MODULES	TOPICS	DURATION
INTRODUCTION TO MERN FS	Introduction to MERN Full Stack	2
1.1: HTML/HTMLS	• HTML5 Basics • Tables • Lists • Working with Links • Image Handling • Frames, Frames • HTML Forms for user Input • New Form Elements • HTML5 Client-Side Storage	16
2.1: CSS3	• CsS-Introduction • CSS-Syntax • CSS-Text Fonts • CSS-Lists Tables • CSS-Box Model • CSS-Display Positioning • CSS-Floats • Color, Gradients, Background Images, and Masks • Border and Box Effects • Working with Colors • Layout Columns, Flex Box • Implementing CSS3 • Transforms, Transitions, and Animations	18
3.1 BOOTSTRAP	• Introduction to Bootstrap • Bootstrap Grid • Bootstrap Components • Bootstrap Plugins	16
4.1: JavaScript	• JavaScript Fundamentals • BOM (Browser Object Model) • DOM (Document Object Model) • Advanced working with functions • AJAX Development • ES6 Features • Modules • TypeScript	42
5.1: MongoDB	• MongoDB - Overview • CRUD Operations • Basic Operations • Aggregations • Indexing • Replication and Sharding	20
	• Introduction of ExpressJs • Templating Engines	

6.1: ExpressJs	• Working with Express.js • Request/Response in Express.]s • Using middleware	20
	• React Introduction •React Essential Features and Syntax	
7.1: React	• React Components, Props and State Styling Components • Debugging React Apps • React Component lifecycle • React Component in Details • HTTP Requests/AJAX Calls • React Routing • React Forms and Form Validation • Deploying React App to the Web • Testing React apps with JEST	42
8.1: NodeJS	• Introduction to NodeJS • Setup Dev Environment ent to Modules • Node Package Manager • Creating Web server • File System • Debugging Node JS Application • Events	26
	Total Hours	200

DAYS	TOPIC	CONTENT
DAY 1	HTML BASICS	Understand the structure of an HTML page. Learn to apply physical/logical tags in HTML Learn to manage document spacing.
DAY 2	TABLES	Understand the structure of an HTML table. Learn to control table format like cell spanning, cell spacing, border
	LIST	Numbered List Bulleted List
DAY 3	WORKING WITH LINKS	Understand the working of hyperlinks in web pages. Lear to create hyperlinks in web pages. Add hyperlinks to list items and table contents.
		Understand the role of images in web pages

DAY 4	IMAGE HANDLING	Learn to add images to web pages Learn to use images as hyperlinks
DAY 5	FRAMES	Understand the need for frames in web pages. Learn to create and work with frames.
DAY 6	HTML FORMS FOR USER INPUT	Understand the role of forms in web pages Understand various HTML elements used in forms. Single line text field Text area Check box Radio buttons Password fields Drop-down menus
DAY 7	NEW FORM ELEMENTS	Understand the new HTML form elements such as date, number, range, email, search Offerings of HTML5 HTML5 - Page Layout HTML5: Browser Support Enhanced Form Elements Audio And Video HTML5 Canvas
DAY 8	HTML 5 CLIENT SIDE STORAGE	Introduction to HTML5 Client-Side Storage Types of Client-Side Storage
DAYS	TOPIC	CONTENT
DAY 1	CSS 2 - INTRODUCTION	Benefits of CSS CSS Versions History CSS Syntax External Style Sheet using Multiple Style Sheets Value Lengths and Percentages
DAY 2	CSS-SYNTAX	Single Style Sheets Multiple Style Sheets Value Lengths and Percentages CSS Selectors Color Background

	CSS BACKGROUNDS AND BORDERS	background-image background-repeat background-position CSS Cursor
DAY 3	CSS-TEXT FONTS	color background-color text-decoration text- align vertical-align text-indent text-transform white- space letter-spacing word-spacing line-height font- family font-size font-style font- variant font- weight
		list-style-type list- style position list- style-image
DAY 4	CSS-LISTS TABLES	list-style CSS Tables I. border II. width & height III.Text-align IV. vertical-align V. padding VI. Color
DAY 5	CSS-BOX MODEL	Borders & Outline Margin & Padding Height and width CSS Dimensions

