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Syllabus

1 HTML 5

- Introduction
- Basics
- Elements
- Attributes
- Headings
- Paragraphs
- Images
- Block & Inline elements
- Tables
- Header, Section & Footer
- Forms

2 CSS 3

- Introduction
- Basics
- Selectors
- Colors
- Background
- Border, margins & padding
- Box model
- Fonts
- Pseudo elements / classes
- Display property
- Position property
- Float and clear
- Flex box
- Grid
- Media Queries
- Responsive Web Design
- SASS

3 Bootstrap

- Introduction
- Installation
- Containers
- Buttons
- Grid
- Tables
- Form
- Carousel
- Navbar
- Modal
- Utilities

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Javascript jQuery

- JavaScript Introduction, Version history
- Syntax, Variables, Data types, let, const
- alert(), confirm() & prompt()
- Operators, if else & switch, Loops, Debugging, Hoisting
- Functions, Strings, Arrays, Classes and Objects
- this keyword, Arrow functions
- Asynchronous
- DOM
- Basic Validations
- External Javascript, Minification Etc.
- Funtional Programming I
- Funtional Programming II
- Window Object | Interval, Timeout, Open, Close Methods
- DOM Manpulation
- Navigator | JSON vs XML
- ECMA 6 Features
- Callback & Promises
- Async & Await
- jQuery Introduction
- Installation/Usage
- Selectors
- Events

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Typescript

- Problems using JavaScript / ECMA Script
- Typescript Module System
- Installing Typescript using NPM
- Language Fundamentals and Features
- OOPS concepts in Typescript
- Strong vs Weak Type checking
- Creating Classes & Objects
- Const. Let vs Var
- Inheritance using Classes and Interfaces
- Optional Parameters
- Generics
- Arrow Functions and Callbacks
- Maps and Sets
- Debugging & Executing Typescript files
- Using 3rd-party libraries using NPM and Typescript

6 Angular 17

- Angular features and elements
- Single Page Apps vs Conventional Web Applications
- Angular CLI and setup
- Angular Components
- Angular Bindings
- Angular Forms
- Angular Template Driven Forms
- Angular Reactive Forms
- Services and Dependency Injection
- Pipes
- Directives
- Routing
- RXJS: Promises and Observables
- Inter-Component Communication
- Testing Angular Applications
- Deploying Angular Applications

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Node.js

- Introduction to the Node.js Framework
- Installing Node.js and using Typescript
- Overview of Blocking vs Non-Blocking IO
- Event Handling Loop in Node.js
- Using Node.js to execute scripts
- The Node Package Manager npm
- The package.json configuration file
- Using & compiling Typescript for Node.js
- Working with the HTTP protocol
- Building an HTTP Server
- Accepting a request
- Rendering a response
- Using Representational State Transfer Protocol (REST)
- Introduction to Web Services
- Introduction to REST Full W/S

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Express.js

- Introduction to the Express.js Framework
- Installing the Express package
- Routing
- HTTP Methods (Get, Put, Post, Delete)
- URL Building
- Body-Parser to read data from incoming requests
- Cookies
- Sessions
- Authentication
- Using CORS
- RESTful APIs
- Using Middleware
- Express & DB Integration
- Using TypeScript with Express

9 MongoDB

- Introduction to the NoSQL Databases
- Data Modelling
- Create & Drop Database
- Create & Drop Collection
- Data Types
- Insert Document
- Query Document
- Update Document
- Delete Document
- Projection
- Limiting Records
- Sorting Records
- MongoDB Indexing
- Object Id
- Aggregation and Map-Reduce

10 ReactJs

- What is ReactIs and why use it?
- React Fundamentals
- React Components
- Props & State
- Event Handling
- Routing in React
- React Hooks
- CRUD Application using React
- Deploying React Application

11) Redux

- What is the FLUX architecture and why use it?
- Store for managing Application State and Event Broadcasting
- Action for Creating Action, Dispatching Action, Action Binders
- Reducer for Creating and combining reducers
- Injecting Redux Store using Providers

12 Projects

- Project 2 (Basics)
- Project 2 (Angular)
- Project 3 (React+Redux)

Aptitude

- Averages and ages
- Percentages
- Ratio and Proportion
- Profit and Loss
- Partnership
- Speed, distance, and time
- Trains
- Boats and Streams
- Time and Work
- Pipes and Cistern
- Permutations and Combinations
- Probability
- Simple Interest
- Compound Interest
- Numbers and Divisibility Rules
- Allegations and mixtures
- Analytical Reasoning
- Linear sitting arrangement
- Circular sitting arrangement
- Parallel sitting arrangement
- Blood Relation
- Distance and Direction
- Coding and Decoding

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Softskills

- Introduction to Communication Skills
- Confidence Building and Public Speaking
- English Grammar
- Business English
- Advanced Communication Skills
- Group Discussion
- Resume Building and Cover Letter
- Interview Preparation
- Email Writing
- Dressing / Attire / Grooming
- Public Speaking and Presentation Skills
- Interpersonal Skills and Assertiveness
- Time Management
- Stress Management
- One to One Counseling Session for needy candidates

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Operating Systems

- Operating Systems an Overview
- Types of Operating Systems
- Components of an Operating System
- An overview of File Systems
- Process and Memory Management
- User Management
- Operating System Security
- Device Drivers
- Installing an OS using Virtual Box
- Operating Systems in Cloud

Software Engineering

- Introduction to Software Engineering
- Software Development Life Cycle
- SDLC Models
- Agile SCRUM
- Requirement Analysis
- Project Management
- Design
- Introduction to UML
- Coding / Implementation
- Testing
- DevOps

Git & GitHub

- Introduction
- Installation & Lifecycle
- Create & clone operation
- Perform, Review & commit changes
- Push, update, stash, move operation
- What is GitHub?
- Create a Repository
- Create a Branch
- Make a Commit
- Open a Pull Request

Credit System

- Mock Interviews (Module wise)
- Techinical quizzes
- Machine Test
- Project Presentations
- **Assignments**

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