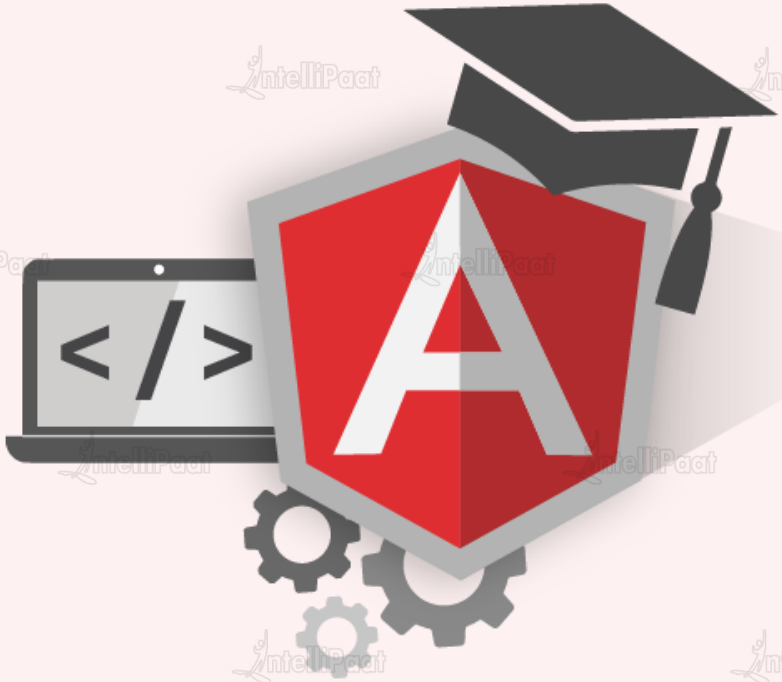
IntelliPaat

Angular



Agenda

01 What is Angular?

02 Typescript

03 Angular Features

04 Angular Architecture

05 Comparison with other JS frameworks

06 Use case

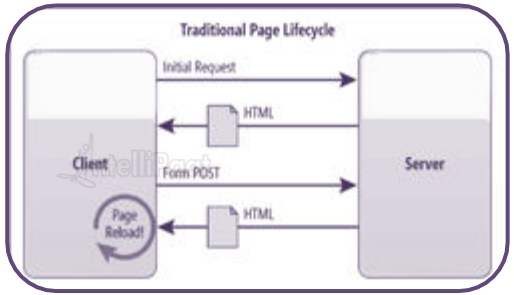
Angular

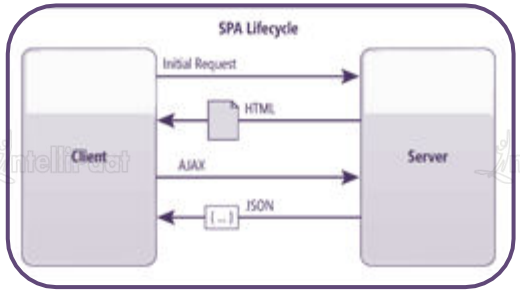
- Angular is a JavaScript framework which allows you to create reactive Single Page Applications (SPAs).
- Angular is written in TypeScript.

SPA

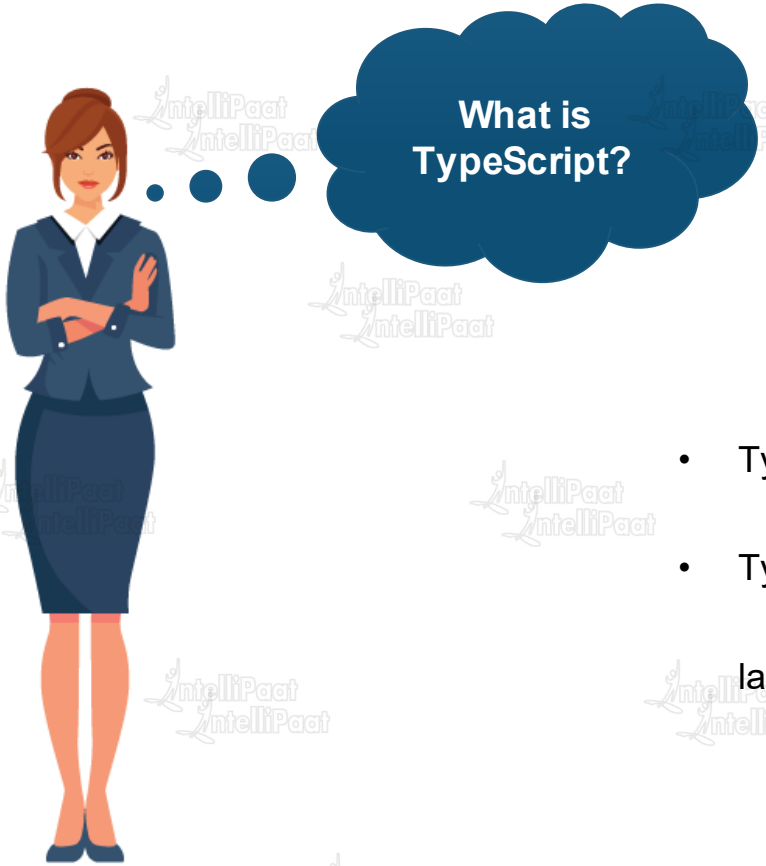
- **Single-Page Application**
- A web application or web site that interacts with the user by **dynamically rewriting the current page** rather than loading entire new pages from a server.

