INTRODUCTION TO SQL & MYSQL

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CONTENTS

MODULE: 1

- What is a database and why do we need SQL?
- Top 5 problems in Excel and why using SQL solves this problem
- Should we import from Excel and why? How it is done?
- Create a link to Excel spreadsheet with MySQL?

WHAT IS SQL?

- SQL (also known as structured query language) is a dynamic language for storing, manipulating and retrieving data from relational databases.

- It's a worldwide programming language, SQL is a must-have for anyone working with data.

WHAT IS A DATABASE?

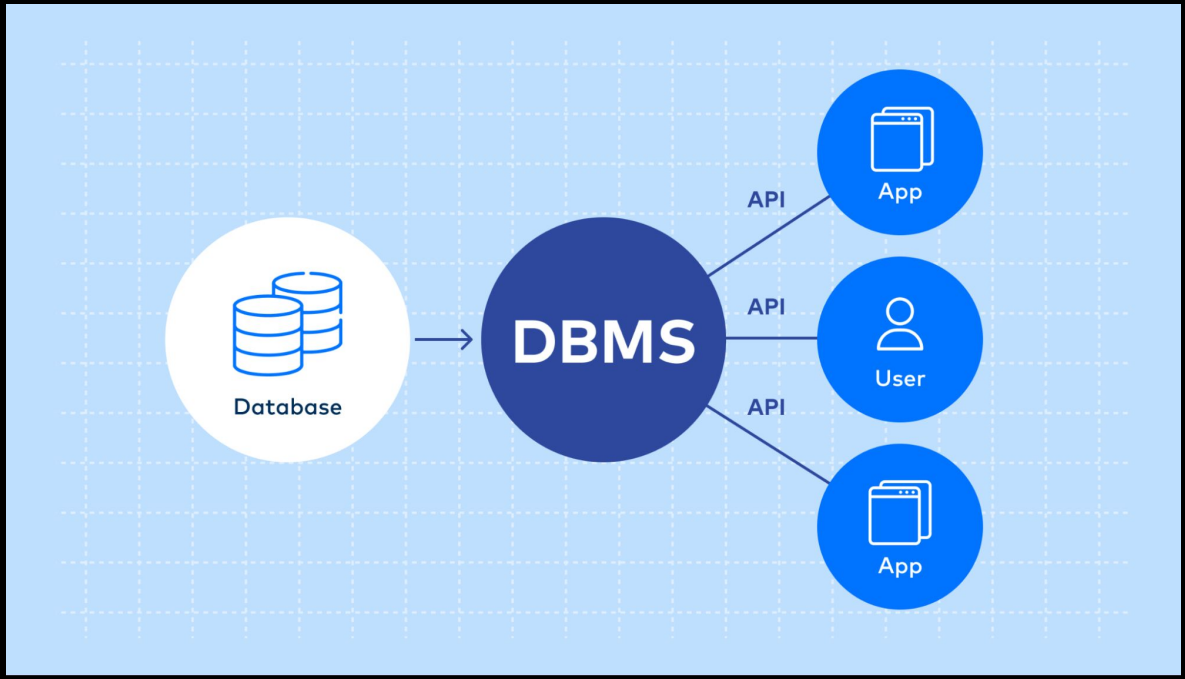
- A database is an organized collection of data stored in a computer. The most common types store data in rows and columns in a series of tables. This makes storing, managing and retrieving the data you need easier.

- The type of data stored in a database depends on the application that's using it. For example, a database for an online store might store:

- Customer data (names, addresses, etc.)
- Product data (colors, prices, etc.)
- Business data (sales, inventory, etc.)
- Market data (competition, weather, etc.

WHAT IS DBMS?

- A database management system (DBMS) is software used to manage databases. It provides a user interface to store, access and manipulate data.

