

# NODE.JS, EXPRESS & MONGODB

THE COMPLETE BOOTCAMP

SECTION

INTRODUCTION TO MONGODB

LECTURE

WHAT IS MONGODB?



# MONGODB: AN OVERVIEW



## WHAT IS MONGODB?



"MongoDB is a document database with the scalability and flexibility that you want with the querying and indexing that you need"

#### **KEY MONGODB FEATURES:**



- **Document based:** MongoDB stores data in documents (field-value pair data structures, NoSQL);
- Scalable: Very easy to distribute data across multiple machines as your users and amount of data grows;
- Flexible: No document data schema required, so each document can have different number and type of fields;
- **Performant:** Embedded data models, indexing, sharding, flexible documents, native duplication, etc.
- Free and open-source, published under the SSPL License.

## DOCUMENTS, BSON AND EMBEDDING

### DOCUMENT STRUCTURE

BSON: Data format MongoDB uses for data storage. Like JSON, but typed. So MongoDB documents are typed.

```
Unique ID

"_id": ObjectID('9375209372634926'),

"title": "Rockets, Cars and MongoDB",

"author": "Elon Musk",

"length": 3280,

"published": true,

"tags": ["MongoDB", "space", "ev"]

"comments": [

{ "author": "Jonas", "text": "Interesting stuff!" },

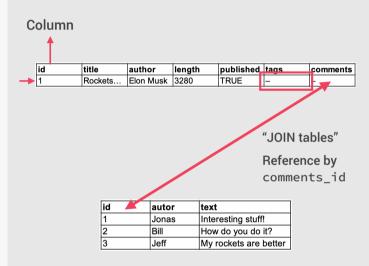
{ "author": "Bill", "text": "How did oyu do it?" },

{ "author": "Jeff", "text": "My rockets are better" }

}
```

Embedding/Denormalizing: Including related data into a single document. This allows for quicker access and easier data models (it's not always the best solution though).

## RELATIONAL DATABASE



Data is always normalized