

Front End Frameworks Intro

... and not really an intro to React

Objectives

- Describe the concept of a Single Page App (SPA)
- Describe the advantages of using a Front End Framework
- Name the key concepts in ReactJS

Rise of the SPA

In a single-page application, all of the code needed is included in a single-page load. This includes all of the CSS, HTML, and JavaScript. The page does not reload, and it requires dynamic interaction with the Web server.

Front End Frameworks help to build SPAs.

Advantages

1. Efficiency — projects that used to take months and hundreds of lines of code now can be achieved much faster with well-structured prebuilt patterns and functions.

1. Safety — top javascript frameworks have firm security arrangements and are supported by large communities where members and users also act as testers.

1. Cost — most frameworks are open source and free. Since they help programmers to build custom solutions **faster**, the ultimate price for web app will be lower.

Most Popular Frameworks in 2017 (in order of popularity)

- ReactJs
- Angular
- Vue (sort of)
- Others...Ember, Meteor, Backbone

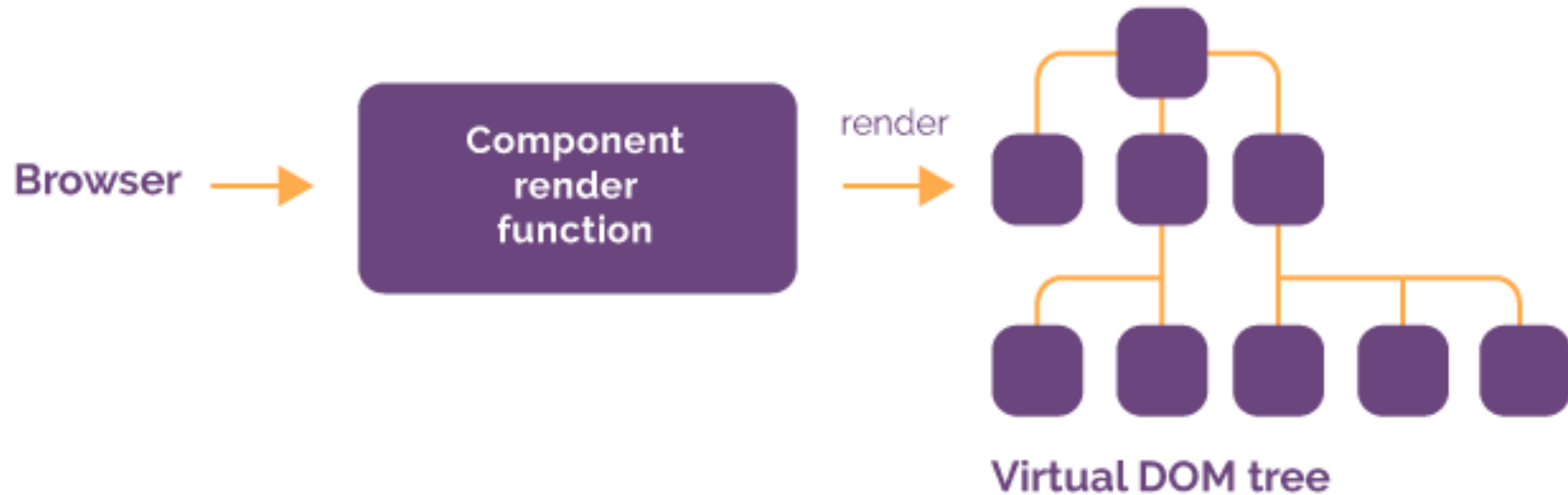
	AngularJS	Angular 2	ReactJS	Vue.js	Ember.js	Meteor.js
Definition	MVW framework	MVC framework	JavaScript library	MVC framework	MVC framework	JavaScript app platform
1st Release	2009	2016	2013	2014	2011	2012
Homepage	angularjs.org	angular.io	reactjs.net	vuejs.org	emberjs.com	www.meteor.com
# Contributors on GitHub	1,562	392	912	62	636	328
GitHub Star Rating	54,402	19,832	57,878	39,933	17,420	36,496

Question: Why is React listed as a Library?

