

## JavaScript, ES6, TypeScript & Angular – Boeing Requirements

- Updated based on the solution call we had on Friday, June 1, 2018, with the Boeing team, between 11:30 am and 12:30 pm
- Updated number of hours based on telephone call with Megha on Sunday, July 1, 2018

### BEGINNERS

1. Web Basics - Day 1 – 1 hour
  - a. Introduction to the Web
  - b. Front-end basics
2. HTML - Day 1 – 4 hours
  - a. Introduction
  - b. Document structure
  - c. Comments
  - d. Basic tags
  - e. Embedding content – inline frames, hyperlinks, images
  - f. Lists
  - g. Divs and Spans
  - h. Attributes
  - i. Tables
  - j. Forms and form validations
3. CSS - Day 1 – 3 hours
  - a. Introduction
  - b. Defining and applying styles
  - c. CSS Colors
  - d. Background and border
  - e. Selectors
  - f. Specificity and cascade
  - g. Text and fonts
  - h. Introduction to Box model
4. Bootstrap - Day 2 – 3 hours
  - a. Introduction
  - b. Adding Bootstrap to a project
  - c. Typography & utilities
  - d. CSS Components
  - e. The Grid System
  - f. JavaScript Widgets
5. JavaScript Fundamentals – Day 2 – 5 hours
  - a. Data types
  - b. Variables
  - c. Functions
  - d. Conditionals
  - e. Loops
  - f. Objects

- g. Literals
- h. Arrays
- i. Error handling using Try Catch
- j. Storage API
  - 01. Local Storage
  - 02. Session Storage

## EXPERIENCED PARTICIPANTS

- 6. Advanced JavaScript – Day 3 – 4 hours
  - a. Async JS
    - 01. AJAX & XHR
    - 02. Promises
    - 03. Fetch
    - 04. Async & Await
  - b. Scopes
  - c. Closures
  - d. Hoisting
  - e. CORS
  - f. JSONP
- 7. ES6 – Day 3 – 1 hour
  - a. Let & Const
  - b. Template literals
  - c. Arrow functions
  - d. Default function parameters
  - e. Rest & Spread
  - f. Destructuring
  - g. Classes, constructors & inheritance
- 8. TypeScript – Day 3 – 3 hours
  - a. Type system
  - b. Basic types
  - c. Interfaces
  - d. Classes & Inheritance
  - e. Functions
  - f. Enums
  - g. Modules
  - h. Namespaces
  - i. Decorators
- 9. Angular – Days 4, 5, 6, 7
  - a. Introduction to Angular – Day 4 – 4 hours
  - b. Architecture overview – Day 4 – 1 hour
  - c. Components, Templates & Styles – Day 4 – 3 hours
  - d. Data Binding – Day 5 – 3 hours
  - e. Directives – Day 5 – 3 hours
    - 01. Attribute directives

- 02. Structural directives
- 03. Custom directives
- f. Pipes – Day 5 – 2 hours
  - 01. Built-in pipes
  - 02. Custom pipes
- g. Services & Dependency Injection – Day 6 – 2 hours
- h. Forms & Validation – Day 6 – 3 hours
  - 01. Template driven forms
  - 02. Reactive forms
- i. Building Single Page Apps using Routing – Day 6 – 3 hours
- j. Reactive Programming using RxJS Observables – Day 7 – 1 hour
- k. Client Server Communication (using HttpClient) – Day 7 – 3 hours
- l. Angular Modules (ngModules) – Day 7 – 1 hour
- m. Unit testing Angular applications – Day 7 – 3 hours
- n. Best practices – (All the days)