	CSS DISPLAY POSITIONING	CSS Visibility CSS Display CSS Scrollbars OSS Positioning CSS Display Positioning I. Static Positioning II. Fixed Positioning III.Relative Positioning IV. Absolute Positioning Css avers with Z-Index
DAY 6	CSS FLOATS	The float Property The clear Property The clearfix Hack
	COLOR,GRADIENTS, BACKGROUND IMAGES,AND MASKS	Opacity New Color Names Nonimage Gradients Multiple Background Images Background-size, Background-origin, Background clip Image Masks
	BORDER AND BOX EFFECTS	Rounded Corners Resizing Outline Offsets Border and Box Effects Appearance Image Borders Box Shadow
DAY 7	WORKING AND COLORS	Background
		Muliple Background
		Colors I. RGB and RGBA II. Alpha factor III. Opacity & Transparency
		Using currentColor
		Working with gradients

DAYS	TOPIC	CONTENT
		Column-count, Column-gap, Column-rule
DAY 8	LAYOUT: COLUMNS,FLEX BOX	Multiple Column Layouts Gaps between Columns Box-orient, Box-pack, Box-align, Box-flex, etc. Display: box Grouping and Changing Orientation Alignment
	VENDOR PREFIXES	Current status of -moz, -o, etc. When and Why to Use
	MEDIA QUERIES	Targeting Device Capabilities: Width, Screen Size, Color Depth ETC Building Responsive Sites: Implications for Mobile
DAY 9	IMPLEMENTING CSS3	Modernizr HTML5 Shims jQuery LESS, SASS, and Other CSS Preprocessors CSS Grid Systems CSS Frameworks
	TRANSFORMS,TRANSITIONS,AND ANIMATIONS	translate(), rotate(), etc. 3D: rotateX() ,rotateY() changing, for example, the width of a div on hover (without JS) animations: @keyframes,animation
DAYS	TOPIC	CONTENT
DAY 1	INTRODUCTION TO BOOTSTRAP	What is Bootstrap Framework Why Bootstrap History of Bootstrap Advantages of Bootstrap Framework What is Responsive web pace How to remove Responsiveness

		Major Features of Bootstrap
DAY 2	INTRODUCTION TO BOOTSTRAP	What is Mobile-First Strategy Setting up Environment How to apply Bootstrap to Applications
DAY 3	BOOTSTRAP GRID	What is Bootstrap Grid How to apply Bootstrap Grid What is Container What is Offset Column How to Reordering Columns Advantages of Bootstrap Grid
DAY 4	BOOTSTRAP GRID	How to Display responsive Images How to change class properties How to customize Bootstrap's components, Less variables, and Query
		What is Bootstrap Typography How to use Typography
DAY 5	BOOTSTRAP GRID	What is Bootstrap Tables What is Bootstrap Form Layout What is Bootstrap Button How display images in different styles like Circle shape etc
DAY 6	BOOTSTRAP GRID	How to display text like muted and warning etc What is Carets Classes How to hide or show the text in Bootstrap
		Jumbotron Alerts Buttons Button Groups

DAYS	TOPIC	CONTENT
DAY 7	BOOTSTRAPS COMPONENTS AND PLUGINS	Bootstrap Components Badge and Plugins Progressiar Spinner Scrollyspy List Group
DAY 8	BOOTSTRAPS COMPONENTS AND PLUGINS	Dropdowns Card Navs Navbar input groups Bread crumb Carousel Tooltips
DAYS	TOPIC	CONTENT
DAY 1	JAVASCRIPTS FUNDAMENTALS	Introduction to Procedural Programming Front- End HTML, CSS and JavaScript! Best Approaches to Learn JS Editors, Where to place your JS Code? And Using coderun Webkit's Web Inspector Tracking down errors JS versions (EmaScript5 and EcmaScript6)
DAY 2	JAVASCRIPTS FUNDAMENTALS	Browser Support for ES6 Javascript Output Methods JavaScript Variables Comments Console Data Types in JavaScript
		Date Objects
DAY 3	JAVASCRIPTS FUNDAMENTALS	Operators Conditions and Loops (control Structures)
DAY 4	JAVASCRIPTS FUNDAMENTALS	Arrays and Array Methods String and String Methods The modern mode, "use strict" ObjectsvFunctions Prototypes, objects

DAY 5	BOM (BROWSER OBJECT MODEL)	History object Document Obiect Navigator Obiect Location Object Screen Obiect
DAY 6	DOM(DOCUMENT OBJECT MODEL)	Browser environment, specs DOM tree DOM Methods Searching: getElement*, querySelector* Node properties: type, tag and contents
DAY 7	DOM(DOCUMENT OBJECT MODEL)	Attributes and properties Modifying the document Styles and classes Element size and scrolling Window sizes and scrolling Coordinates
DAY 8	ADVANCED WORKING AND FUNCTIONS	Recursion and stack Rest parameters and spread operator vClosure The old 'var" Global obiect The "new Function" syntax Scheduling: setTimeout and setinterval Decorators and forwarding, call/apply Function binding
DAY 9	AJAX DEVELOPMENT	Creating the XMLHttp Request Object Managing Ajax Requests JSON, API & AJax JSON Introduction JSON Parse
DAY 10	AJAX DEVELOPMENT	JSON Stringity JSON Object HTTP Methods - REST API XMLHttpRequest Object

