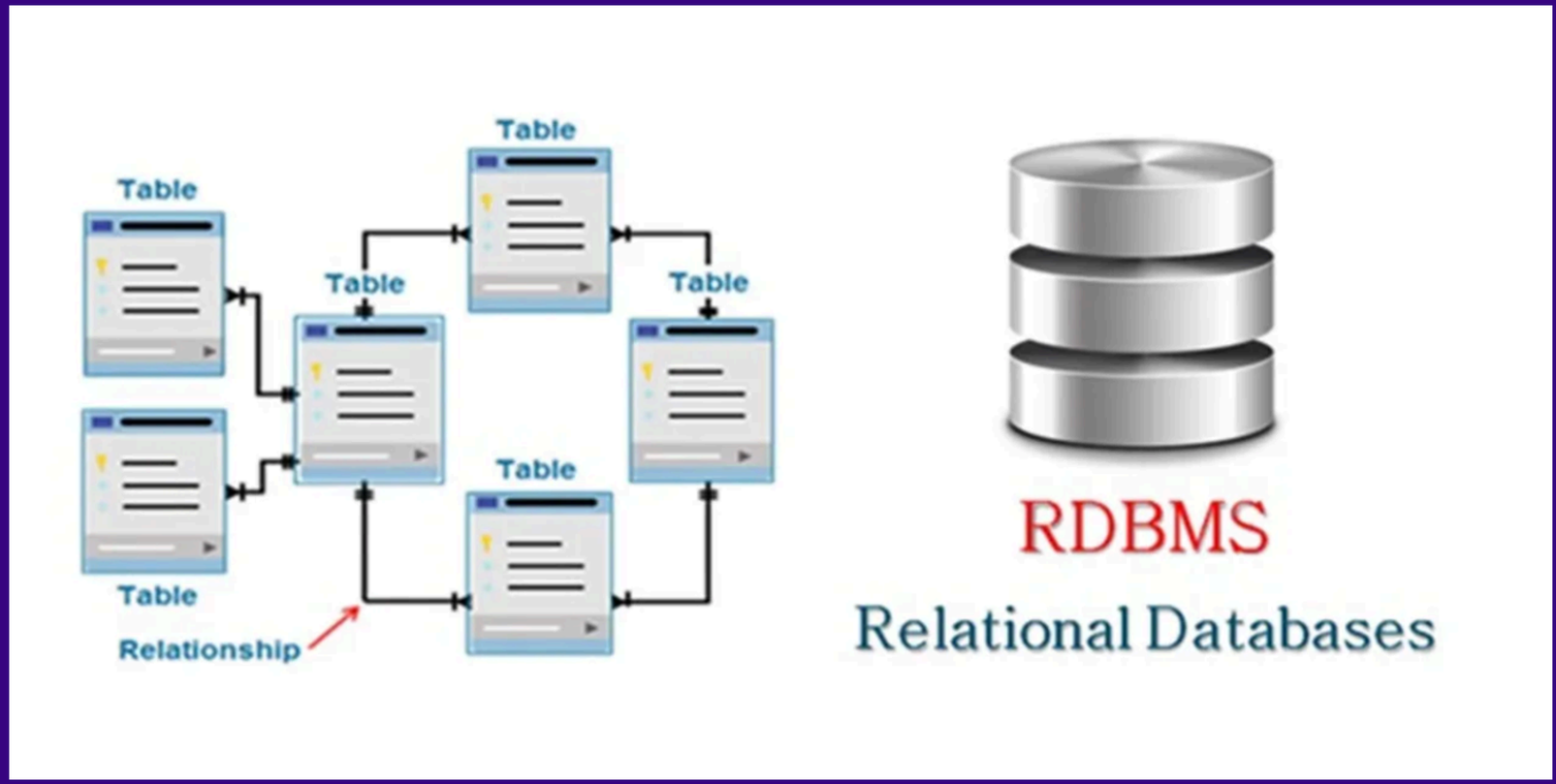
Information that lacks a formal arrangement or predefined structure. It can include content like text files, multimedia, and documents, which are harder to analyze due to their irregular format.