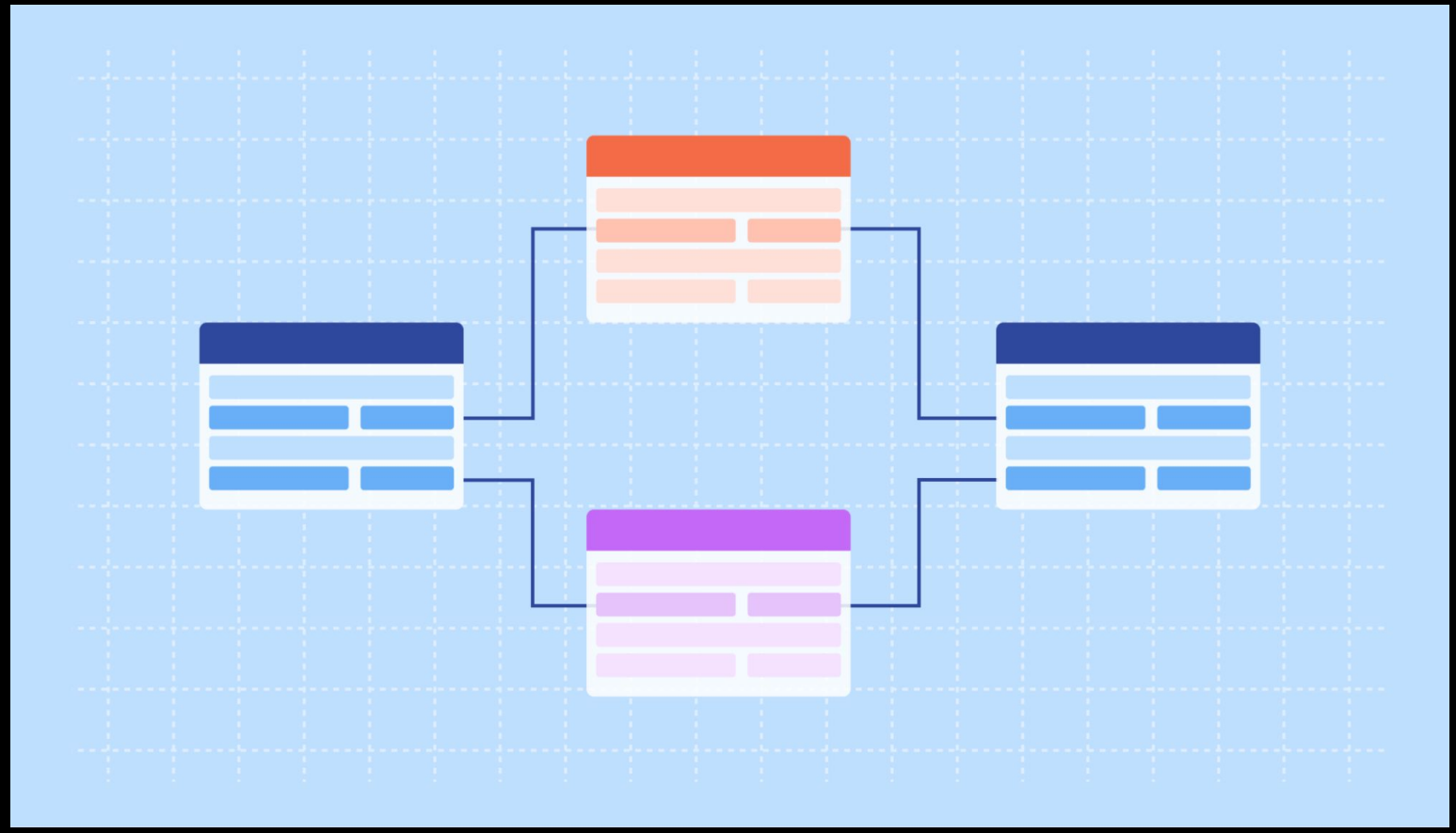


RELATIONAL DATABASES

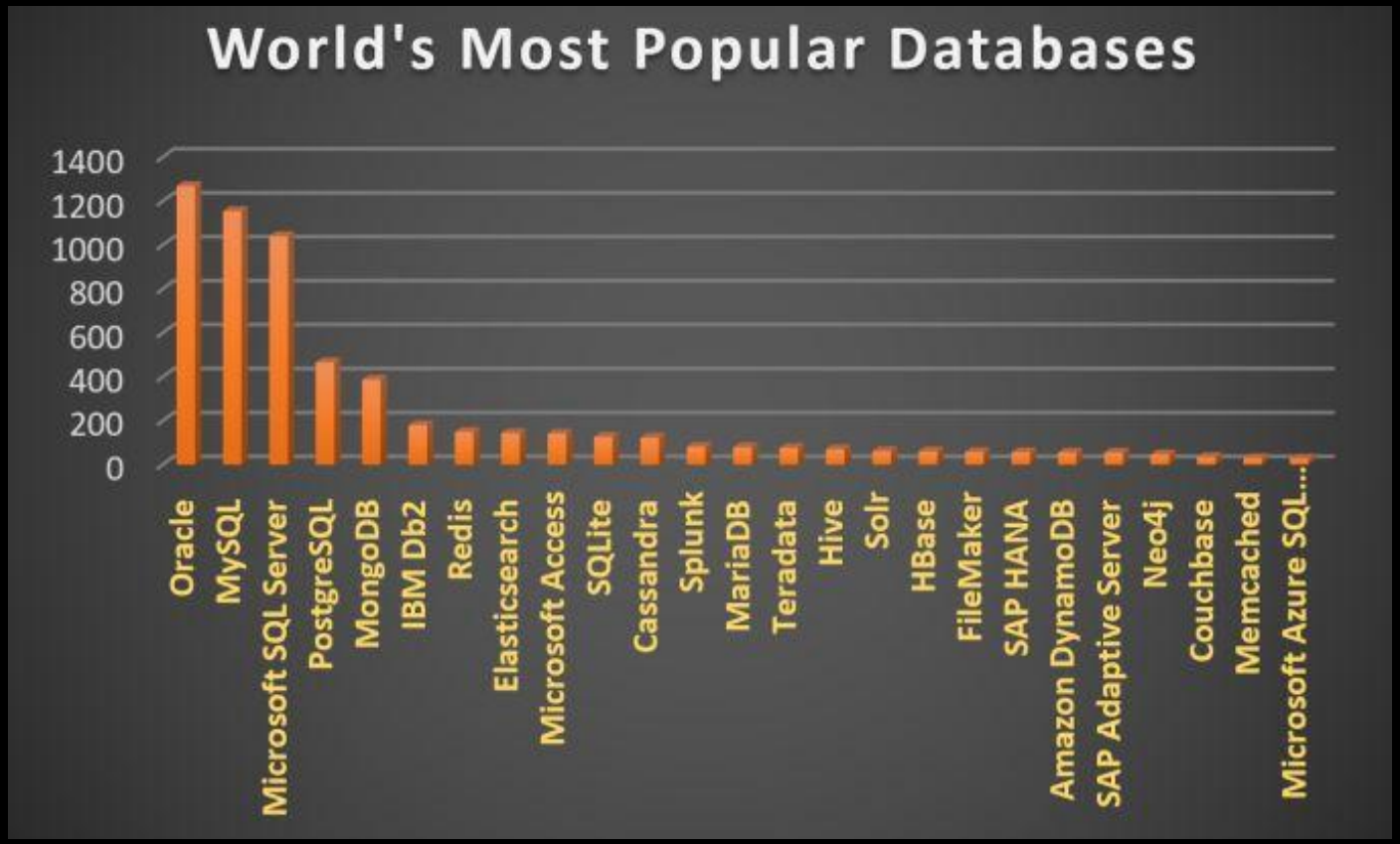
- A relational database management system (RDBMS) is a program used to create, update, and manage relational databases.
- A relational database is also known as a SQL database

- The data in a relational database is organized according to a schema
- schema — a "blueprint" that describes how it will store data.
- Relational databases are organized in rows and columns in a series of tables. The data within these tables relate to each other, hence why it's called relational!

