

# Introduction to MEAN stack

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# What is MEAN

## MEAN STACK



**Mongo DB**  
(database system)



**Express**  
(back-end web  
framework)



**Angular.js**  
(front-end  
framework)



**Node.js**  
(back-end runtime  
environment)

# What is MEAN

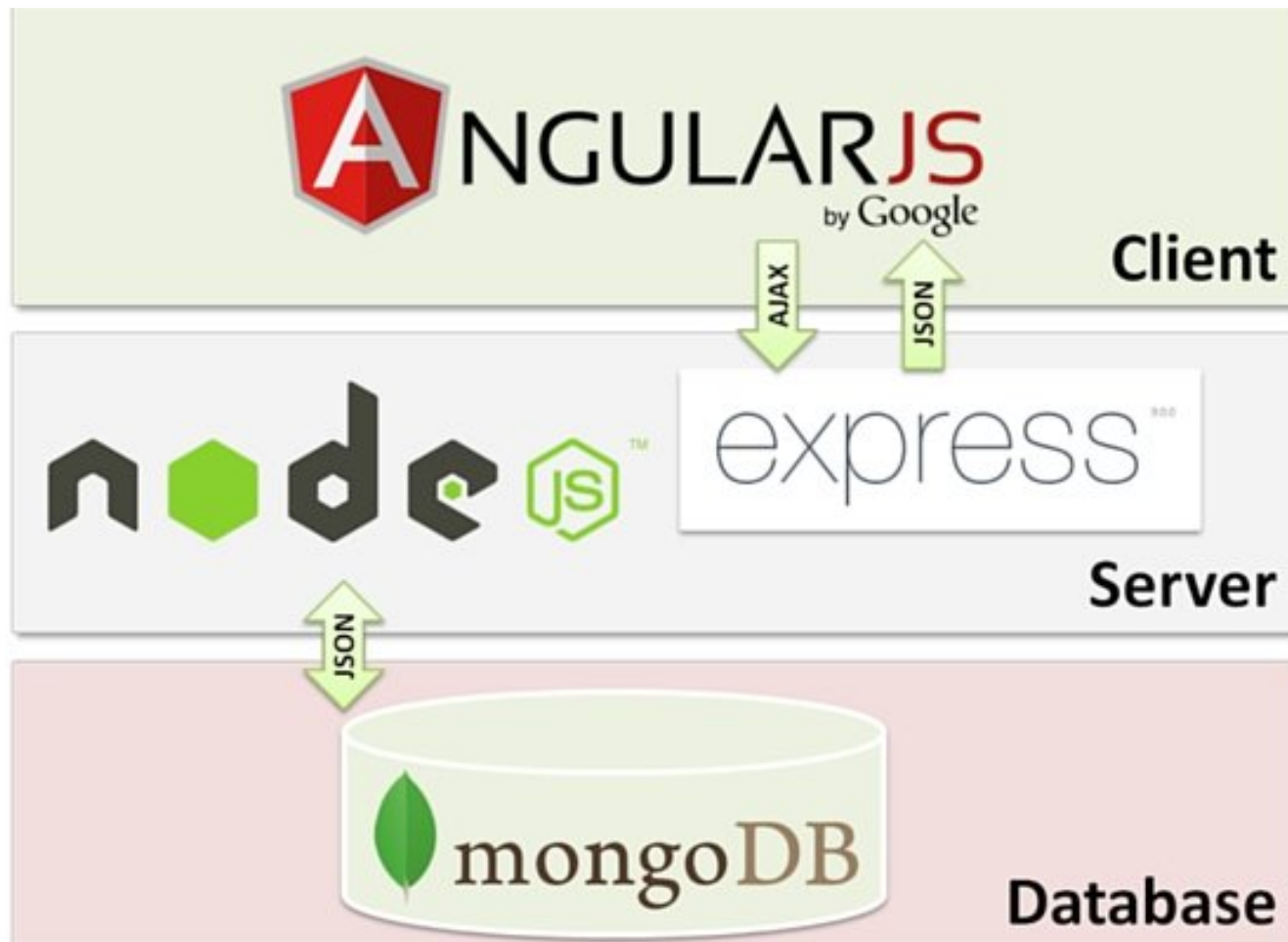
M = MongoDB --> DATA solution

E = Express JS (for use with nodeJS) -->  
Routing and ease of transactions (above simple NodeJS) ,  
session management, server side

A = AngularJS (for use with nodeJS) -->  
Presentation layer ease (above simple NodeJS)  
THIS IS CLIENT SIDE MVC