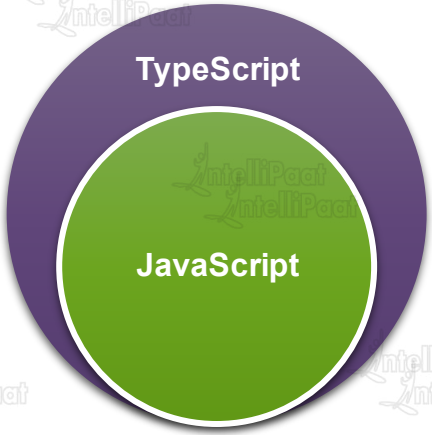
One of the best example is Gmail





TypeScript



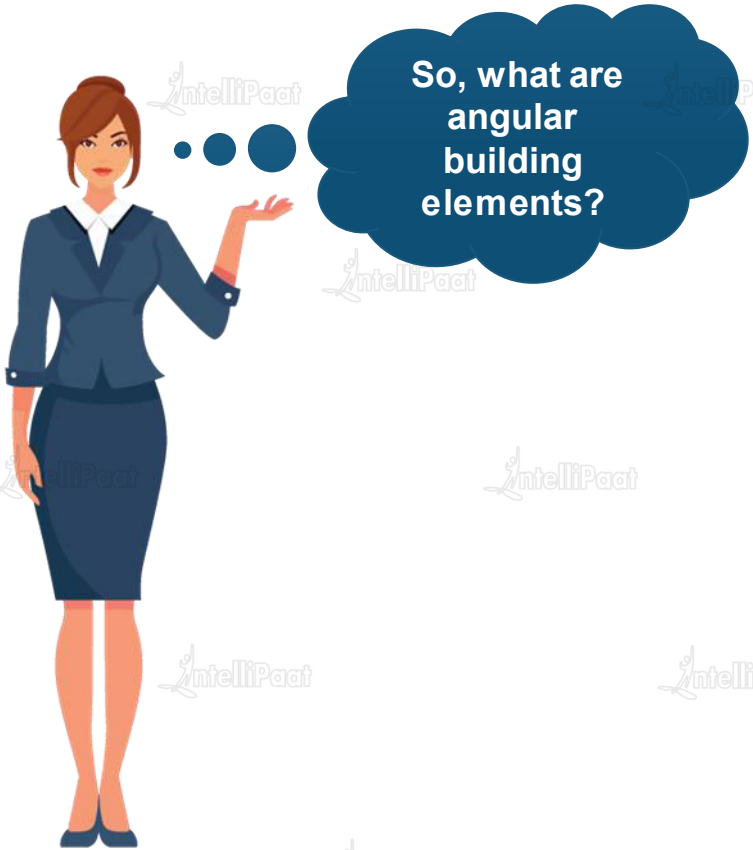


- TypeScript is JavaScript plus some additional features.
- TypeScript is a strongly typed, object oriented, compiled language.