RDBMS SCHEMA



POPULAR DATABASES



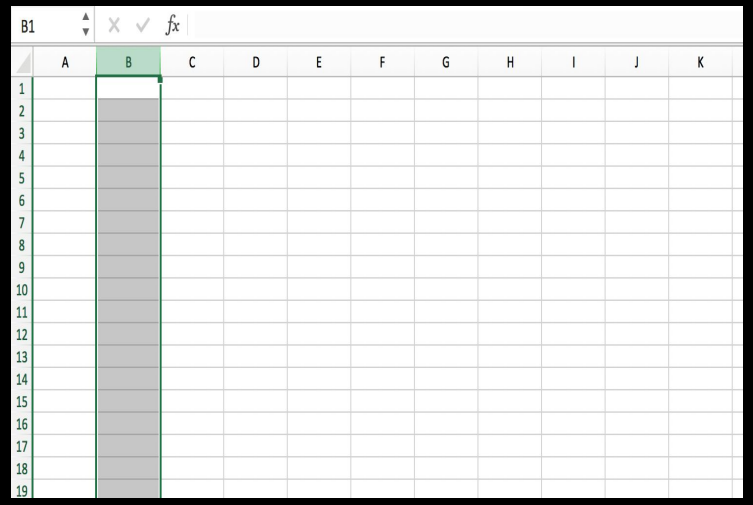
TOP 5 PROBLEMS IN EXCEL AND WHY USING SQL SOLVES THIS PROBLEM

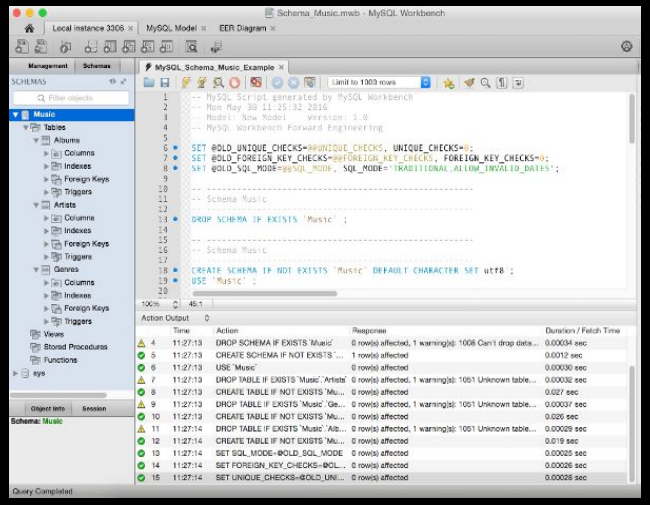
1. Data Integrity
2. Faster Manipulation of Data
3. Unlimited Volume of Data
4. Better Multi-User Experience
5. Data Consistency
6. Eliminating Duplicate Information

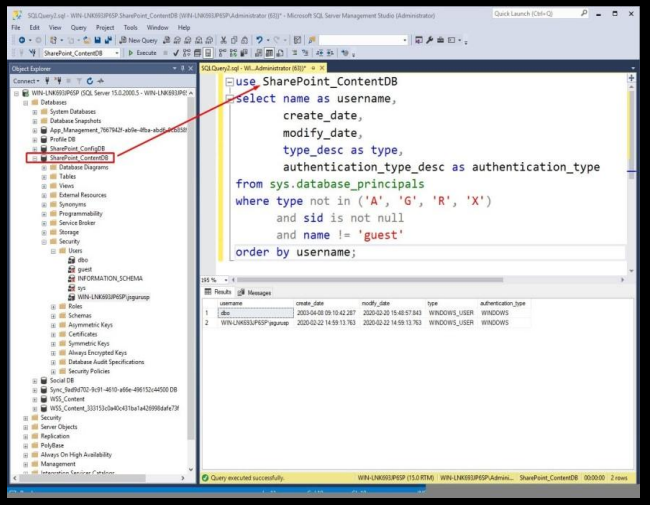
- The database features mentioned so far improve data integrity – you can't store different types of data in the same field.
- Relations between the tables, will boost the performance of operations.
- Excel is incapable of handling over 1 million rows of data.
- where databases having 2, 5, or 10 million records or more than it.

WHAT IS THE DIFFERENCE BETWEEN DATABASES AND SPREADSHEETS?

- Spreadsheets are electronic ledgers, i.e. electronic versions of accounting workbooks. While databases are collections of information organized and managed using structured query language (SQL).