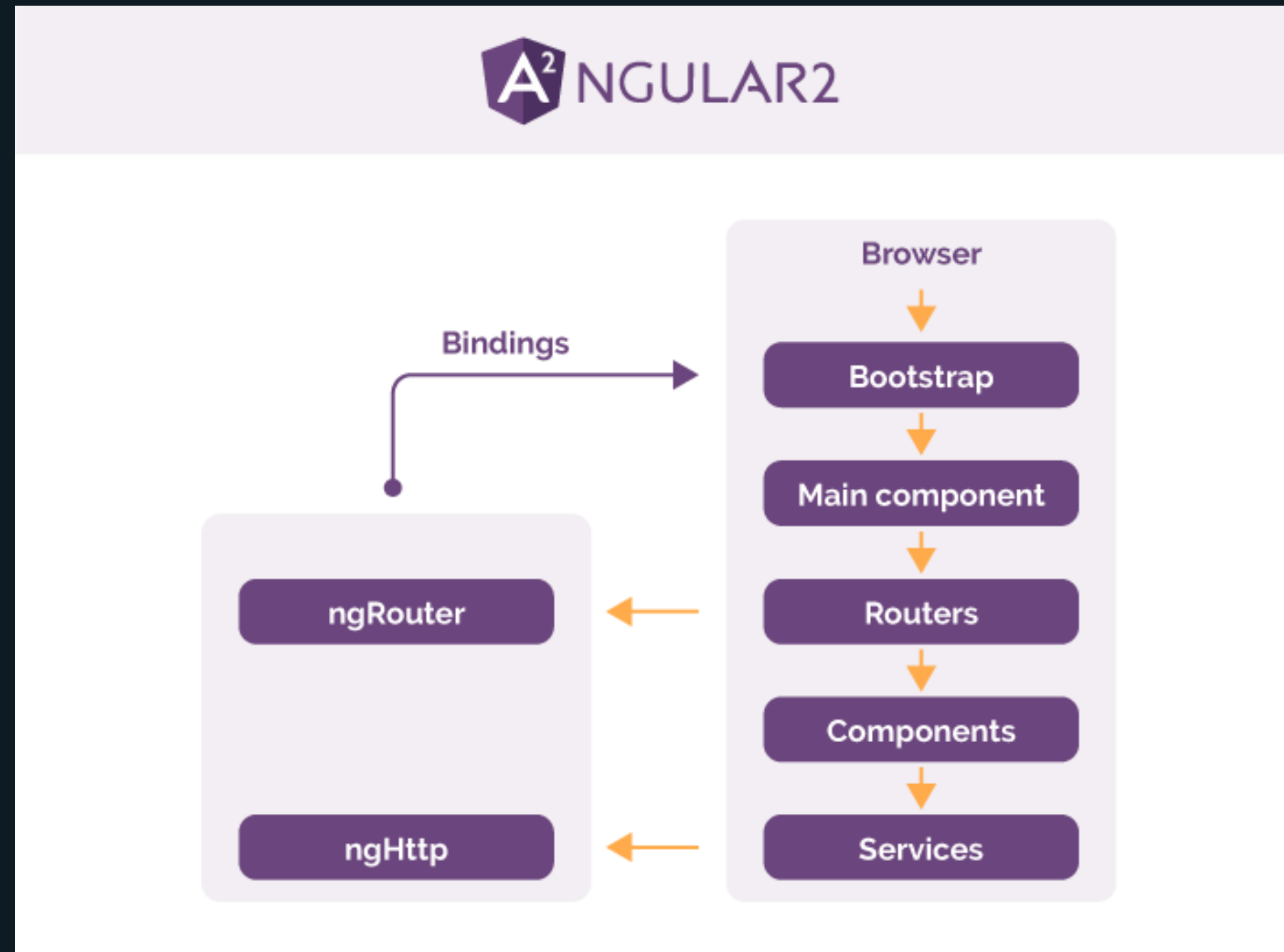
React Concepts

- Web Components
- 1 way data binding
- Virtual DOM
- JSX (which requires a "build" step)
- State management (Flux or Redux)