DAY 11	ES6 FEATURES	Let, Var and Const Keywords Arrow Functions, Default function arguments Template Strings Obiect Destructuring
DAY 12	ES6 FEATURES	Array Manipulation Functions Array from(). Array.off(), Array. find(), Array findindex(). Array.some(). Array.every() spread and rest operators Promises Promises, async/await Introduction: callbacks
DAY 13	ES6 FEATURES	promise promises chaining error handling with promises Promise API Promisification Symbols Code Quality with ESLint ES6 Tooling
DAY 14	ES6 FEATURES	Babel, Npm, webpack overview Classes, Inheritance Generators Proxies Async, await flow control Map, Set Operators
DAY 15	MODULES	Modules, introduction Export and Import Dynamic imports
		Introduction to Typescript Introduction to Typescript JavaScript & Typescript The Type System

DAYS	TOPIC	CONTENT
DAY 16	TYPESCRIPT	Primitive types & type inference Object type & type inference Function type & type inference Enums, Tuples Nullable types
DAY 17	TYPESCRIPT	Union types, intersection types Never and void types OOPS in typescript Classes, Class properties, Static Properties
DAY 18	TYPESCRIPT	constructors getters & setters Inheritance, Abstract classes, Interfaces Access modifiers
DAY 19	TYPESCRIPT	Namespaces and Modules Namespaces and multiple files Loading modules
DAY 20	TYPESCRIPT	Generise Generic functions classes Generic types and arrays Constraints Decorators
		Class Decorators
DAY 21	TYPESCRIPT	Decorator Factories Method Decorators Property Decorators Parameter Decorators Typescript essentials debugging typescript
DAYS	TOPIC	CONTENT

DAY 1	MongoDB - OVERVIEW	Understand what is NOSQL Describe CRUD State the types of NOSOL Explain what is Aggregation Describe Replication & Sharing
DAY 2	CRUD OPERATIONS	Understand what are Crud Operations Explain what is Upsert Describe Query Interface List the Comparison Operators and Logical Operators State what are Wrapped Queries and Query Operators
DAY 3	BASIC OPERATIONS	Crud Operations Basic Operations With Mongo Shell Data Model JSON BSON MongoDB - Datatypes
DAY 4	BASIC OPERATIONS	BSON Types The id Field Document Document Store Blog: A Bad Design Blog: A Better Design
DAY 5	AGGREGATIONS	Types of Aggregations What is Aggregation? The Aggregate() Method Pipeline Concept
DAY 6	AGGREGATIONS	Pipelines Pipeline Flow Pipeline Operators $match, $unwind $group, $project $skip, $limit $sort, $first $last, $sum

DAYS	TOPIC	CONTENT
DAY 7	INDEXING	Understand about Indexes Understand different types of Indexes Understand properties of Indexes Explain Plan in MongoDB
DAY 8	INDEXING	Mongostat Mongotop Logging Slow queries Profiling
DAY 9	REPLICATION AND SHARDING	Understand about Replication Purpose of Replication Understand Replica Set
DAY 10	REPLICATION AND SHARDING	Sharding Sharing Mechanics GridFs
DAYS	TOPIC	CONTENT
DAY 1	INTRODUCTION OF EXPRESSJs	What is ExpressJS How Express.js works Installation of Express.js Basic Example
DAY 2	TEMPLATING ENGINES	Introduction pug Templating Engine Working with Tags in pug Working with id and classes in pug
		Attributes and Nesting Tags in pug

DAYS	TOPIC	CONTENT
DAY 3	TEMPLATING ENGINES	Using if & unless in puq Using for & each in pug Using case & mixins in pug
DAY 4	TEMPLATING ENGINES	Include and Extend in pug EJS Templating engine Express Handlebars
DAY 5	WORKING WITH EXPRESS.JS	Introduction Introduction to Express.js Connect Module Express.js Installation
DAY 6	WORKING WITH EXPRESS.JS	app.is Working with Express.is Steps for creating Express.js Application application, request, response obiect properties & methods
DAY 7	REQUEST/RESPONSE IN EXPRESS.JS	Request-params,body,files,route,header,get
		Response-render,locals, status json,redirect
DAY 8	USING MIDDLEWARE	Types of middleware Application level middleware Express-ison,session, logger, compress
DAY 9	USING MIDDLEWARE	Router level middleware Built-in middleware
DAY 10	USING MIDDLEWARE	Third party middleware Express 4.0 Router
DAYS	TOPIC	CONTENT

