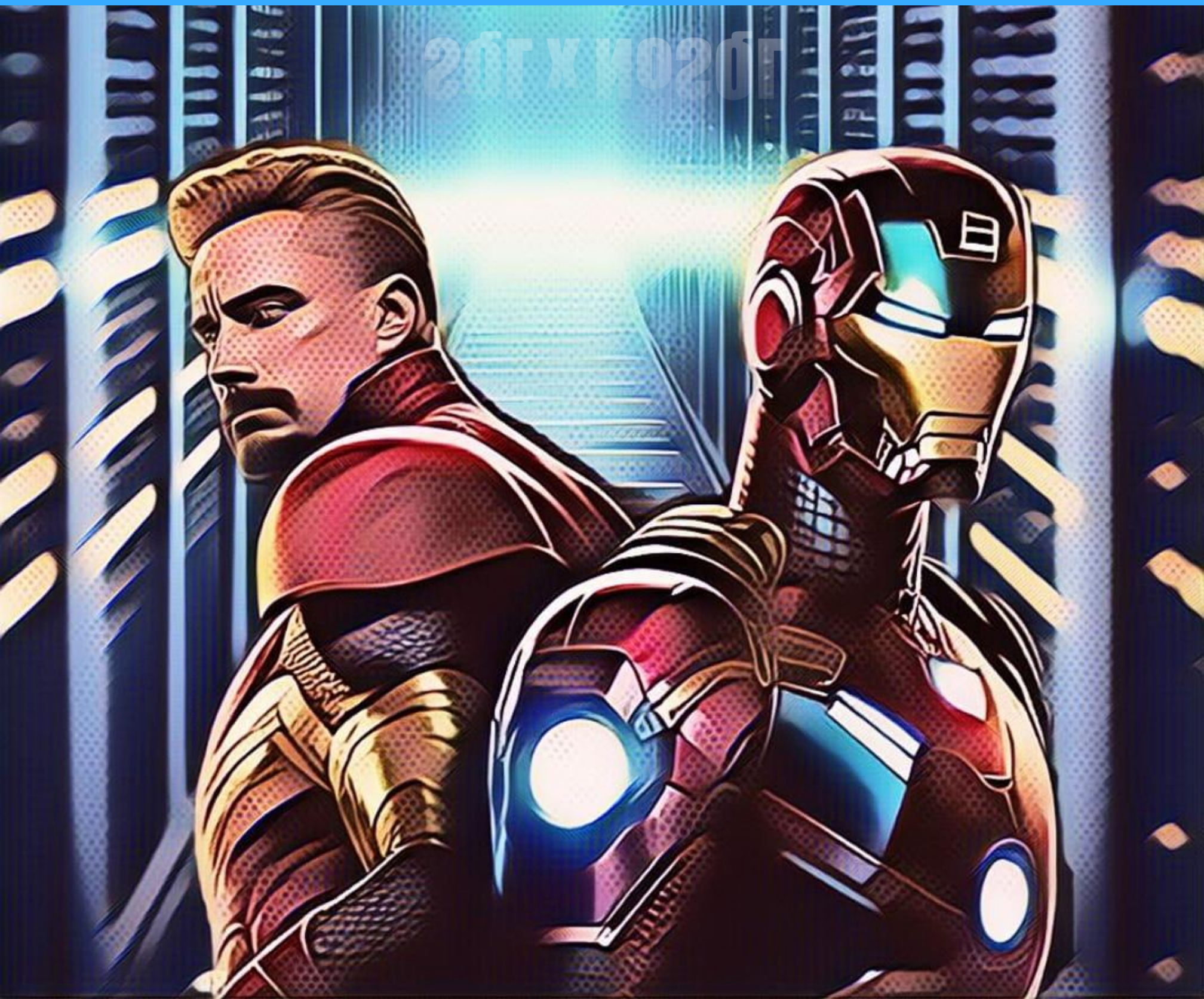


# DATABASE WARS

**SQL x NoSQL**

2017 x 2017



UNITING DATABASE AVENGERS

**RDIASR**



# SQL X NOSQL DATABASE WARS UNITING DATABASE AVENGERS

## Introduction

Welcome to the spectacular world of databases, where SQL and NoSQL are the superheroes of data management, kind of like the Avengers!

In this entertaining e-book, we'll embark on a thrilling journey into the realm of data storage and retrieval, and explore the similarities and differences between SQL and NoSQL in a way that's so easy to grasp, even Deadpool would approve.

Whether you're a tech guru or just a curious reader, we promise this adventure might leave you feeling like a true data superhero!





01

# THE AVENGERS ASSEMBLY

SQL x NoSQL



# THE AVENGERS ASSEMBLY

In the world of the Avengers, a diverse team of heroes unites to tackle formidable foes. Similarly, SQL and NoSQL are both database management systems, each with its unique strengths and quirks. Picture SQL as Captain America, all about structure and discipline, while NoSQL is more like Iron Man, adaptable and dynamic.



