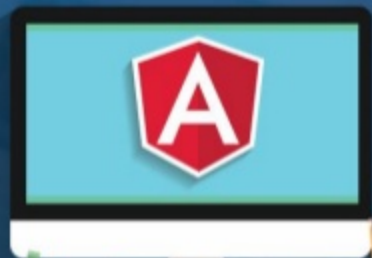


edureka!



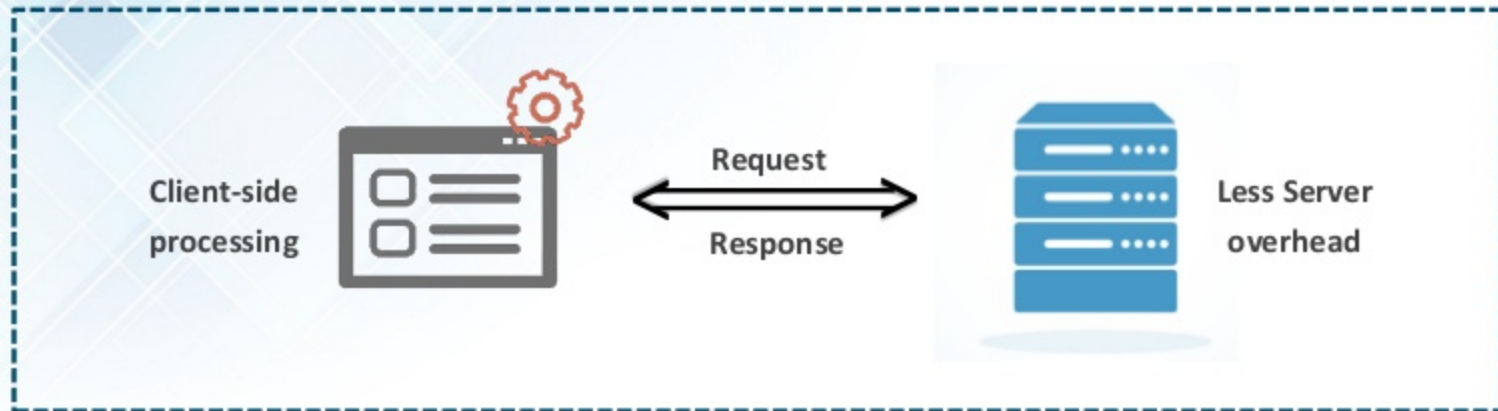
What is Angular2?

- ❖ Evolution of Web Development
- ❖ What is AngularJS ?
- ❖ Angular 2 and It's Architecture
- ❖ Components of Angular 2
- ❖ Your First Angular 2 program



Challenges of Web Development

- Client-side scripting is executed on the client's browser instead of the web-server
- It alleviates some of the burden on your web server when running a web application.
- It can be used for page navigation, data validation and formatting.



- JQuery is a specific library of JavaScript code.
- It is a DOM manipulation library that makes it easier to use JavaScript on your website.
- jQuery wraps the complex code into simple methods whether it required to make AJAX calls or manipulate the DOM.



- JQuery has no real structure, the developer has full freedom to build projects as they see fit.
- But the lack of structure can lead to confusion on larger projects with no clear design direction or code maintainability.



For these situations, a framework like AngularJS can be a big help.

What is AngularJS ?

- AngularJS was developed in 2009 by **Misko Hevery** and **Adam Abrons** at Brat Tech LLC.
- It is a open source JavaScript client-side framework maintained by Google and a group of developers and enterprises



What is AngularJS?

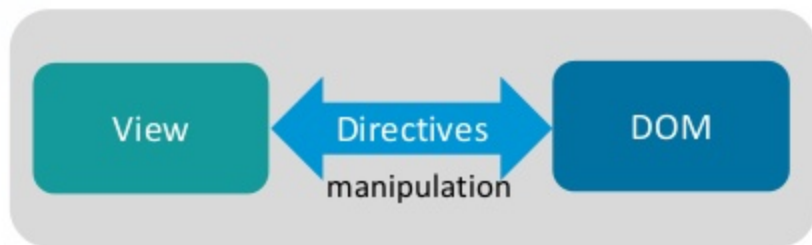
- Client side JavaScript framework to develop a dynamic web application
- Help developers build SPAs in accordance with best practices for web development
- Data binding and dependency injection eliminate much of the code you would otherwise have to write
- Extends HTML attributes with Directives, and binds data to HTML with Expressions



- Traditionally, the view modifies the DOM to present data and manipulates the DOM (or invokes jQuery) to add behaviour

whereas...