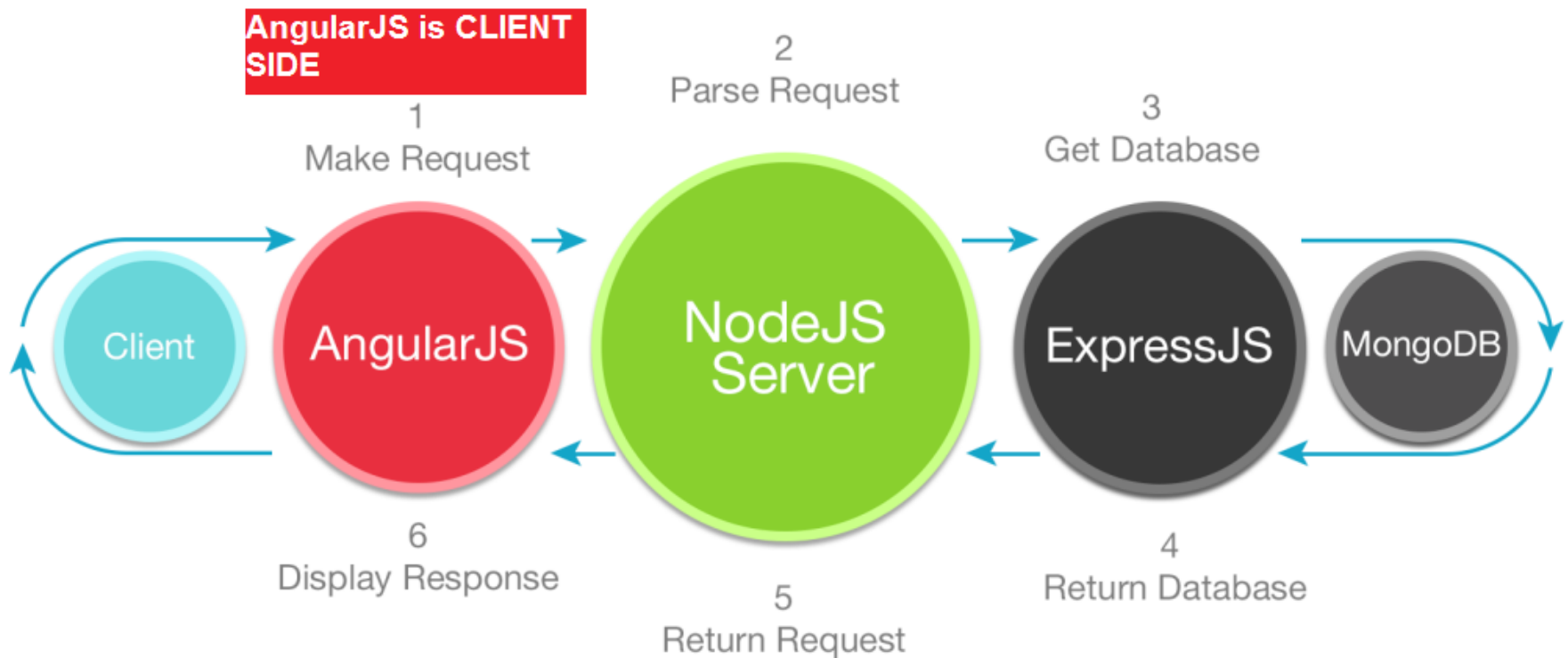
N = NodeJS -->  
Platform for javascript frameworks  
Express and Angular built on top of nodejs  
used for serverside programs, server side