Semi-Structured Data



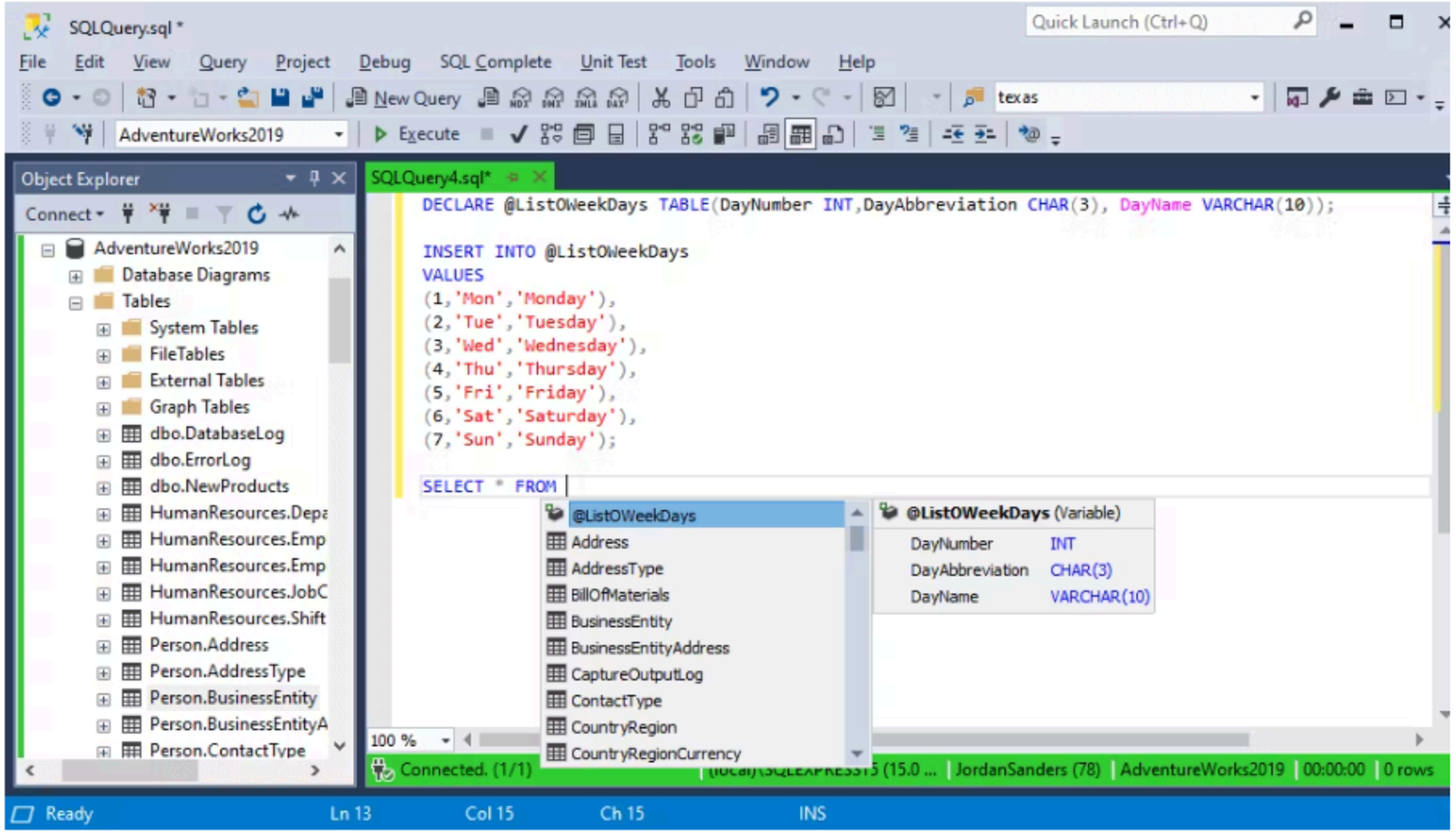
It is a form of data that does not reside in a traditional relational database but still contains some organizational properties, such as tags or markers to separate data elements.

What is RDBMS?