02

# THE CAPTAIN AMERICA OF DATABASES

SQL

SQL VS NOSQL



# SQL THE CAPTAIN AMERICA OF DATABASES

SQL (Structured Query Language) is like Captain America – reliable, structured, and excellent for organizing and managing data. It uses tables and is ideal for handling structured data, like customer information.



# SQL THE CAPTAIN AMERICA OF DATABASES

It's time to unleash CRUD (Create, Read, Update, Delete) operations – this is how the superpowers of SQL can handle Customer data!

```
// Create the customer Tony Stark
INSERT INTO Customers (FirstName, LastName, Email,
Country) VALUES ('Tony', 'Stark',
'ironman@example.com', 'USA');
Read (Retrieve) Data:

// Read customers which are from USA
SELECT FirstName, LastName, Email FROM Customers WHERE
Country = 'USA';

//Update customers with customerID equal 1
UPDATE Customers SET Email = 'tony.stark@avengers.com'
WHERE CustomerID = 1;

// Delete customers with customerID equal 1
DELETE FROM Customers WHERE CustomerID = 1;
```







03

# THE IRON MAN OF DATABASES

**NoSQL**



# NOSQL THE IRON MAN OF DATABASES

NoSQL databases rock when it comes to handling unstructured data, such as tweets or sensor readings. They are not bothered by fixed schemas, so they can deal with any type of data you give them. Just like Iron Man, who is awesome, flexible, and ready for any challenge. It doesn't rely on tables but can store data in various ways, like documents, graphs, or key-value pairs.





# NOSQL THE IRON MAN OF DATABASES

Now, let's check the abilities of NoSQL super commands with some CRUD examples:

```
// Create the Iron Man Suit product
db.products.insert({
  name: "Iron Man Suit",
  price: 1999.99,
  category: "Tech",
  features: ["Powered Flight", "Repulsor Beams", "Jarvis AI"]
});

// Read all products in the "Tech" category
db.products.find({ category: "Tech" });

// Update the price of the "Iron Man Suit"
db.products.update({ name: "Iron Man Suit" }, { $set: {
  price: 2499.99 } });

// Delete the "Iron Man Suit" from the products
db.products.remove({ name: "Iron Man Suit" });
```





**04**

# **RETRIEVING DATA**

**SQL x NoSQL**



# RETRIEVING DATA

SQL and NoSQL databases specially differ in how they retrieve data. SQL uses structured queries to retrieve data, making it suitable for complex relational data like customer records, as seen in our earlier examples.

On the other hand, NoSQL relies on flexible queries, making it ideal for unstructured or semi-structured data like social media.





# RETRIEVING DATA

SQL queries are like Thor's mighty hammer, Mjölnir, precise and powerful.

```
// SQL (Structured):  
SELECT FirstName, LastName, Email FROM Customers  
WHERE Country = 'USA';
```

NoSQL queries are more like Black Widow's agility, adapting to different data structures.

```
// NoSQL (Flexible):  
db.products.find({ category: "Tech" });
```



05

**SCALABILITY**

**SQL x NoSQL**



# SCALABILITY

Just as the Avengers confront formidable foes, databases encounter scalability challenges.

SQL scales vertically, adding more power to a single server, just like Hulk's increasing strength. For example, you can beef up server resources to handle more requests.

NoSQL scales horizontally, similar to the superheroes getting stronger with more members in the team. For instance, you can add more servers to distribute the load and tackle large data volumes.



**06**

# **COMMON GOALS**

**SQL & NoSQL**



# COMMON GOALS

SQL and NoSQL are both ways of storing data, just like the Avengers are heroes who protect the world. They use different methods of organizing data, but they have the same purpose – keeping and handling information, ensuring dependability and availability.



# COMMON GOALS

In addition to storing data, both SQL and NoSQL databases aim to:

- Ensure data integrity and consistency;
- Support data retrieval and analysis;
- Enable data security and access control;
- Facilitate data backups and recovery.





UNITED  
WE  
STAND

# Conclusion

In the Avengers, unity is the key to success. Similarly, SQL and NoSQL have their strengths and quirks, but they can work together in a technology stack to overcome various data challenges. It's all about choosing the right superhero for the job!



# FINAL WORDS



Congratulations, you've reached the end of this e-book!


I hope you enjoyed this Avengers-themed journey through the world of SQL and NoSQL databases.

You've learned a lot about how they work, what they can do, and how to use them effectively. You've also had some fun along the way, with jokes, references, and trivia.

I want to thank you for choosing this e-book and sticking with us until the end. You're a true superhero of data!

Now go out there and save the world with your awesome database skills!

 Click on the image below and follow me 



The image shows a screenshot of a user's profile on the DIO platform. The profile is titled 'Meu Perfil DIO' and features a circular avatar with a circuit-like design. Below the avatar is the DIO logo. The profile is divided into two main sections: 'Principais Habilidades' (Main Skills) and 'Últimas Conquistas' (Latest Achievements).

**Principais Habilidades**

Rank	Skill
1	Soft Skill
2	Python
3	SQL
4	ChatGPT

**Últimas Conquistas**

Achievement	Count
Habilidades Desenvolvidas	014
Conquistas	239
Projetos Realizados	030
Artigos Escritos	002