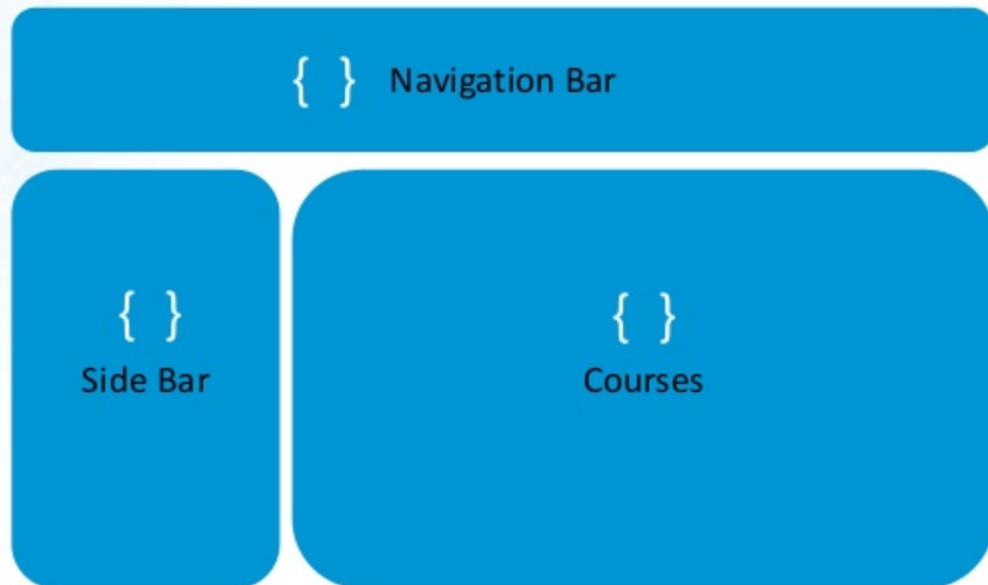
- AngularJS puts all the DOM manipulation code into directives, thus easily separating that code out from the view and making it available as standalone reusable units



Single Page Application

A Single Page Application is a web application that requires only a single page load in a web browser.

- Your browser fully renders the DOM a single time.
- After this, background JavaScript performs any server interactions and modifies the view as needed.



Angular 2.0

Mobile development

Desktop development is much easier when mobile performance issues are handled first



