

MEAN STACK

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redhat.[®]



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LAMP
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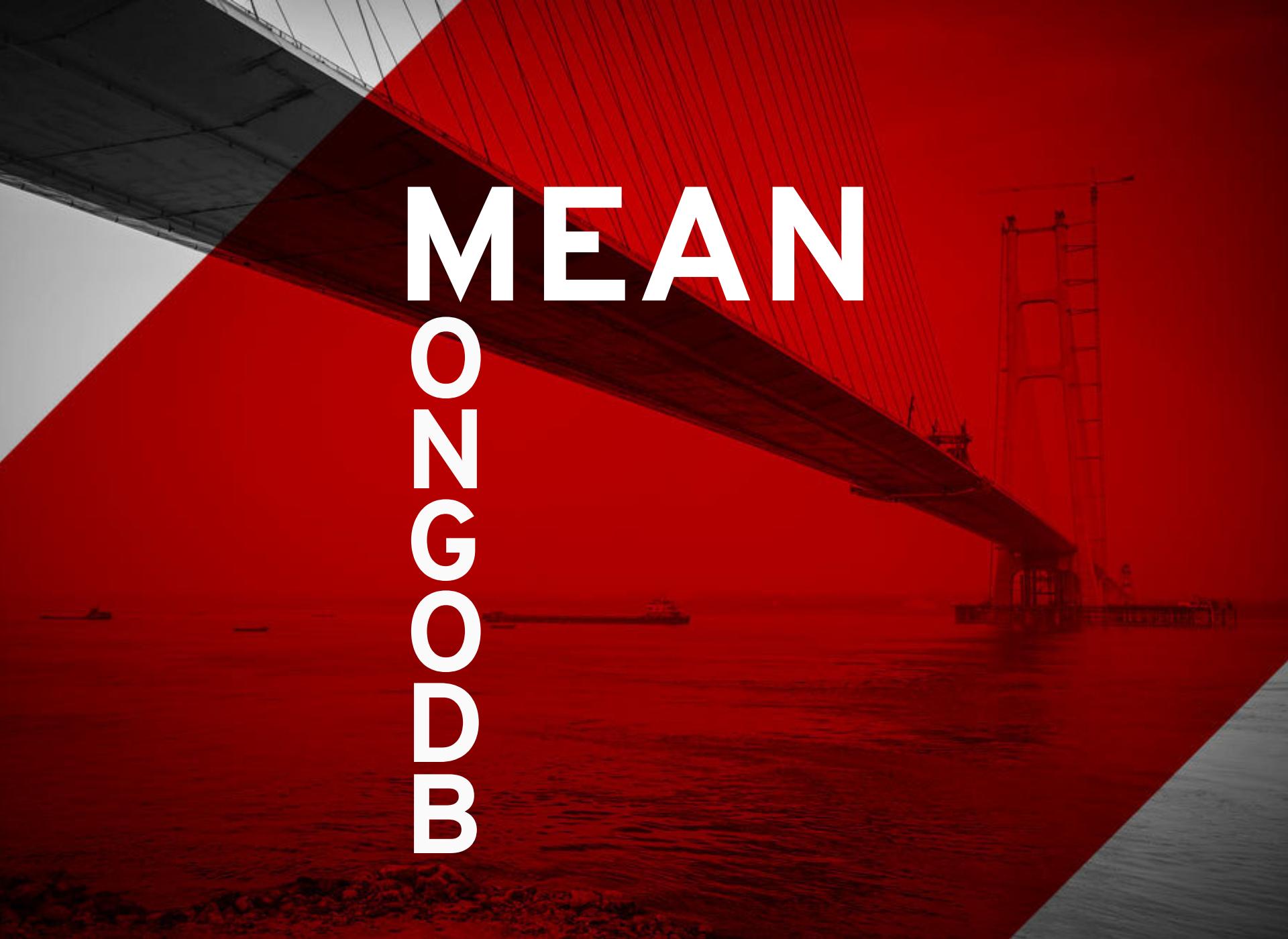
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CONS OF LAMP

- Speed - Apache is not as fast as modern alternatives.
- It's hard to write reusable, fast and easy to read PHP.
- Front and back end are using different languages.
- No clear separation between server-side and client-side development.