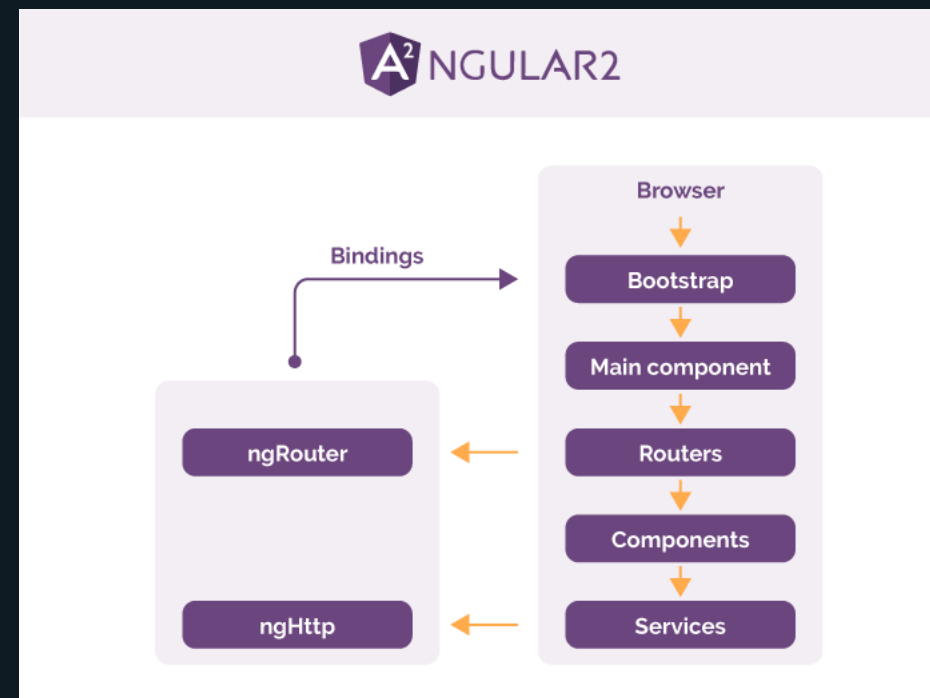
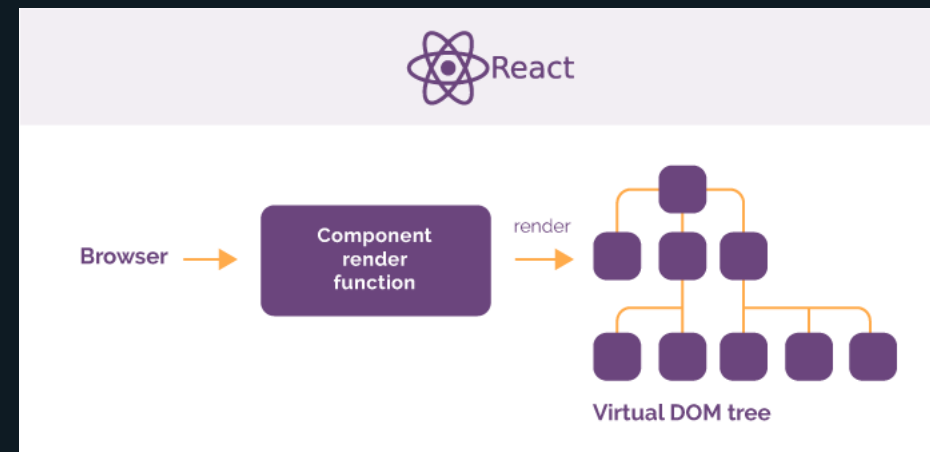
React in a Nut Shell



Angular in a Nut Shell



Question: How are React & Angular similar/different?



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- Describe the advantages of using a Front End Framework
- Name the key concepts in React

Resources

- <https://rubygarage.org/blog/best-javascript-frameworks-for-front-end>
- <https://blog.appdynamics.com/product/comparing-the-4-most-popular-client-side-javascript-frameworks/>
- <https://hackernoon.com/5-best-javascript-frameworks-in-2017-7a63b3870282>
- <https://medium.com/javascript-scene/top-javascript-frameworks-topics-to-learn-in-2017-700a397b711>