Day 16 Revisit

- Introduction to JavaScript. (Multi-Paradigm)
- ECMA Script (ES) – European Computer Manufacturing Association
- JS gives life to web pages (It helps adding interactivity)
- It's also called as programming lang of web.
- DOM (getElementById(), getElementsByName(), getElementsByClassName(), querySelector() etc.,)
- Document Object Model – Tree representation of every HTML file.
- Relationships between HTML elements (father, child, grand child)
- JS variables, data types, scope, hoisting
- Objects (Array, Enum, Custom Object)
- JS Objects vs JSON
- Different types of String representation "". ''. `` (Template String/literal)
- Using EL syntax inside the String variable ${}
- Various String, Array, Math & Date functions in JS
- Hands-on – LearnJS.Online
- ES6 Features (Async, Await, Callback methods, arrowfunctions)
- AJAX (High Level Introduction) XMLHttpRequest – Partially send form data to server.
- Async Javascript And Xml. (Non-blocking)

Day 17 Agenda

- Introduction to NodeJS, NPM, Modules
- ReactJS Fundamentals
    - JavaScript MVC
    - View Technology
    - Introduction to ReactJS
    - React and SPA
    - The create-react-app CLI
    - Project structure
    - React Introduction
    - View Technology
    - React and SPA
    - The create-react-app CLI
    - Project structure
    - Understanding What React Is
    - What Problem React Solves
    - Virtual DOM Concept
    - Comparative Analysis
    - React Foundation
    - React Fitting Into Web Applications
    - Modern Web Architecture
    - Developer Setup
    - IDE Plugins
    - Chrome Plugins
    - Creating First React Project

- o Code Formatter Setup
- o Building Static Site Using React
- o JSX Introduction

Functional Programming – Performing various operations in a single line using the power of different types of functions.

1) WAWR (With Argument With Return)
2) WANR (With Argument No Return)
3) NAWR (No Argument With Return)
4) NANR (No Argument No Return)

Object – Is a Custom Data Type

Normal Functions

Anonymous functions (Name-less Function)

Arrow Functions

Call-back Function

Sync/Async Functions (Blocking/Non-blocking)

Node JS - https://nodejs.org/en - Node.js® is an open-source, cross-platform JavaScript runtime environment.

NodeJS is based on V8 Engine (JS Engine of Google Chrome Browser)

NPM – Node Package Manager (Dependency Management Tool for JS)

Package.json (NODE/NPM)

NPM init (utility to create package.json file)

NPM install

- Local Installation (Project Specific – Node_modules folder in the current folder)
- Global Installation (It added the node_modules folder inside npm folder of node origin folder) - **C:\Users\Siva\AppData\Roaming\npm\node_modules**

Npm I (Normal/Local Install)

Npm I -g (Global Installation)

React – JS library (Helps to create simple/complex UI – Component based UI)

React is From FaceBook family. (Child of FaceBook)

Next.JS (React based framework)

ReactJS (React), React Native (Helps to build Mobile Apps)

React – (Web based Applications)

SPA – Single Page Applications

https://react.dev/ -- official site

Component – Simple UI unit (Reusable piece of UI code)

It is a custom HTML tag.

- React

<asdetable tb_name="employee">

Npm I -g create-react-app (CLI tool for creating react application)

Live Reloading (Dynamic Rendering)

React creates a virtual DOM

Root Component – Default component of React

Types of Components

1) Class based Components (State Component)
2) Function based Components (Normal/Arrow) -- (Recommended) [Stateless Component]

Types of HTML Elements

1) Block level (println) – It uses entire line (div)
2) Inline Level (print) – It uses part of a line (based on content size) (span, a, input)

React Component needs to return only one element.

Rendering – Displaying the content of component for the first time.

Re-Rendering – Re-displaying the content bcos. of state change or any other reason.