MEAN

Full-stack JavaScript framework that
enables you to build fast, robust and
maintainable web applications.

A photograph of a cable-stayed bridge spanning a body of water during sunset or sunrise. The sky is a deep red, transitioning to white near the horizon. The water below reflects this color. In the background, a tall industrial lattice tower stands on the right bank. The bridge's cables and roadway are visible against the bright sky.

MEAN
MONGODB

MONGO DB

- Cross platform
- Document-oriented storage
- NoSql database - schemaless
- JSON-like structure

MONGO DB

DOCUMENT VS RELATIONAL

Document Based	Relational
Collection	Table
Document	Row
Index	Index
Embedded Document	Join
Reference	Foreign Key

MONGO DB

DATA STRUCTURE

```
{  
  _id: '123123',  
  name: 'Joe Bloggs',  
  age: 56,  
  groups: [ 'Sports', 'news' ]  
}
```

A red-tinted photograph of a suspension bridge, likely the Golden Gate Bridge, spanning a body of water. The bridge's cables and towers are visible against a dark sky. The water below shows some ripples and distant structures.

MEAN
EXPRESS

EXPRESS.JS

Express is a minimal and flexible node.js web application framework, providing a robust set of features for building single, multipage and hybrid web applications.

EXPRESS.JS

- Node.js based framework.
- Makes it easy to implement REST API
- Makes it easy to implement session management
- Asynchronous
- Allows to set up middlewares to respond to http requests.
- You have to define your own error handling methods

A red-tinted photograph of a suspension bridge, likely the Golden Gate Bridge, spanning a body of water. The bridge's cables and towers are visible against a dark sky. The water below shows some ripples.

MEAN
ANGULAR

ANGULARJS

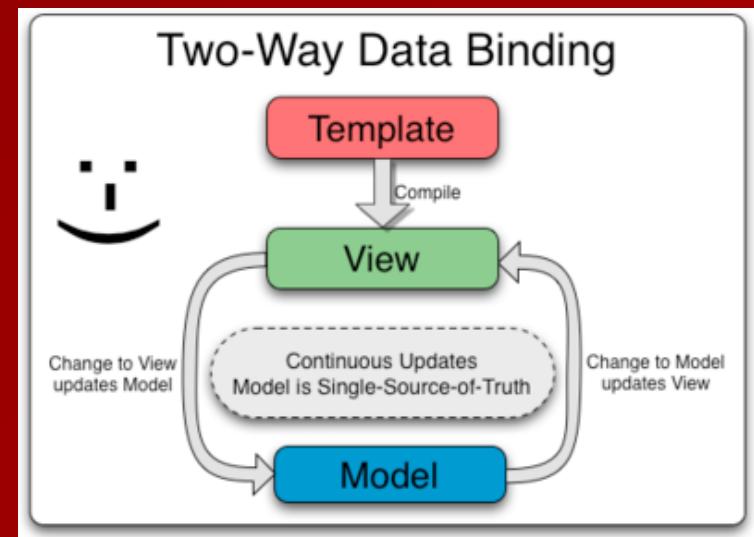
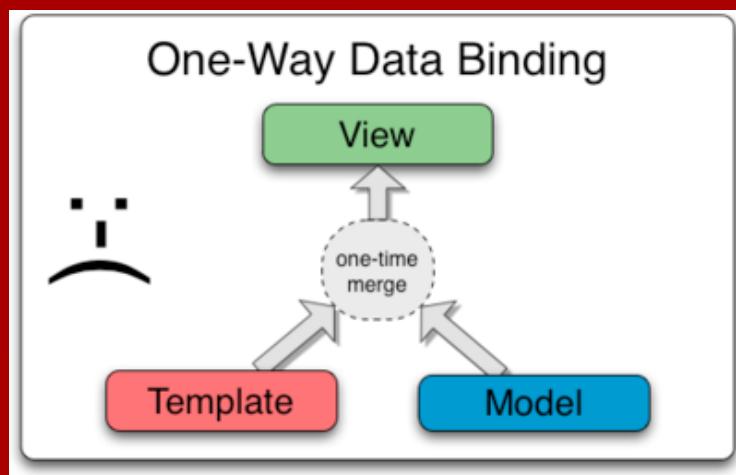
Open source JavaScript front end framework