Modularity

Much core functionality has moved to modules, producing a lighter, faster core

Using TypeScript

Class-based Object Oriented Programming, Static Typing, Generics, Lambdas



TypeScript

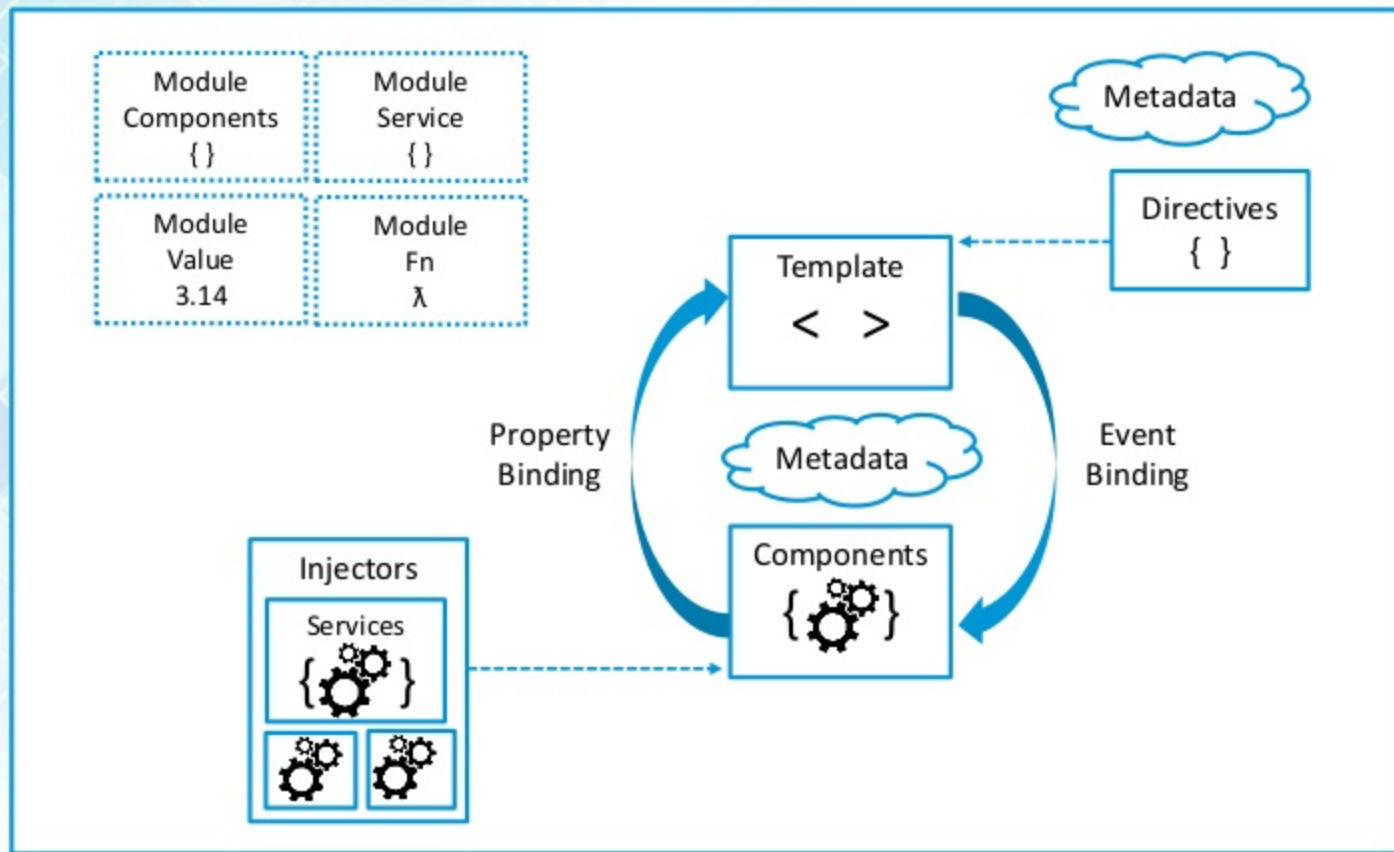
ES6 and **JS**
ECMAScript 6 Javascript



ECMAScript 6

Iterators, For/Of loops, Python-style generators, Reflection

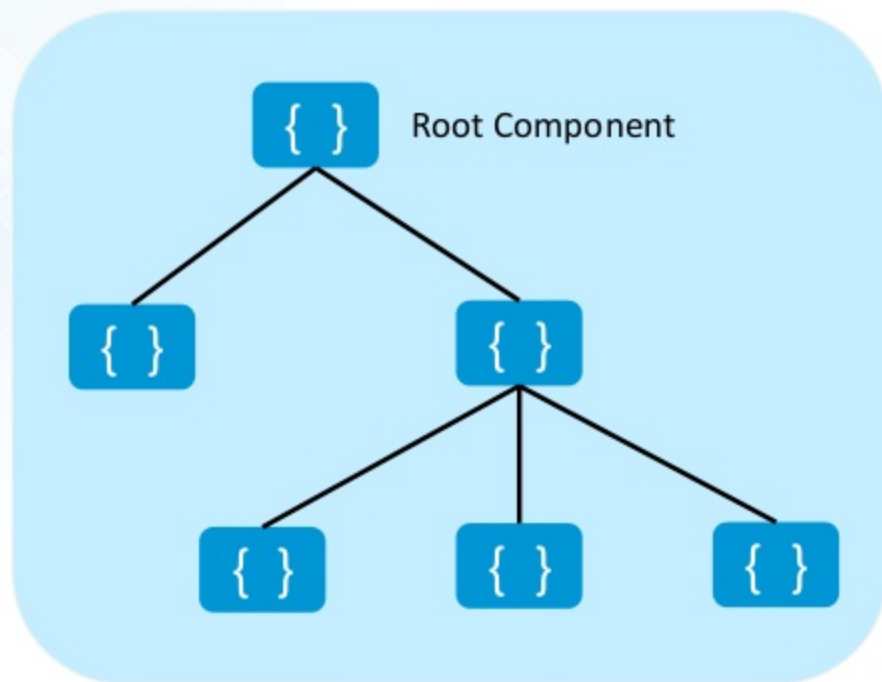
Architecture Angular 2.0



Main Building Blocks Of Angular 2

- 
- Components
 - Modules
 - Templates
 - Metadata
 - Services
 - Data Binding
 - Directives
 - Dependency Injection