https://www.typescriptlang.org

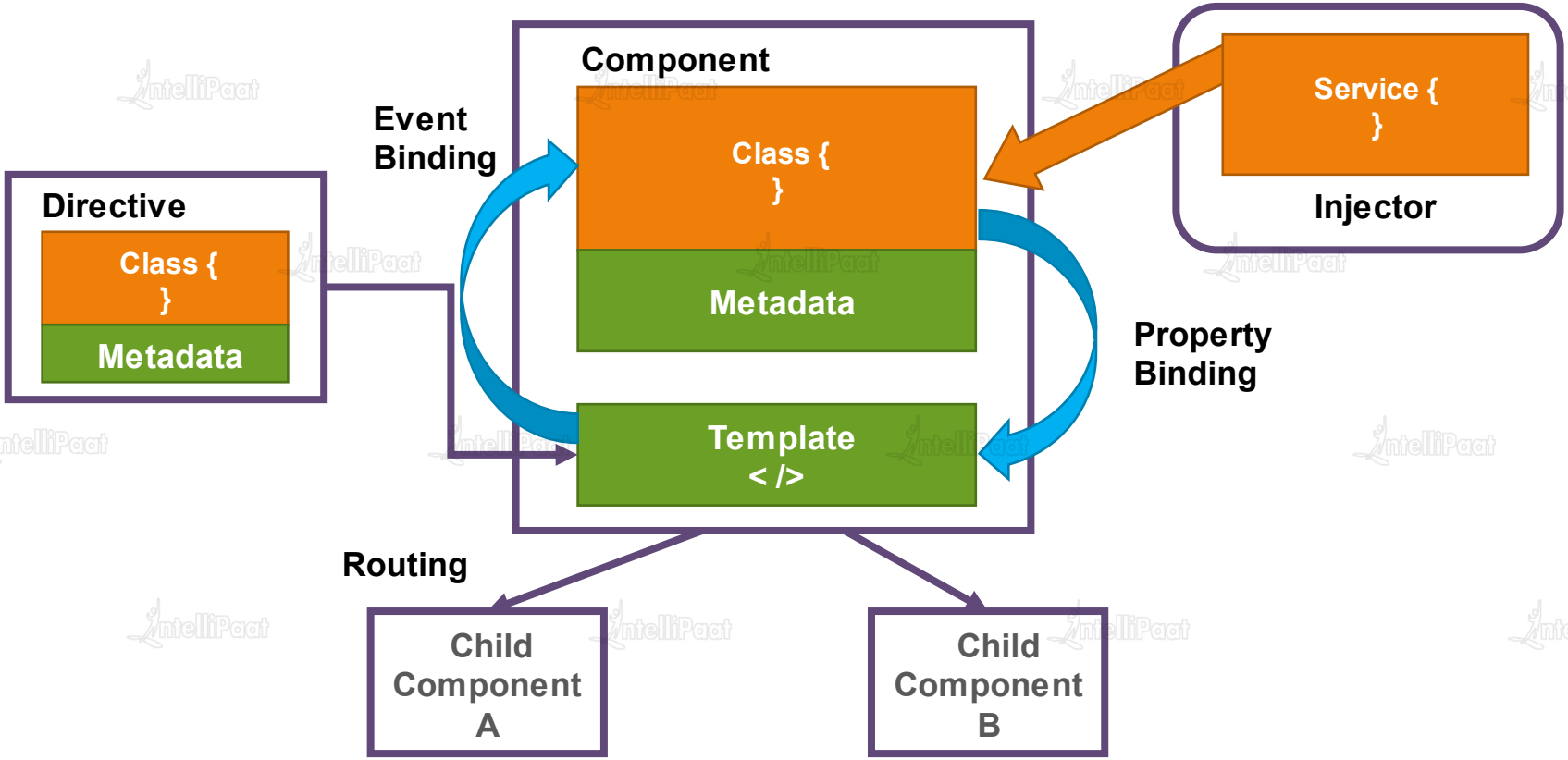
Angular Features

Angular Building Elements



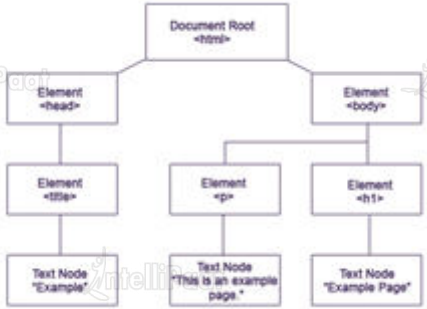
- Modules
- Components
- Templates
- Directives
- Pipes
- Services and Dependency injection
- Routing

Architecture



Prerequisites

JavaScript



DOM

Development Environment

Angular Versions

- Oct 2018 - Angular 7
- May 2018 - Angular 6
- Nov 2017 - Angular 5
- Dec 2016 - Angular 4
- Sept 2016 - Angular 2
- Just Angular
- Incremental Improvements, No Complete Re-Writes !