# MEAN application flow



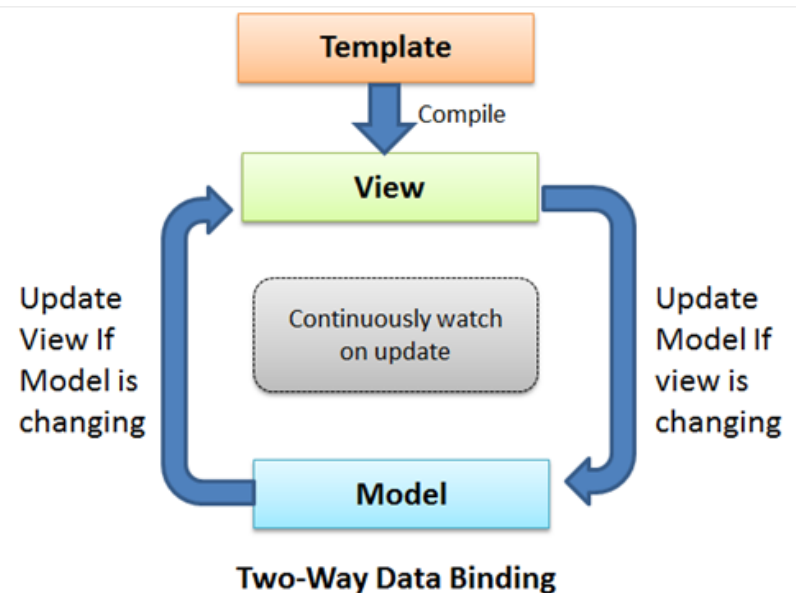
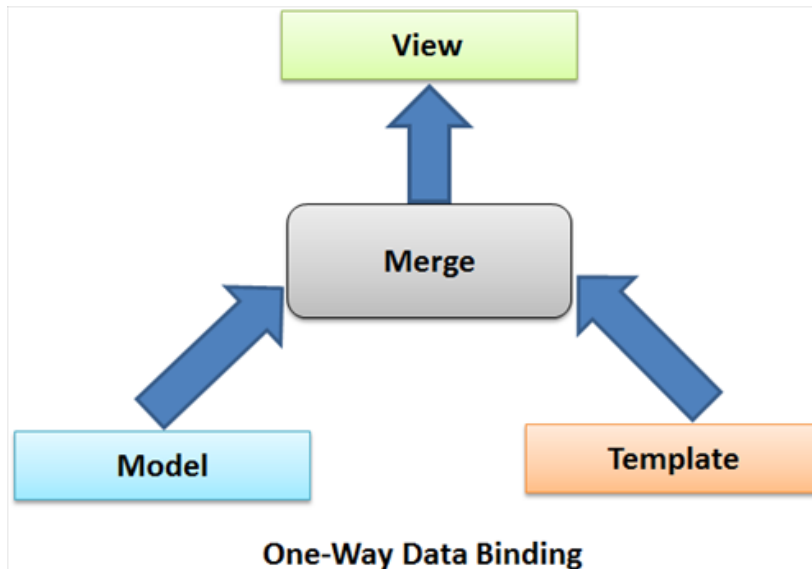
# User Request Processing MEAN

- Here we can see how a user/client request is processed and response returned



# MEAN Role of AngularJS

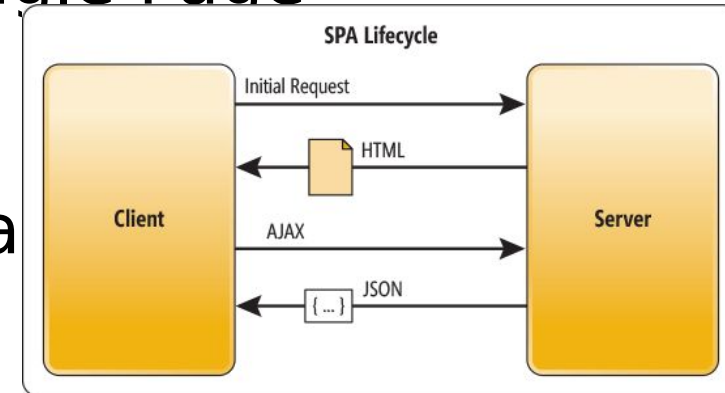
- With AngularJS - MEAN- : Puts HTML together on CLIENT side based on data provided AND updates HTML if data changes (subscribes) and can also update the data if HTML changes (a push) --> Called 2 way data binding



# What does AngularJS give us

AngularJS used to create Single Page Application (SPA)

What is a single page applica



- SPA = Think of Yahoo! or Google Mail as examples.
  - **runs inside single page load, just updates part of the page as you need it.**
  - Positives: once you load it, it has fast response, moves some of computation to client side (in AngularJS)

# When MEAN

- don't care about longer initial load time, but, want faster interactive use
- Example: Admin interface of Blog where blogger creates new entries and manages old blog posts.





# blog site

Blog entries



Characteristics:

- Content-rich
- Low interaction
- Fast first load
- Short user duration
- Public and shareable

Admin interface

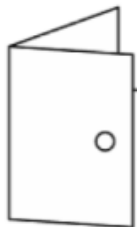


Characteristics:

- Feature-rich
- High interaction
- Fast response to actions
- Long user duration
- Private

**MEN**

REST API



JSON

JSON

Blog entries



MongoDB  
Express  
Node.js

Express  
Node.js

**MEAN**

REST API



JSON

JSON

Admin interface



MongoDB  
Express  
Node.js

Angular