DAY 1	REACT INTRODUCTION		Overview of frameworks, libraries for client side Web applications React Introduction Environment Setup for React Application
DAY 2	REACT INTRODUCTION		Understanding PM commands VS Code extensions for ES6, React
DAY 3	REACT ESSENTIALS FEATURES AND SYNTAX		React App Project Directory Structure Overview of Webpack, Babel React Component Basic
DAY 4	REACT ESSENTIALS FEATURES AND SYNTAX		Create React Component Understanding .JSX Limitations of .JSX Working with Components and Reusing Components
DAY 5	REACT ESSENTIALS FEATURES AND SYNTAX		Understanding and using Props and State Handling Events with methods Manipulating the State Two way data-binding
DAY 6	REACT ESSENTIALS FEATURES AND SYNTAX		Functional (Stateless) VS Class (Stateful) Components Parent - Child Communication Dynamically rendering contents Showing Lists, List and keys
DAY 7	STYLING COMPONENTS		CSS Styling Scoping Styles using Inline Styles Limitations of inline styes Inline Stles with Radium

DAY 8	STYLING COMPONENTS	Using Psuedo classes/media quries with inline styles CSS Modules, importing css classes Adding Bootstrap, Semantic Ul to React apps Using react-bootstrap, reactstrap packages

DAY 9	DUBBING REACT APPS	Understanding React Error Messages Handling Logical Errors,
DAY 10	DUBBING REACT APPS	Debugging React apps using google developer tools and React DEVTOOL Understanding Error Boundaries
DAY 11	REACT COMPONENT LIFE CYCLE	Updating life cycle hooks pure components React's DOM Updating Strategy Returning adjacent elements Fragments
DAY 12	REACT COMPONENTS IN DETAILS	Higher Order Components Passing unknown Props Validating Props Using References
DAY 13	REACT COMPONENTS IN DETAILS	React Context API Updated LifeCvele hooks (16.3) Best practices for React Projects Demo apps
DAY 14	HTTP REQUESTS/AJAX CALLS	HTTP Requests in React Introduction of Axios package HTTP GET Request, fetching & transforming data

		HTTP POST. DELETE. UPDATE
DAY 15	HTTP REQUESTS/AJAX CALLS	Handing Errors Adding/Removing Interceptors Creating/Using Axios intances
DAY 16	REACT ROUTING	Routing and SPAs Setting Up the Router Package react-router vs react-router-dom Preparing the Project For Routing Switching Between Pages, Routing-Related Props
DAY 17	REACT ROUTING	The "withRouter* HOC & Route Props Passing & extracting route/query parameters Using Switch to Load a Single Route Navigating Programmatically
DAY 18	REACTS FORMS AND FORM VALIDATION	Creating a Custom Dynamic Input Component Setting Up a JS Config for the Form Dynamically Create Inputs based on JS Config
DAY 19	REACTS FORMS AND FORM VALIDATION	Adding a Dropdown Component Handling User Input Handling Form Submission Adding Custom Form Validation
DAY 20	REACTS FORMS AND FORM VALIDATION	Fixing a common validation adding validation Feedback Showing Error Messages Handling Overall From Validity
DAY 21	i. Deploying React App to the Web ii. Testing React apps with JEST	

DAYS	TOPIC	CONTENT
DAY 1	INTRODUCTION TO NODE JS	Introduction What is Node JS? Advantages of Node JS Traditional Web Server Model Nodes.js Process Model
DAY 2	SETUP DEV ENVIROMENT	Install Node.js on Windows Installing in mac as Working in REPL Node JS Console
DAY 3	EVENT LOOP	Callback Concept Global Objects Streams
DAY 4	EVENT LOOP	Buffers Utility Modules
DAY 5	NODE JS MODULES	Functions Buffer Module
DAY 6	NODE JS MODULES	Module Types Core Modules Local Modules Module. Exports
		What is NPM

DAY 7	NODE PACKAGE MANAGER	installing Packages Locally Adding dependency in package.json
DAY 8	NODE PACKAGE MANAGER	Installing packages globally updating packages
DAY 9	CREATING WEB SERVER	Creating Web server Handling http requests Sending requests
DAY 10	FILE SYSTEM	Fs. readFile Witing a File Writing a file asynchronously
DAY 11	FILE SYSTEM	Opening a file Deleting a file Other IO Operations
DAY 12	DUBUGGING NODE.JS APPLICATION	Core Node JS debugger Debugging with Visual Studio
DAY 13	EVENTS	EventEmitter class Returning event emitter Inhering events