



redhat®


MEAN STACK

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RHMAP RMAD RAINCATCHER

A perspective view of a wooden walkway with metal mesh railings, overlaid with a red gradient. The walkway is made of wooden planks and is flanked by railings made of metal mesh. The background is a dark, overcast sky. The entire image is overlaid with a red gradient that is darkest in the center and fades towards the edges.

LAMP



LAMP PHP
INUX ACHE SQL P

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.

MEAN

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MONGO DB

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

MONGODB

DOCUMENT VS RELATIONAL

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

MONGODB

DATA STRUCTURE

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

A red-tinted photograph of a cable-stayed bridge over water. The bridge's structure, including the deck and support towers, is visible against a hazy sky. The water below is dark with some ripples. Several small boats are scattered across the water. The text 'MEAN X P R E S S' is overlaid in white, with 'MEAN' in a large, bold, sans-serif font at the top, and 'X P R E S S' in a smaller, bold, sans-serif font arranged vertically below it.

MEAN
X P R E S S

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 photograph of a cable-stayed bridge over a body of water, with a large red overlay covering most of the image. The text 'MEAN ANGULAR' is centered in white, bold, sans-serif font. 'MEAN' is on the top line, 'ANGULAR' is on the bottom line, and 'N G U L A R' is written vertically in the middle.

MEAN
ANGULAR

ANGULARJS

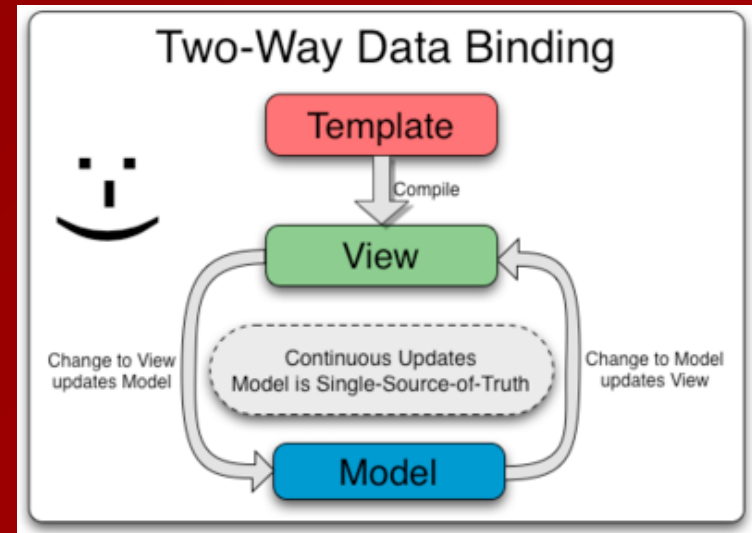
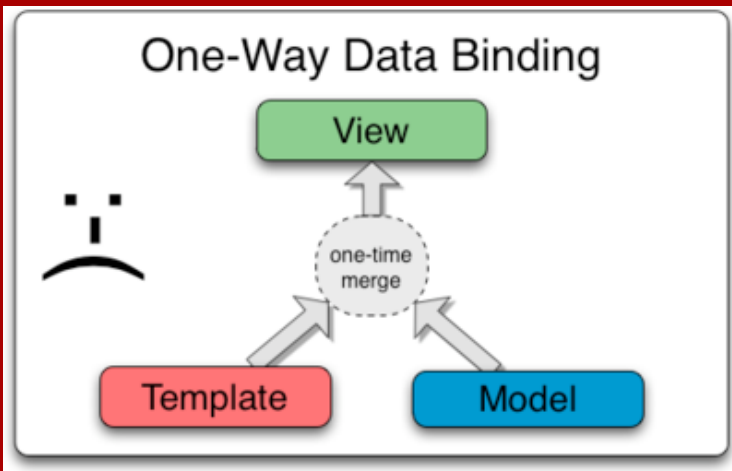
Open source JavaScript front end framework

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 photograph of a cable-stayed bridge over a body of water, with a large red overlay covering most of the image. The bridge's structure, including its cables and towers, is visible. The water below has some small boats. The text 'MEAN' is written in large, white, bold, sans-serif capital letters across the upper part of the bridge.

MEAN

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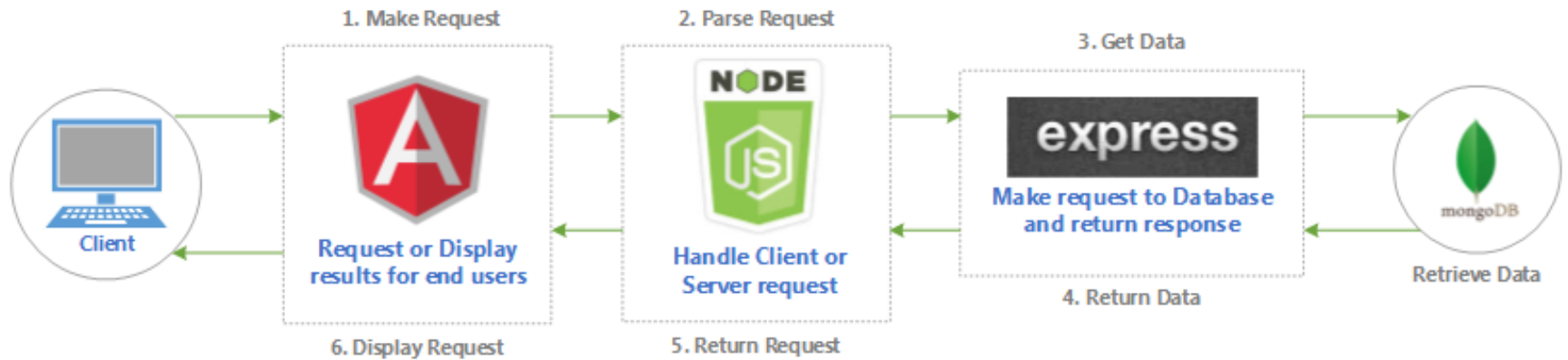
NODEJS

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>



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