A Relational Database Management System (RDBMS) is software that manages structured data organized in relational databases. It uses tables with rows and columns to store and retrieve data efficiently.

What is SQL?

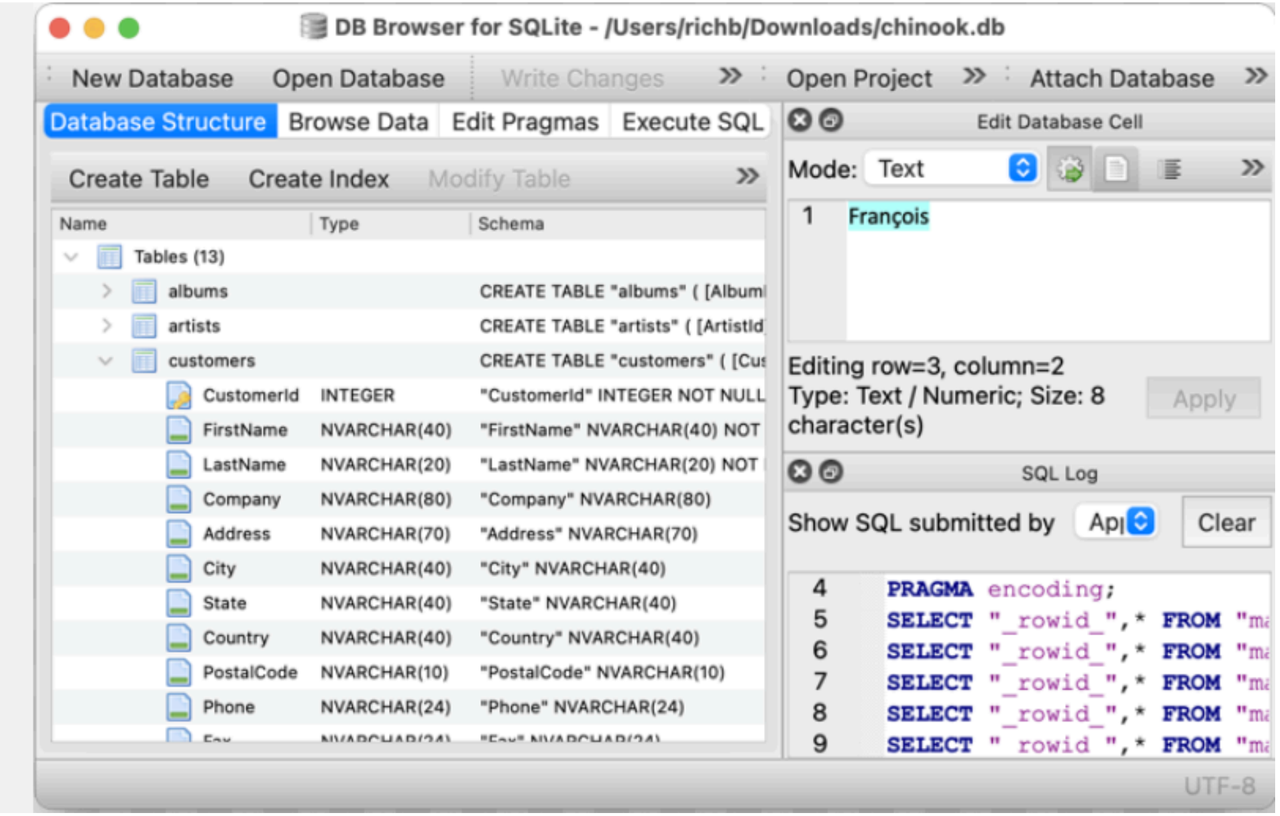


SQL (Structured Query Language) is a programming language for managing and manipulating data in relational databases.

SQL Flavours

SQL flavours are variations of the SQL language, customized for specific database management systems (RDBMS). These flavours often include unique features and syntax extensions while maintaining core SQL functionalities.

What is SQLite?



SQLite is a lightweight, standalone SQL database engine. It is self-contained and highly portable, making it ideal for learning and small-scale applications.

Note: The SQLite flavour will be used for this course.

Next Steps

Homework:

- Complete Week 2 Quiz