2010 - Angular 1

Complete Re-Write

"Angular JS"

Not really related to Angular 2+

AngularJS vs Angular

- The official website of AngularJs is https://angularjs.org/ whereas for angular it is https://angular.io/
- The architecture of AngularJS is based on MVC or MVW whereas the architecture of Angular uses a hierarchy of components as its primary architectural characteristic.
- AngularJS uses terms of **scope** and **controller** **while Angular** uses a hierarchy of components and directives.
- Angular is based on TypeScript while AngularJS is based on JavaScript.
- There is very less possibility to upgrade the Angular 1 to 2, mainly developers have to rewrite the entire application code.

Which one to choose?

Anyway, before you choose one of them to your new project, try to answer some questions:

- What libraries would you like to use?
- Are they compatible with Angular?
- What web browsers we want to support? (this one is really important)
- If you choose only new browsers, then Angular is the best. It's because it is a forward-looking library, but don't forget about other browsers. For example: IE8 for which you should definitely use AngularJS

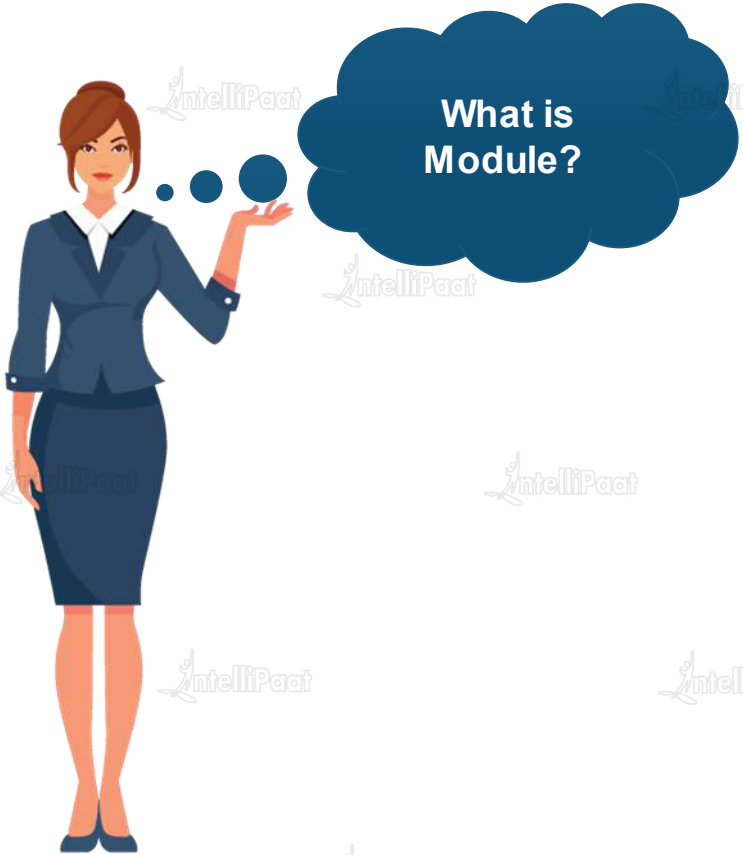
Angular vs React

Technology	Angular	React
Created By	Google	Facebook
Technology Type	Component-Based Framework using Typescript	User Interface Library with a component-based architecture using JavaScript
Data Binding	2-way data binding	1-way data binding
Size	Quite large and since it needs to be shipped to the client side, it increases the initial load time	Quite small in size, especially when compared with Angular
Learning Curve	Quite Sleep, given the number of features and options you have in angular	Its easy to pick up and learn
Simplicity	Quite complex	Fairly simple but takes some time to set up a project and configure everything