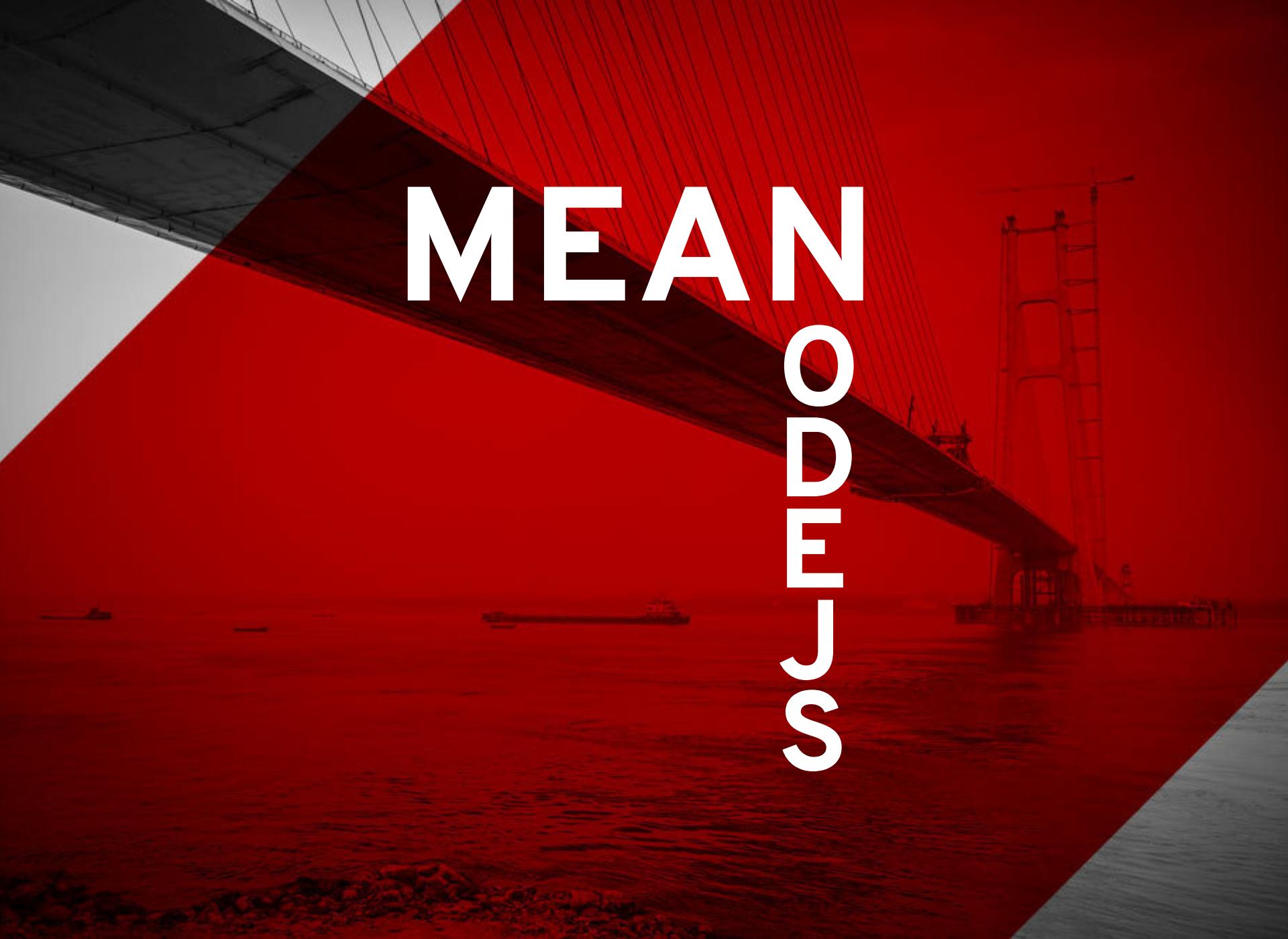
ANGULARJS

- Developed by Google
- Great Browser support
- Great for SPA and mobile apps
- Based on MV* pattern - MVVM MVC

ANGULARJS

TWO WAY DATA-BINDING



A red-tinted photograph of a suspension bridge with cables and towers, spanning a body of water where several ships are visible. A large, bold, white vertical text "MEAN NODEJS" is overlaid on the right side of the image.

MEAN
NODEJS

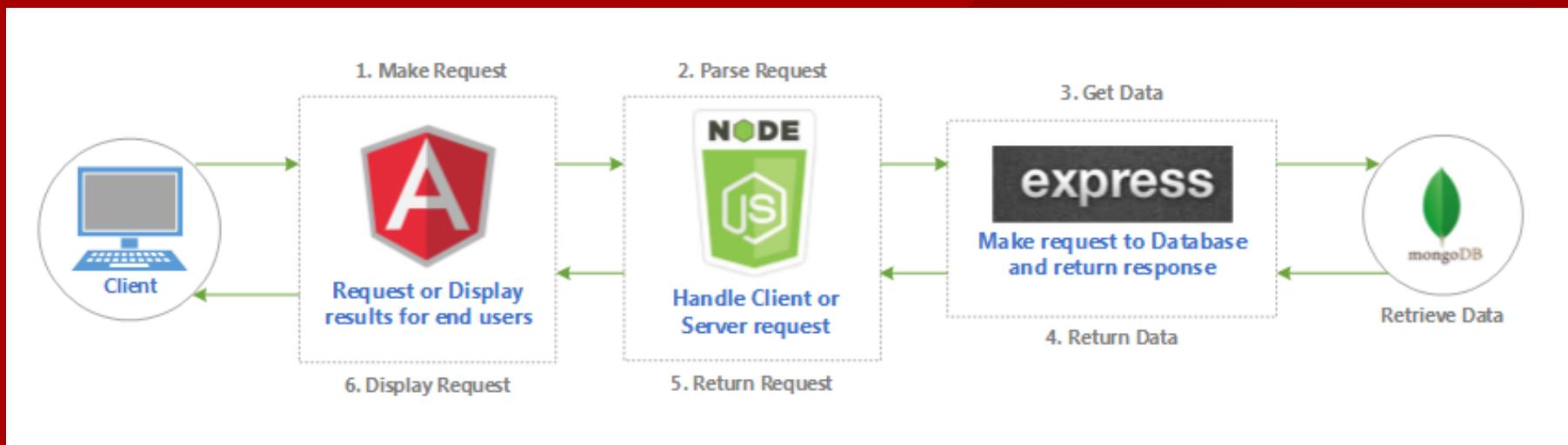
NODEJS

Node.js is a JavaScript runtime built on Chrome's V8 JavaScript engine. Node.js' package ecosystem, npm, is the largest ecosystem of open source libraries in the world.

NODEJS

- Foundation of the stack
- Single threaded
- one process per CPU core
- Event driven
- Server-side Javascript run-time environment - the same language on the front and back-end.
- Able to handle 10.000 concurrent connections
- Easily scalable
- Non-blocking IO

MEAN



TUTORIAL

[https://github.com/wit-ict-summer-school-2017/rh-course-web/tree/master/topic04-
MEAN](https://github.com/wit-ict-summer-school-2017/rh-course-web/tree/master/topic04-MEAN)



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