



MONGODB. VS SQL

CHECKPOINT PRESENTATION

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PLAN

01

Introduction

02

MongoDB Overview

03

SQL Overview

04

Key Differences

05

Use Cases and Conclusion

06

Conclusion



Introduction

& Definitions



MongoDB : A flexible **NoSQL** database



SQL : A powerful **relational** database management system

Let's dive in...

An abstract graphic on the left side of the slide. It features a large green circle at the bottom left, a smaller green circle at the top right, and a central white 3D cube. The cube is surrounded by four green, rounded rectangular shapes that appear to be holding or supporting it. A green leaf is placed on top of the cube. A green diagonal line cuts across the cube and the surrounding shapes.

MongoDB Overview

- **MongoDB** is a **NoSQL** database.
- **Flexible** data handling: Stores **unstructured** data.
- **Document-based** structure: Utilizes **JSON-like** documents.
- Ideal for **scalable applications** and **real-time analytics**.

SQL Overview

- **SQL** is a **relational database management system** (RDBMS).
- **Structured data storage**: Uses **fixed schemas and tables**.
- Supports **complex queries and transactions**.
- Widely used for **structured data storage and retrieval**.



Key Differences



DATA STRUCTURE

*Flexible, schema-less
documents*

SCALABILITY

*Horizontal scalability for
large datasets*

QUERY LANGUAGE

*JSON-based query
language*



*Fixed schema with
tables and relations*

*Vertical scalability for
structured data*

*Utilizes SQL (Structured
Query Language)*





MongoDB Use Cases

Agile development:
Adaptable to changing
requirements

Real-time applications:
Supports fast data
updates



PROS & CONS :

Flexibility, Scalability

Limited transaction support



SQL Use Cases

Financial systems:

Ensures data accuracy
and integrity

E-commerce platforms:

Efficiently handles
structured data



PROS & CONS :

**Structured data management, ACID
compliance**

Steeper learning curve

The slide features a white background with three orange circles of varying sizes. A large circle is on the left, a medium one is in the top right, and a small one is in the bottom right.

CONCLUSION

*The choice between MongoDB and SQL
depends on project requirements*



Merci

Pour votre attention