Top companies using Angular

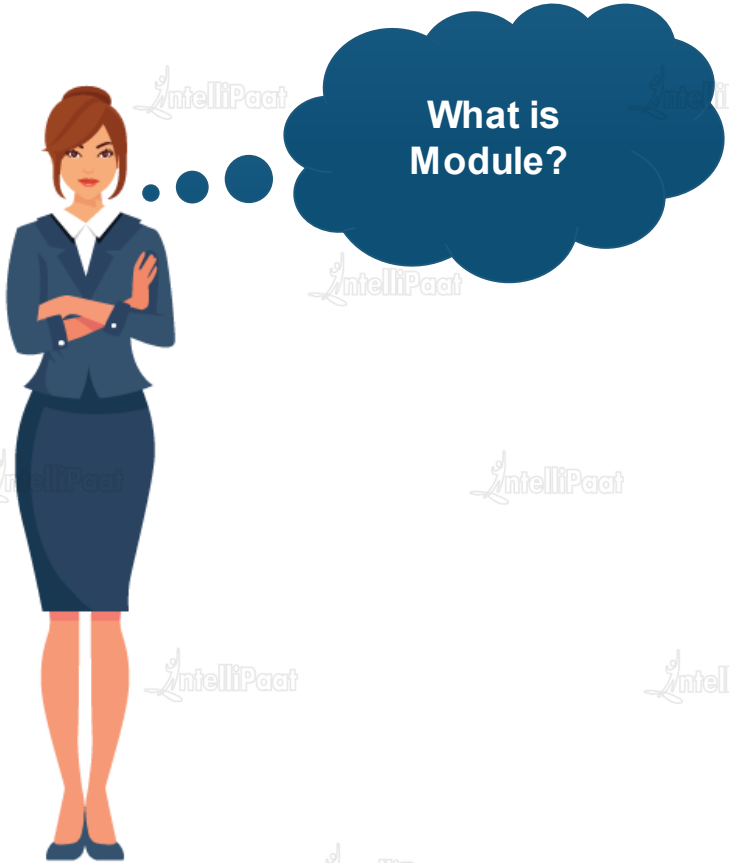
Basic Architecture

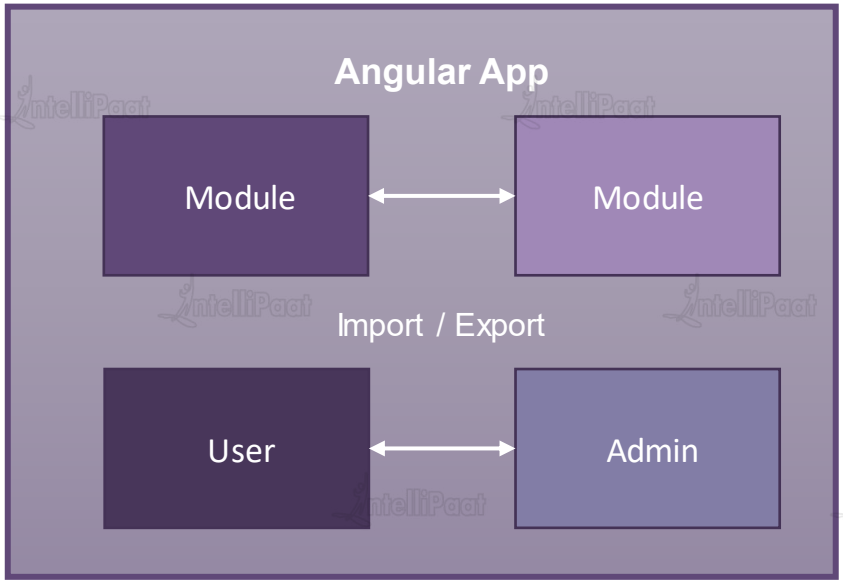
Module



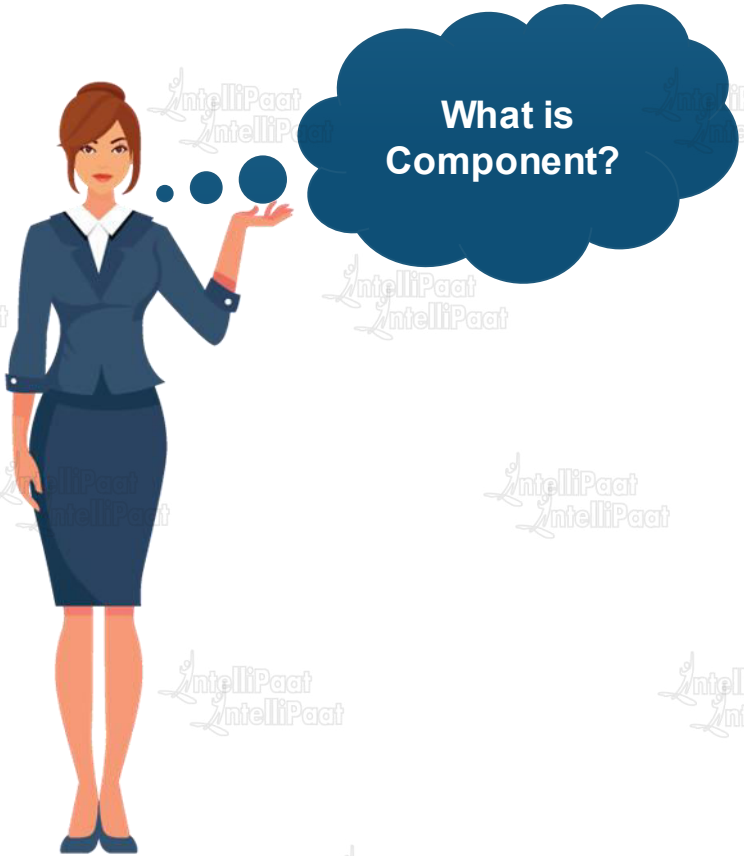
- **Module** in Angular refers to a place where you can group the components, directives, pipes, and services, which are related to the application.
- Every Angular application has atleast one module which is Root Module and By convention it is AppModule and it resides inside app.module.ts

