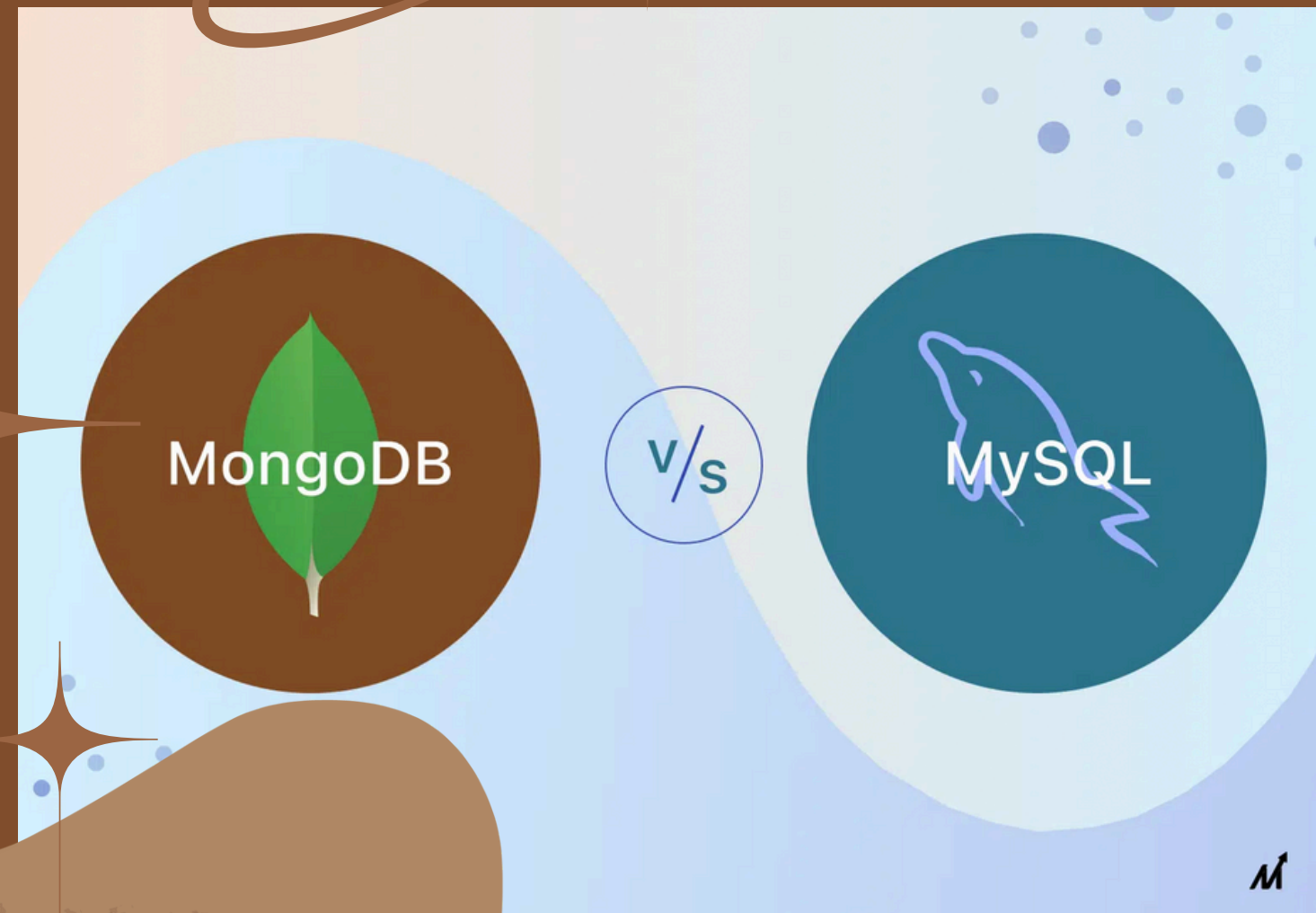


# Welcome to My. Comparison Between MongoDB and SQL Databases

In this presentation, we'll explore the functionalities of each database type and delve into their key differences. By the end, you'll have a clear understanding of which database might best suit your needs.



## MongoDB NoSQL

- Definition:
- Document-oriented NoSQL database storing data in JSON-like documents.
- Functionalities
- Schema-less: Flexible structure for rapid development.
- Scalability: Horizontal scaling via sharding.
- Performance: High for large data volumes.
- Ease of Use: Dynamic schemas.
- High Availability: Supports replica sets for redundancy.



# SQL OVERVIEW

## Relational Database Management System RDBMS

- Structured Query Language SQL:  
Standardized language for managing relational databases
- ACID properties:  
Ensures data integrity and consistency
- Strong data consistency:  
Relationships enforced through foreign keys
- Use Cases:  
Ideal for applications requiring complex queries, transactions, and strict data integrity

# COMPARISON

## Comparing MongoDB and SQL

### Schema:

MongoDB: Schema-less, flexible document structure  
SQL: Pre-defined schema with tables, rows, and columns

### Query Language:

MongoDB: Query language for documents (MongoDB Query Language)  
SQL: Standardized SQL for relational databases

### Use Cases:

MongoDB: Agile development, real-time analytics, and high-volume data  
SQL: Complex queries, transactions, and strict data consistency

### Scalability:

MongoDB: Horizontal scalability via sharding  
SQL: Vertical scalability, limited by hardware

### Transactions:

MongoDB: Limited support for multi-document transactions  
SQL: Full support for ACID transactions





# Conclusion

In conclusion, both MongoDB and SQL have their unique strengths. MongoDB, with its flexible schema and horizontal scalability, is ideal for agile development and real-time analytics. SQL, with its structured approach and strong data integrity, is perfect for complex queries and transactional applications.

Choose MongoDB for projects needing flexibility and scalability. Opt for SQL when you require structured data and complex querying capabilities. Your choice should align with your project's specific needs and goals. Thank you for joining this comparison!