- Encapsulates the template, data and the behaviour of a view



1

Components

2

Modules

3

Templates

4

Metadata

5

Services

6

Data binding

7

Directives

8

Dependency
Injection

1

Components

2

Modules

3

Templates

4

Metadata

5

Services

6

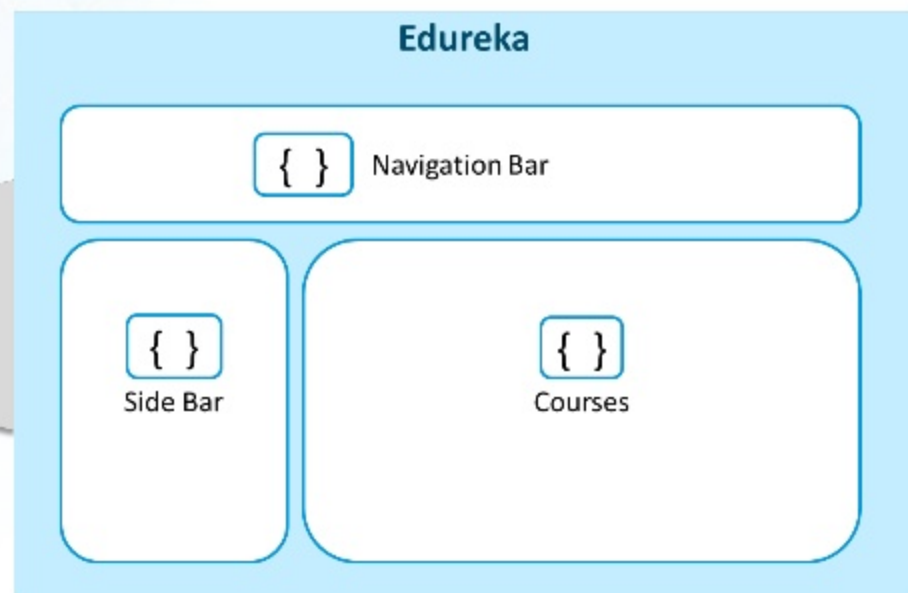
Data binding

7

Directives

8

Dependency
Injection



1

Components

2

Modules

3

Templates

4

Metadata

5

Services

6

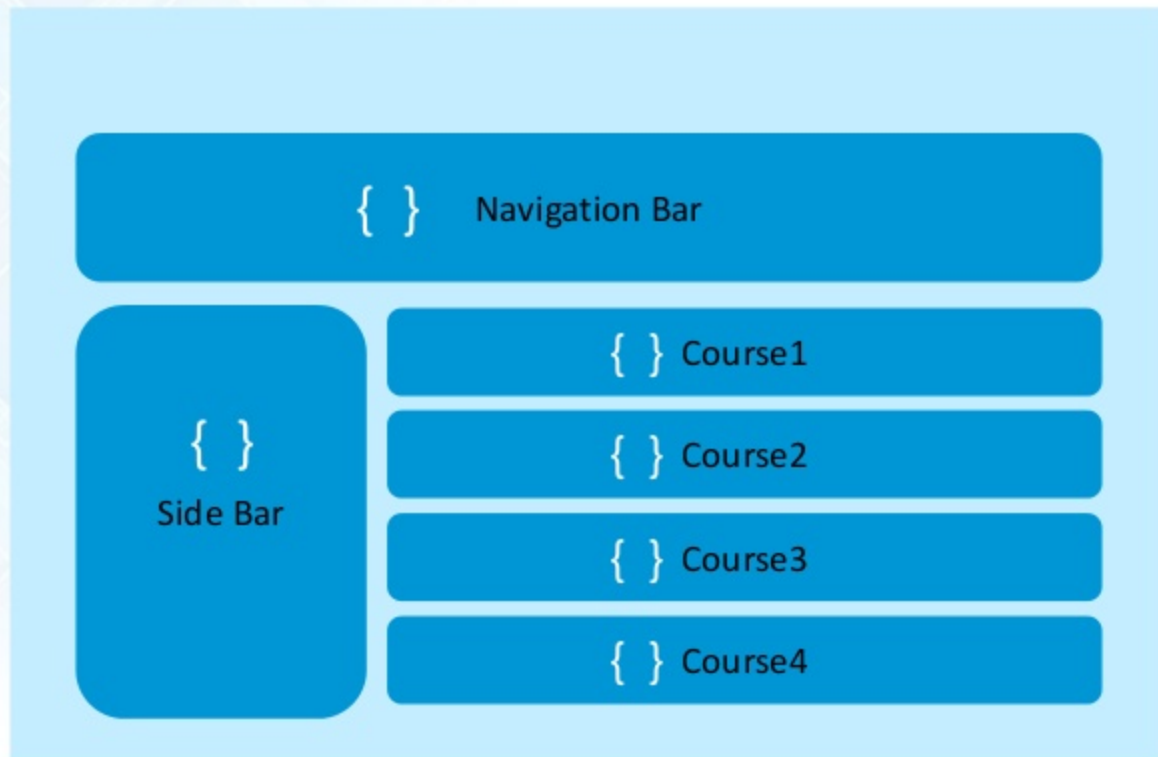
Data binding

7

Directives

8

Dependency
Injection



1

Components

2

Modules

3

Templates

4

Metadata

5

Services

6

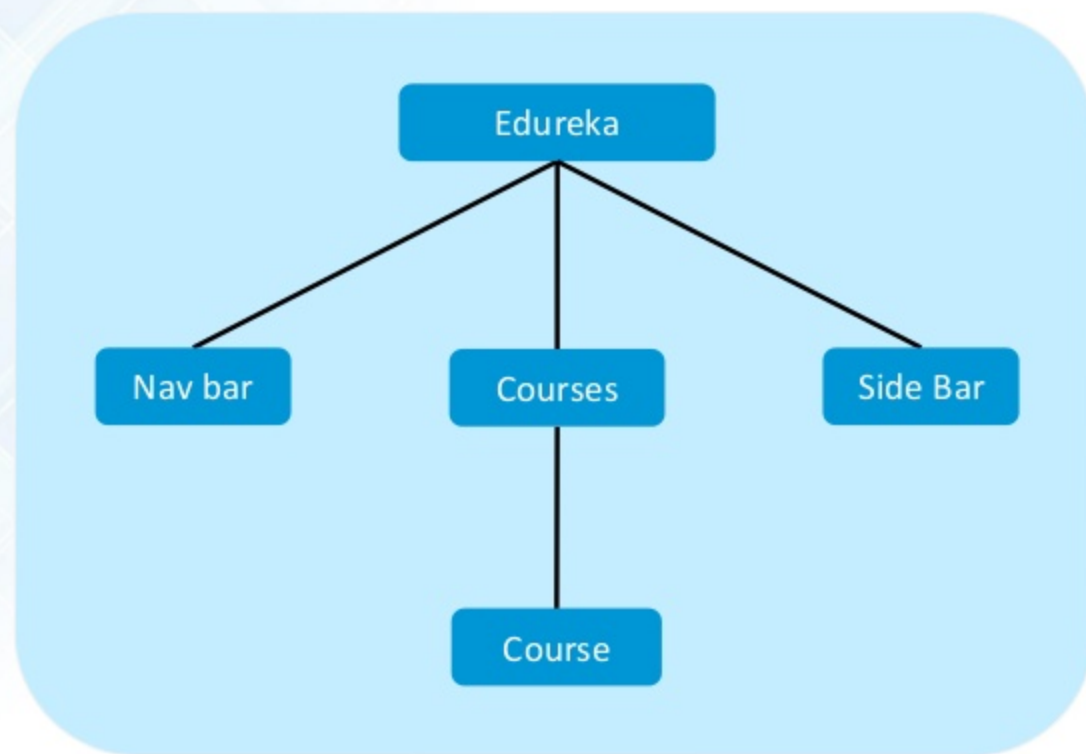