Module



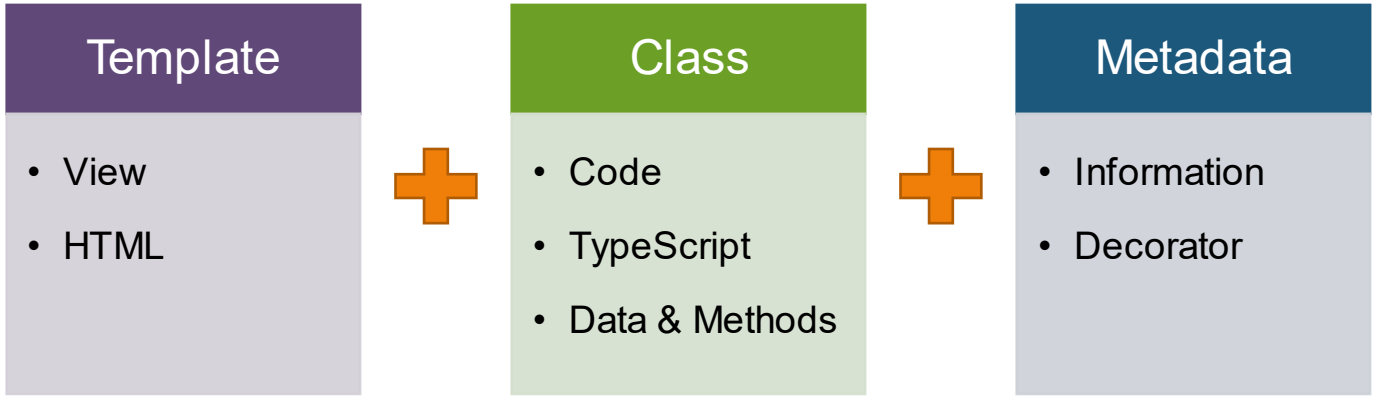


Component

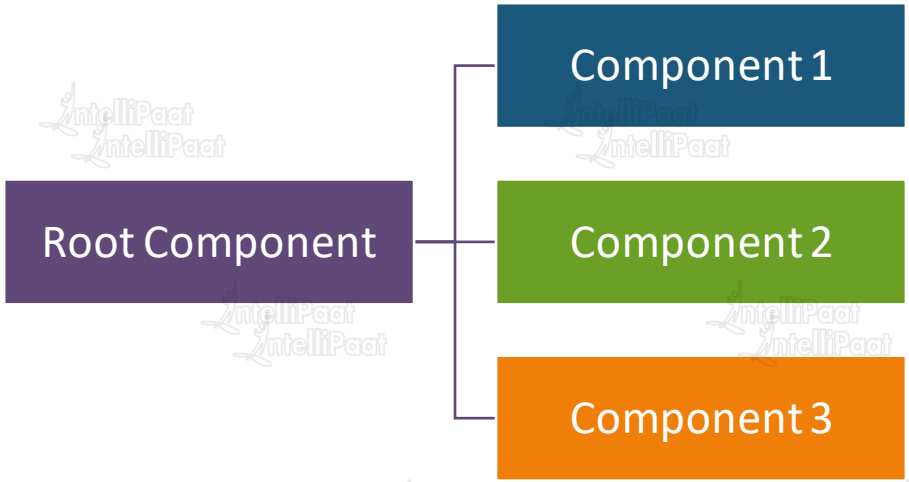


- Major part of the development is done in the components
- Components control the portion of the view in the browser.
- Components are basically classes that interact with the .html file of the component, which gets displayed on the browser.
- Every Angular application has atleast one component which is Root Component and By convention it is AppComponent

Component



Multiple Components



Summarize the Architecture

- Angular application - one or more modules
- Module – one or more components
- Component – HTML template + class to control the logic to the particular view
- Services – Business Logic
- Finally modules interact each other and render view in the browser

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