**What is Angularjs 2? Is that true that Angular2 is entirely a new thing (revamped version) as compared to Angularjs 1.x?**

**What is Angularjs 2?**

Angularjs 2 has most of the architectural component from such as module, directive, service, dependency injection, change detection and modularity. However, in Angular 2.0 existing all architectural building blocks from Angularjs 1.x are available in more better as well as improved format. The reason, some may argue that it is a completely new framework as it has shifted the coding to Type script. However, from architectural point of view Angularjs 2   is not a new web framework, rather, its just a better framework.

The main disadvantage of Angularjs 1.x, that it was not build for Modern Web, therefore,  it was such a  framework which cannot work with Modern Web Components, therefore, mobile development with Angularjs 1.x was not very straight-forward. In order to get rid of all these disadvantages and to make it be suitable for Modern Web Components based development, Angularjs team has released Angular 2.0.

#### AngularJs 2 Advantages:

* **Get Rid of ‘$digest already in progress when calling $scope.$apply()’** **Exception**: In Angularjs 1.x, there are multiple times, developer get the exception ‘’ $digest already in progress when calling $scope.$apply()’. The  reason is, Angular 1.x  did not support digest cycle finished event,  because such event might trigger further events as well as changes which can trigger an infinite loop for  the current digest cycle. Developer used to make very distinctive reasoning in order to decide when to call $scope.apply or $scope.digest, which was not always very simple .Moreover, developer needs to use $timeout event to force Angular finish event to end the current digest cycle.  In Angular 2.0 Zone has made a revolutionary change in case of change detection and  zones mechanism  is capable of deciding whether to end digest cycle or not. Therefore, one of the major advantages of Angular 2.0 is change detection with Zone mechanism.
* **Improved Performance**: Another significant disadvantages of Angularjs 1.x was its poor performance, In case of ng-repeat the performance issue was really a blocking issue. However in Angular 2.0, the change detection mechanism does not travel the entire DOM tree to detect a change, rather its only travel a part of it, therefore, the performance has been improved significantly.
* **Improved modularity & Dependency Injection:**Angular modules in Angular 1.x are mostly architecture to group a number of related functions and then used as container for dependency injection containers. However, in 2.0 modular development and component isolation has made it more easier to instantiate a component and used it in its scope. Inheritance has been introduced in component isolation, therefore, a child service can be injected while it will inherits all the services of its parent. Child injectable component or service is also capable of overriding their parent’s functionality.
* **This is more friendly for mobile development and server side rendering.**

#### AngularJs 2 Downside/Disadvantages:

* Those who are not familiar with typescript would take longer time to learn.
* Most of the component need to be developed as the online community is still at the beginning stage.

**What is ECMAScript ES6/ES7? Breifly explain both. Which version is supported by Angularjs 2.**

ECMAScript is a standard for modern scripting-language specification. Initially, it was JavaScript, now its being changing to ECMAScript.

**6th Edition – ECMAScript 2015:**

ECMAScript 2015 is the 6th Edition. This version has significant contribution for:

* Class Inheritance
* Iterators for loop
* Python-style generators and generator expressions
* Advanced set for collections
* number and math enhancements
* Promises
* Metaprogramming for virtual objects and wrappers and so on.

Although, ES6 still does not support browser. Therefore, compiler such as Traceur are required to compile EC6 code to pure javascript on the fly in browser.

**Which version is supported by Angular2?**

Angular has used 6th Edition – ECMAScript 2015 (Es6). However, there are configuration available to try some experimental feature from  7th Edition – ECMAScript 2016 (Es7).

* Inheritance of component has become so easy. Now Angular 2.0 can be developed using  Object oriented thinking. Inheritance has been possible for javascript. A number of libraries has been developed to support this concept. However, with ES2015 all those  nonstandard abstractions can be got rid of. As  ES2015 defines an easier inheritance.

**How to setup development environment for Angular2? Please follow the step by step approach with code configuration/screenshots?**

In this section, the development environment setup has been described. Angularjs 2.0 application can be developed using:

1. **angular-cli**: This is a command line tool for Angularjs 2.0 application development which support live coding and deployment instantly. This is much easier and much straight forward.
2. **systemjs**: This is the traditional way of developing angularjs application. This way has been described in details later in Part-2.