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# Becoming Full Stack Engineer

An event for women by women



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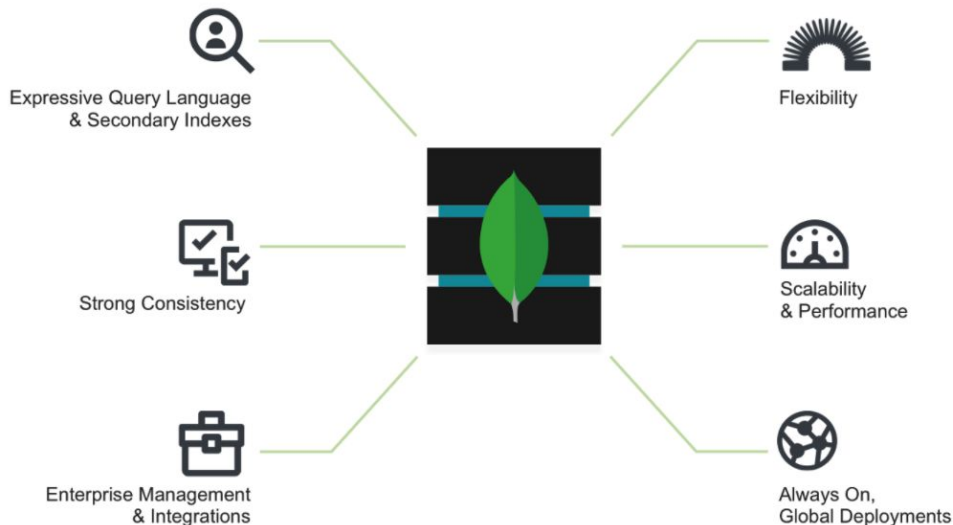
# MongoDB & Mongoose

Presented by

**Diana García**

# What is a non relational database?

NoSQL databases are non-tabular databases and store data differently than relational tables. NoSQL databases come in a variety of types based on their data model.





# Relational or non relational?

| Consider a NoSQL datastore when:  | Consider a relational database when:  |
|---|---|
| You have high volume workloads that require predictable latency at large scale (e.g. latency measured in milliseconds while performing millions of transactions per second) | Your workload volume generally fits within thousands of transactions per second |
| Your data is dynamic and frequently changes   | Your data is highly structured and requires referential integrity               |
| Relationships can be de-normalized data models  | Relationships are expressed through table joins on normalized data models       |
| Data retrieval is simple and expressed without table joins  | You work with complex queries and reports                                       |
| Data is typically replicated across geographies and requires finer control over consistency, availability, and performance  | Data is typically centralized, or can be replicated regions asynchronously      |
| Your application will be deployed to commodity hardware, such as with public clouds   | Your application will be deployed to large, high-end hardware                   |

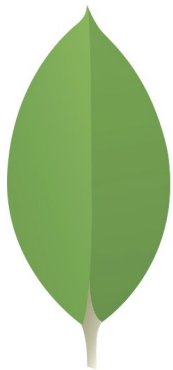
# What is MongoDB?



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MongoDB is an open source, **non-relational database management system (DBMS)** that uses flexible documents instead of tables and rows to process and store various forms of data.



mongoDB

# How a flexible document looks ...

```
{
  "firstName": "Shane",
  "lastName": "Johnson",
  "skills": ["Big Data", "Java", "NoSQL"],
  "experience": [
    {
      "role": "Technical Marketing",
      "company": "Red Hat"
    },
    {
      "role": "Product Marketing",
      "company": "Couchbase"
    }
  ]
}
```

# What is MongoDB Atlas?



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MongoDB Atlas is a multi-cloud database service by the same people that build MongoDB.



mongoDB Atlas

# What is an ODM Library?



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ODM is **Object Document Mapping**. It is like an ORM for non-relational databases or distributed databases such as MongoDB, i.e., mapping an **object model and NoSQL database** (document databases, graph database, etc.).