Data binding

7

Directives

8

Dependency
Injection



1 Components

2 Modules

3 Templates

4 Metadata

5 Services

6 Data binding

7 Directives

8 Dependency Injection

- A cohesive block of code dedicated to an application domain, a workflow, or a closely related set of capabilities
- Every Angular app has at least one Angular module class, the root module (AppModule)
- An Angular module, whether a root or feature, is a class with an @NgModule decorator

Module:

Components

{ }

Templates

< >

Directives

{ }

Services

{ }

1 Components

2 Modules

3 Templates

4 Metadata

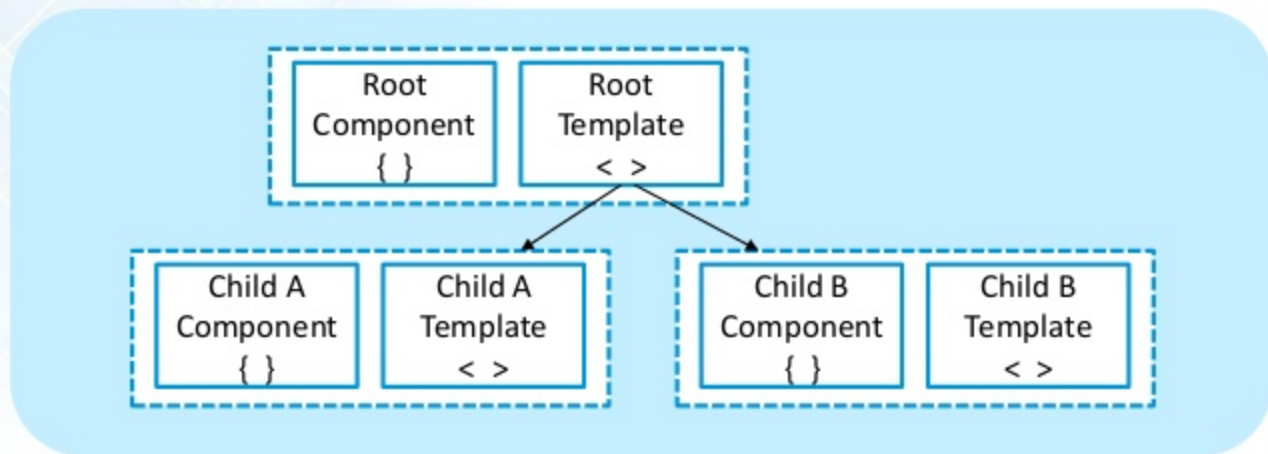
5 Services

6 Data binding

7 Directives

8 Dependency Injection

- You define a component's view with its companion template
- A template is a form of HTML that tells Angular how to render the component
- Although this template uses typical HTML elements but it also uses Angular's template syntax



1 Components

2 Modules

3 Templates

4 Metadata

5 Services

6 Data binding

7 Directives

8 Dependency Injection

- Metadata tells Angular how to process a class
- In TypeScript, you attach metadata by using a decorator
- The template, metadata, and component together describe a view