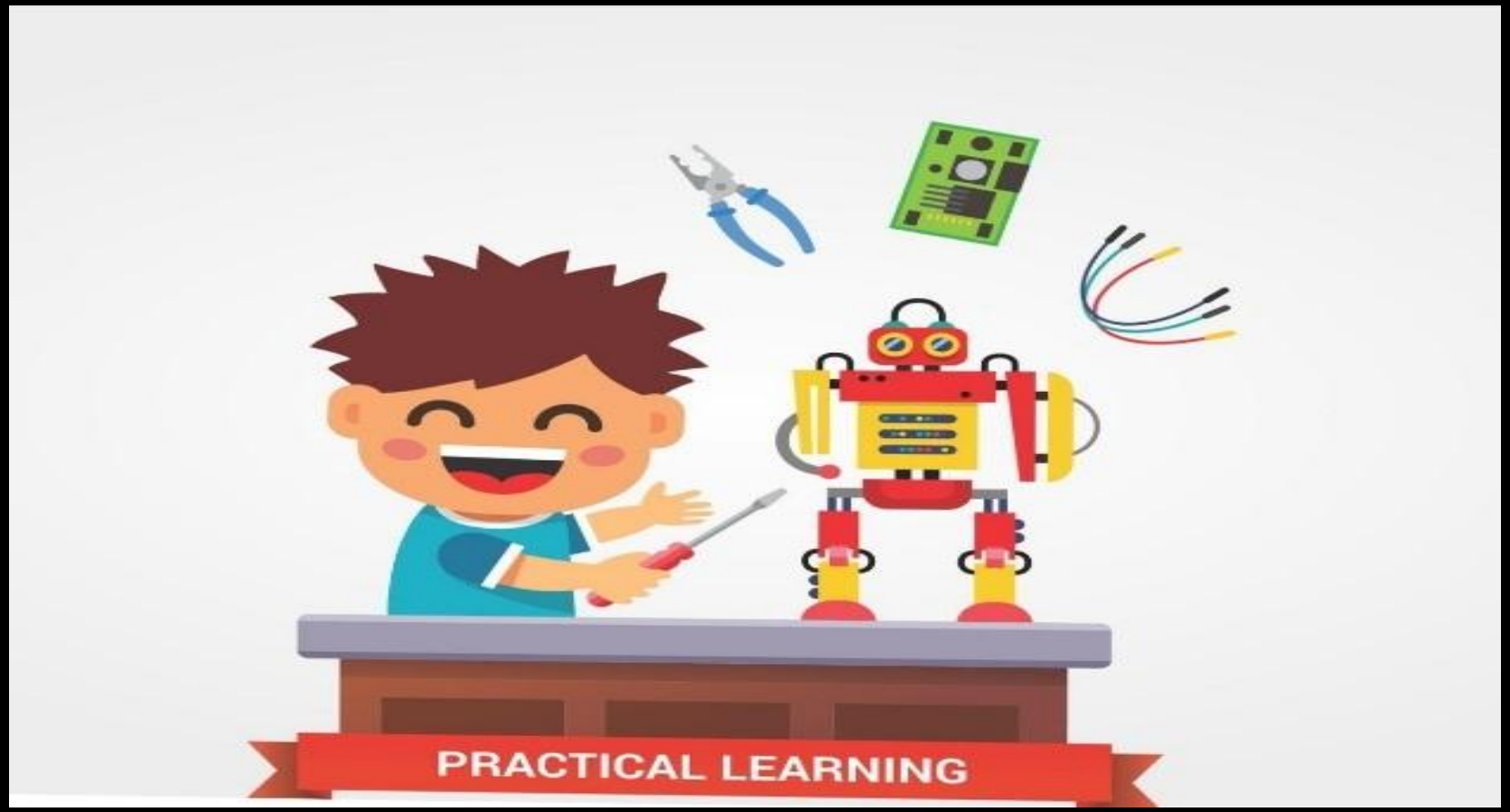


POPULAR DATABASES

WHY SHOULD YOU IMPORT EXCEL INTO MYSQL?

- As you collect data and store it in your separate Excel files, it becomes a huge task to track each sheet with millions of records in it. To simplify this we import Excel file in RDBMS.

IMPORT EXCEL INTO SQL



BASIC STATEMENT

1. CREATE DATABASE DATABASE_NAME;
2. CREATE TABLE TABLE_NAME;
3. INSERT INTO TABLE_NAME VALUES();
4. SELECT * FROM TABLE_NAME;