SQL Video 1

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> 💡 **Notion Tip:** Use this template to source ideas from your team even when you're not in the same room. Articulate a question you'd like to have answered. At the same time, people can add their bulleted ideas below that question and tag themselves. Click New topic to generate a new question to answer.

What is a Database?

- A database is a collection of data and holds the data in the form of tables
- The database provides us the capability to access and manipulate this data

What is a table?

- The way of storing the data in the form of rows and columns
- It is similar to an Excel spreadsheet

If excel stores data and performs the same operations then why do we even need a database?

- What if there are 1000 spreadsheets having lakhs of data each? So it is cumbersome to handle and manage the sheets.

Kind of DataBases

2 types of databases

1. **Relational Database** -

   - In these databases, we store the data in the form of rows and columns

   - The tables have relations between them.

   - Examples of Relational Databases

     - MySQL

     - SQL Server

     - PostgreSQL

     - SQLite

     - MariaDB

2. **Non-relational / NoSQL Database** -

   - Data is stored in the form of Key-Value, Documents, and Graphs. Basically not in the form of rows and columns.

   - There is no relation between tables

   - Examples-

     - HBase

     - MongoDB

     - Cassandra

SQL(Structured Query Language)

- Called Structured Query Language because it is used with structured data

- MySQL is a database and SQL is a way to interact with the relational database

IDE goormIDE to practice and run SQL queries

- To clear the MySQL CLI screen,

```
\! cls
```

- Create DataBase

Syntax: create database <database name>

```
create database students;
```

- Dropping Databases

Syntax: drop database <database name>

```
drop database students;
```

- Using a DataBase

```
USE students;
```

- To know the current working database

```
SELECT database();
```

Output

```
mysql> select database();
+------------+
| database() |
+------------+
| sakalya    |
+------------+
1 row in set (0.00 sec)
```

- Creating a table

Syntax: CREATE TABLE <table name>

```
CREATE TABLE employee(
name varchar(50),
age INT,
salary INT
);
```

The datatypes in SQL are

- int for numeric
- varchar - for string
  - Holds data till 256 characters

- To display the structure of Table

```
DESCRIBE students;

DESC students;
```

- Drop tables

Syntax: DROP TABLE <table name>

```
DROP TABLE students;
```