

Angular vs AngularJS

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History

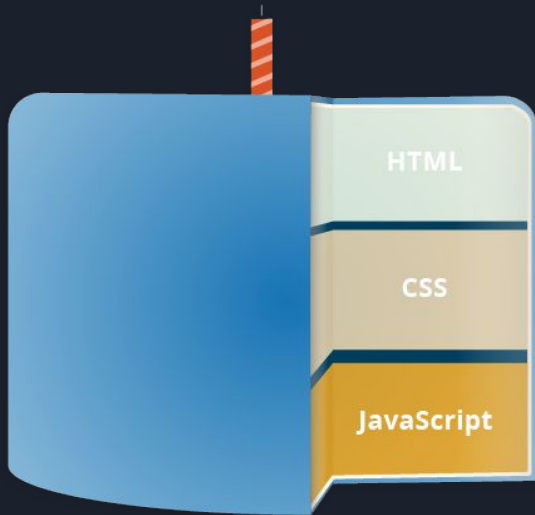
- AngularJS
 - Developed in 2009 by Brad Tech LLC
 - Business abandoned and released to open source
- Angular
 - Typescript rewrite of AngularJS
 - Open source managed by Google



JS

- Scripting language
- Compiled and run in the browser
- Java-esque syntax

TypeScript



- Strongly typed superset of JS
- Compiled to JS in browser by Babel
- Browser support still lacks



- Uses JavaScript
- Has concept of controllers
- Has concept of scope (including rootScope)
- Supports MVC architecture (Model-View-Controller)

```
<> index.html > ...
1  <html>
2  <body>
3  <script language = "javascript" type = "text/javascript">
4  document.write("Hello World!");
5  </script>
6  </body>
7  </html>
8  |
```



AngularJS Pros and Cons

Pros

- Two-way data binding
- JavaScript is easy to learn
- Fast development for easy/smaller applications

Cons

- No dynamic loading
- No CLI (Command Line Interface)



Angular

- Controversial
- CLI to generate components
- Components consist of three elements:
 - CSS
 - HTML
 - TypeScript
- Dependency Injection Framework

```
ng generate component hero
```



```
ng new my-app
```

The Angular logo graphic consists of two overlapping parallelogram shapes. The top one is blue and the bottom one is light green, both pointing towards the bottom right.

Angular

Pros

- Client tool for expedited development.
- Component Decorators
- Event bindings

Cons

- Rewriting code base for AngularJS users.
- Relearning a new syntax.
- Perception for future changes.



Transitional Period (Angular 2-10)

Angular 3

- Skipped to avoid version confusion

Angular 4

- **HttpClient**
- New router life cycle events
- Conditionally disable animations

Angular 5

- **Support for Progressive web apps**
- **A build optimizer**
- Improvements related to Material Design (Google design language)



Transitional Period (Angular 2-10)

Angular 6

- Focused on the toolchain
- **First release of Angular Elements**
- **Angular Material + CDK Components**
- Library Support
- Starter Components

Angular 7

- **Application Performance updates**
- Angular Material & CDK updates
- Virtual Scrolling
- Content Projection support
- Dependency updates

Angular 8

- Differential loading for all application code
- Dynamic imports for lazy routes
- Web Workers
- TypeScript 3.4 support
- **Angular Ivy opt-in preview**



Transitional Period (Angular 2-10)

Angular 9

- **Moves all applications to the Ivy compiler and runtime**
 - Smaller bundle sizes
 - Faster testing
 - Better debugging
 - Improved CSS class and style binding
 - Improved type checking
 - Improved build errors
 - Improved build times
 - Improved Internationalization
- Compatibility w/TypeScript 3.6 and 3.7

Angular 10

- New Date Range Picker
- Warning about CommonJS imports
- Optional Stricter Settings
- Updates to Angular's dependencies
- New Default Browser Configuration
- **Deprecations and Removals**



Current Focus

- Add TypeScript 4.0 support
- Community
 - Clear out the backlog by responding to issues and getting more input for where to go next
- Testing
 - Update e2e testing strategy to make it 'future-proof'
- Ivy Compiler
 - Convert the Angular Language services to rely on Ivy instead of View Engine Compiler
 - Continue to improve design and performance



Future Plans

- Optimization
 - Add WebPack 5 support for faster build times and smaller bundle sizes
 - Make Zone.JS optional for a simpler, smaller framework
- Improve learning curve
 - Rewrite beginner docs
- Improve Type-Checking
 - Add stricter type checking for @angular/forms



Discussion

Do you think the switch from JavaScript to TypeScript was beneficial?