# mongoose



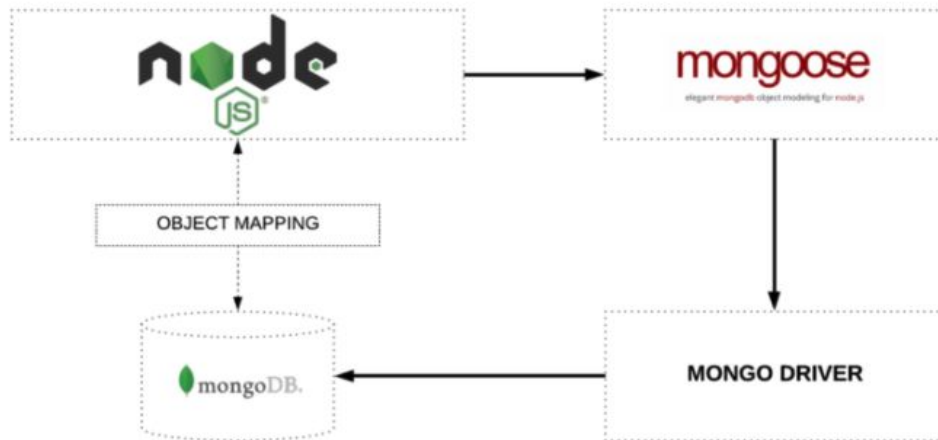
# What is Mongoose?



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Mongoose is an Object Data Modeling (ODM) library for MongoDB and Node.js. It manages relationships between data, provides schema validation, and is used to translate between objects in code and the representation of those objects in MongoDB.



Object Mapping between Node and MongoDB managed via Mongoose



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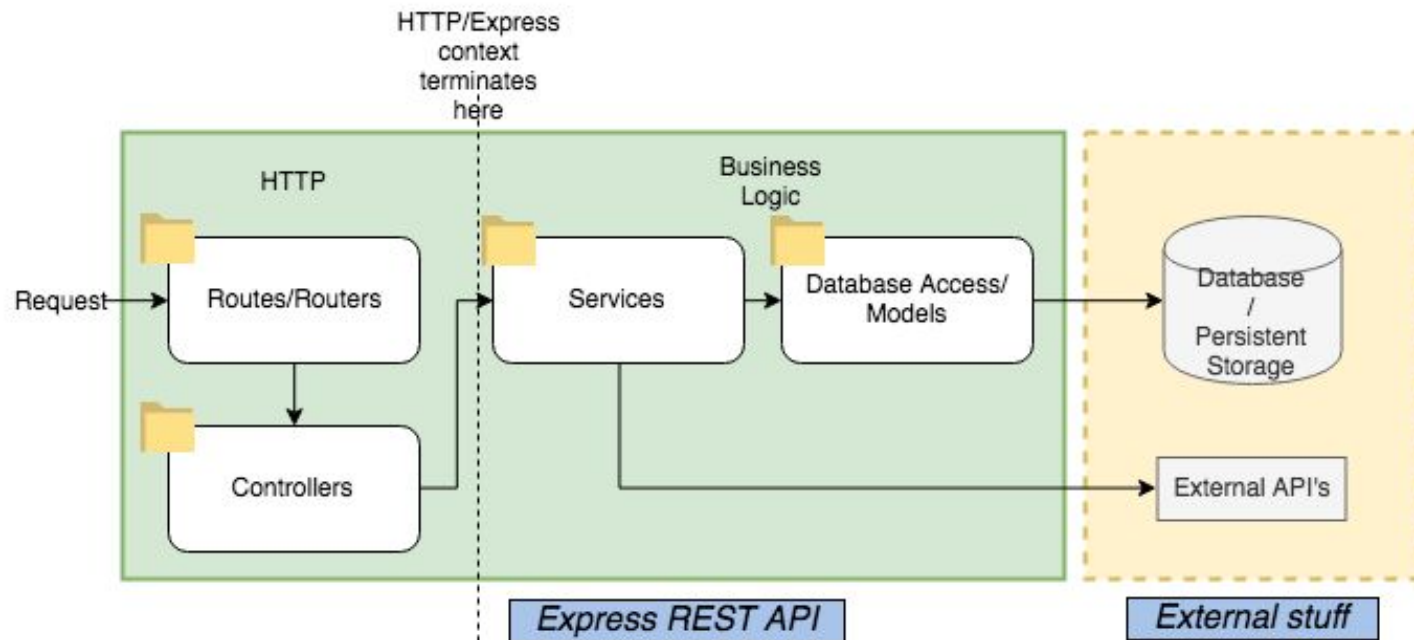
# Let's code!

# Project structure



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————— Thank You