Template

< >

Metadata

Components



1 Components

2 Modules

3 Templates

4 Metadata

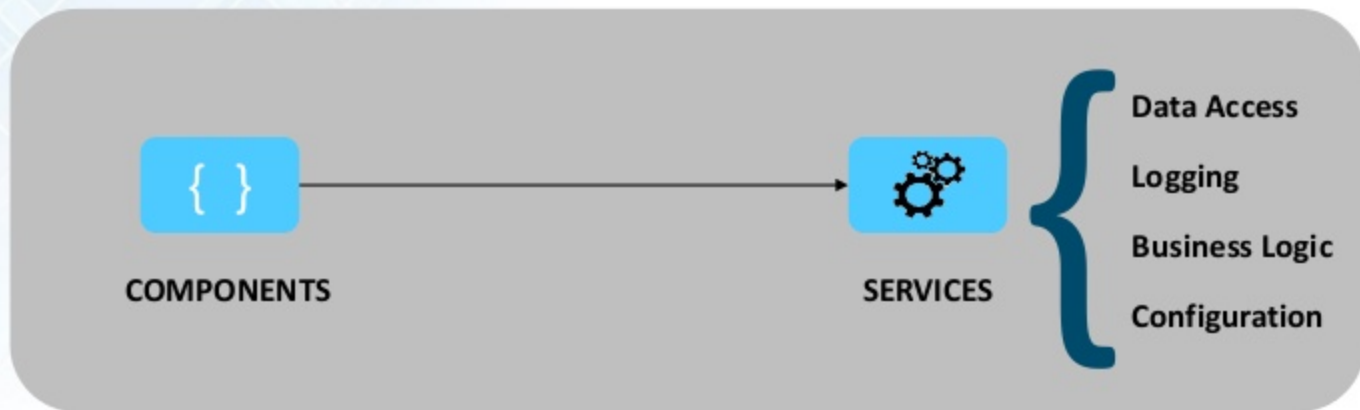
5 Services

6 Data binding

7 Directives

8 Dependency Injection

- Service is a plain class that encapsulates any non logic not related to view
- Examples include - logging service, data service, tax calculator etc.
- Service accomplishes tasks that fetch data from the server, validate user input, or log directly to the console



1 Components

2 Modules

3 Templates

4 Metadata

5 Services

6 Data binding

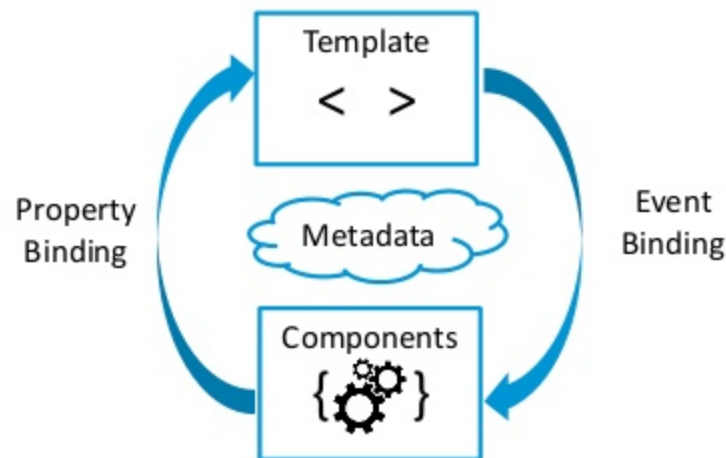
7 Directives

8 Dependency Injection

- Responsible for pushing data values into the HTML controls and turning user responses into actions and value updates
- The three forms of binding:
 - Interpolation
 - Property binding
 - Event binding

NOTE :

- *In two-way binding, a data property value flows to the view from the component as with property binding*
- *The user's changes also flow back to the component, resetting the property to the latest value, as with event binding*



1 Components

2 Modules

3 Templates

4 Metadata

5 Services

6 Data binding

7 Directives

8 Dependency Injection

- Modify DOM elements and modify their Behaviours
- Built-in directives helps in -
 - Extend or control DOM
 - Adding classes
 - And much more ...
- You can also write your own directives



1 Components

2 Modules

3 Templates

4 Metadata

5 Services

6 Data binding

7 Directives

8 Dependency Injection

- A way to supply a new instance of a class with the fully-formed dependencies it requires like services
- Provide new components with the services they need
- An injector can create a new service instance from a provider



Your First Angular 2 program

Put on your Angular Glass



The background of the entire image shows a person from the side, looking at a laptop screen. A semi-transparent blue rectangle is overlaid on the center of the image, containing the text. In the bottom right corner, outside the blue rectangle, there is a white cup of coffee on a saucer.

edureka!

Thank You

For more information please visit our website
www.edureka.co