Mastering MongoDB

Data Boot Camp
Lesson 12.1

What's MongoDB?

MongoDB is a very popular noSQL database.

It uses a document-oriented model as opposed to a table-based relational model (SQL).

MongoDB stores data in BSON format (effectively, compressed JSONs).

MongoDB has tons of drivers and packages for connecting to Node, C++, Java, etc.

Relational Databases (SQL)

ID	Title	Author	Published
1	The History of Blah	Blah Matic	2010
2	The Chronicles of Blahrnia	Sir Blahston	2011
3	Love in the Time of Blah	Gabriel Garcia Blah	2013

SQL relies on **joins** to combine relevant data.

Author	Email	Phone Number
Blah Matic	blahston@gmail.com	911-546-5454
Sir Blahston	blahby@gmail.com	911-544-5112
Gabriel Garcia Blah	blahby231@gmail.com	125-215-5645

Document Database (noSQL)

noSQL databases, on the other hand, are effectively JSONs.

They excel at heterogeneous data formats and are easy to implement.

```json
{
    "id": 1,
    "Title": "The History of Blah",
    "Author": {
        "name": "Blah Matic",
        "email": "blahston@gmail.com",
        "phone": "911-546-5454"
    },
    "Published": 2010
},

{
    "id": 2,
    "Title": "The Chronicles of Blahrnia",
    "Author": {
        "name": "Sir Blahston",
        "email": "blahby@gmail.com",
        "phone": "911-544-5112"
    },
    "Published": 2011
},
```

MongoDB Storage

Terms are slightly different in the noSQL context. Take note!

SQL Term	noSQL Term
Database	**Database**
Table	**Collection**
Row	**Document**
Column	**Field**

Partner Activity:
Questions & Answers

Partner Activity: Questions & Answers

Work with your neighbors to research the following:

01 What are the advantages of using a noSQL database like MongoDB according to the MongoDB website?

02 What are the advantages of using a noSQL database like MongoDB according to the web (according to places like Quora)?

03 What are the disadvantages of using a noSQL database like MongoDB according to the web (according to places like Quora)?

Suggested Time: 10 minutes

MongoDB Storage

Database composed of multiple collections

Collection composed of multiple documents

```
{
  {
    {
      "Patientid": "AFH123",
      "PatientName": "Ahmed",
      "Age": 25,
      "BiomarkersTested": ["CRP", "MYO", "CKMB"],
      "BiomarkerScore": 96
    }
  }
}
```
Individual **Document**

Collection composed of multiple documents

```
{
  {
    {
      "Patientid": "JTM987",
      "PatientName": "John",
      "BiomarkersTested": ["CRP", "MYO", "BNP"],
      "BiomarkerScore": 90,
      "Location": "NYC"
    }
  }
}
```
Individual **Document**

Time to Code