

# **Accessing Data with Node.js**

# Agenda

- **Accessing Data with Node.js**

- How is Accessing Data Different in Node.js?
- Do I Have to Use NoSQL?
- Accessing SQL Server Data
- What is MongoDB?
- Installing MongoDB
- Storing Data in MongoDB
- Retrieving Data in MongoDB

# DATA ACCESS IN NODE.JS

Is it different from ASP.NET?



# NODE.JS

Like .NET, you need a driver for data stores

- Relational and NoSQL alike
- Lots of solutions...have to research your driver carefully
- Age of repo and activity level is a common approach
- Greenfield vs. Brownfield an issue
- Document databases and Node.js are the norm





DATA ACCESS IN NODE.JS IS TYPICALLY  
WEAKLY TYPED

GIVE UP YOUR .NET PREJUDICES  
ABOUT STRONGLY TYPED DATA  
OBJECTS

“

Versioning and data schemas aren't the same thing. Don't assume you need data schemas if you need to version your API.

”

— Me

“DO I HAVE TO USE  
NOSQL DATA STORES FOR  
NODE.JS?”



# DRIVERS FOR RELATIONAL DBs

Like .NET, you need a driver for data stores

- **massive-js**
  - **MySQL, PostgreSQL**
- **msnodesql**
  - **Native tds driver, but difficult to build on Windows**
- **tedious**
  - **Pure JavaScript SQL Server but limited functionality**
- **edge**
  - **ScriptCS and Node.js interop (to call any .NET code)**







# demonstration

ACCESSING SQL SERVER

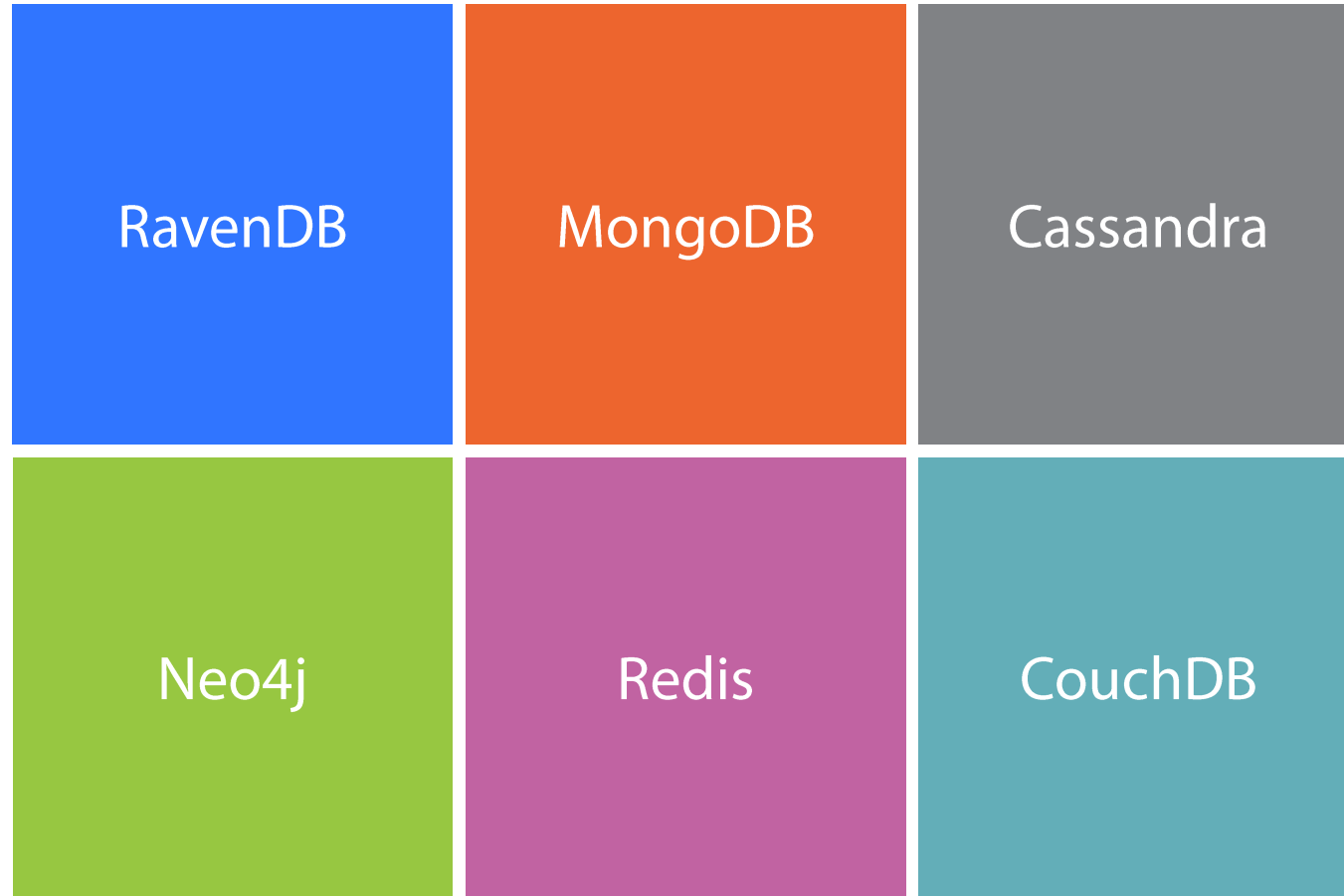
# WHAT ARE NOSQL DATA STORES?

Why are they different to relational data stores?

- Document or data structure storage
- Hierarchies not relational
- Built to be run in parallel (e.g. Sharding)
- Simple to deploy (usually no installer)
- Recent ones support transactions too



# NoSQL Databases\*



*\* Lots of smaller players too if you don't like any of these!*



MONGODB IS THE MOST POPULAR, SO  
LETS START THERE



# demonstration

INSTALLING MONGODB



# demonstration

ACCESSING MONGODB SERVER



# demonstration

STORING DATA IN MONGODB



# demonstration

RETRIEVING DATA IN MONGODB





# demonstration

USING AN HTML FORM TO INSERT DATA

# Summary

- **Accessing Data with Node.js**

- Like much of JavaScript coding, data access means giving up strong typing
- NoSQL data stores are a popular option with Node.js but you can still use relational data
- The SQL Server driver ecosystem is diverse, but not all options are easy
- MongoDB is very common in Node.js
- Installation of MongoDB is straightforward and very portable
- The choice of a MongoDB driver can substantially affect the style of Node.js code
- Understanding the nature of collections is key to storing data in MongoDB
- Querying MongoDB isn't based on SQL but is very achievable with the richness of the driver