

ActiveNET®

Enterprise Solution Company

Only Institute covers all Latest Web Technologies

Suryanarayana

Always Latest, Always First

Complete Web Technology

Course Content

HTML, CSS, JavaScript, HTML5, CSS3, jQuery, Bootstrap, AngularJS, node.js, Angular2, Express.js, MongoDB

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HTML

- HTML Introduction
- HTML Document Elements
- Container Elements (Block Level Element & Inline Elements)
- Difference between applying attributes on HTML tags and separating styles using inline, internal and external style sheets using Tag, ID, CLASS selectors
- Heading Elements
- Text Formatting Elements
- Image Elements
- Anchor Elements
- FRAMESET & FRAME Elements
- Menu Elements (Ordered/Unordered Elements)
- Table Elements
- Formatting Layout with <P>, <DIV>, and Elements

- FORM Elements

CSS

- CSS Introduction, CSS Syntax, CSS Selectors
- CSS Backgrounds, CSS Text, CSS Fonts, CSS Links, CSS Lists, CSS Tables, CSS Box Model, CSS Border, CSS Outline, CSS Margin, CSS Padding, CSS Dimension, CSS Display, CSS Max-width, CSS Position, CSS Float, CSS Inline-block, CSS align, CSS Pseudo classes, CSS Pseudo Element, CSS Navigation Bar, CSS Image Gallery, Image Opacity, CSS Image Sprites, CSS Attribute Selectors.

JavaScript

- Importance of JavaScript, Difference between Object Oriented and Object Based Programming Languages.
- Creation of JavaScript Code
- Var Declarations, Conditions, Loops, Data type Conversions, Operators, Writing and Accessing Functions.
- JavaScript supporting Events, JavaScript Objects
 - Window, Window.document, String, Date, Math, Number, Array, Boolean, RegExp, XMLHttpRequest and ActiveXObject.
- How to access HTML elements in JavaScript using hierarchical way and selector way.
- How to manipulate HTML elements using HTML DOM
- How to make AJAX call, get the XML or JSON output and read it using XML DOM and JSON Parser.
- HTML FORM validations using JavaScript.

HTML5

- Difference between Semantic and Non-Semantic Elements
- HTML5 New Elements
 - (semantic elements - <header>, <footer>, <article>, <section>, <aside>, <details>, <figcaption>, <figure>, <main>, <mark>, <nav>, <summary>, <time>,
 - control attributes - number, date, time, calendar, range,
 - graphic elements - <svg>, <canvas>, multimedia elements - <audio> and <video>)
- HTML5 API (Geo, Drag and Drop, Local Storage, Application Cache, Web Socket, SSE)

CSS3

- CSS3 Modules (Selectors, Box Model, Backgrounds and Borders, Image Values and Replace Content, Text Effects, 2D/3D Transformations, Animations, Multiple Columns, User Interface.
- Rounded Corners, Border Images, Backgrounds, Colors, Gradients, Shadows, Text, Box Sizing, Flexbox, Media Queries
- RWD Intro, RWD View Port, RWD Grid View, RWD Media Queries, RWD Images, RWD Videos, RWD Frameworks
- Web Safe Fonts, Animate, Units, PX-EM Converter, Colors, Color Values, Color HEX, Color Groups,

jQuery

- **jQuery Introduction**
 - Intro, Syntax, Selectors, Events
- **jQuery Effects**
 - hide(), show(), slide(), animate(), stop(), callback(), chaining
- **jQuery HTML**
 - get(), set(), add(), append(), prepend(), remove(), css(), dimensions
- **jQuery Traversing**
 - traversing, ancestors, descendants, siblings, filtering
- **jQuery AJAX**
 - load(), get(), post()
- **jQuery Misc**
 - noConflict()

Bootstrap

- **What is Bootstrap? Bootstrap History. Why use Bootstrap? How to install Bootstrap?**
- **Bootstrap Grids (Bootstrap Grid System, Grid Classes, Basic Structure of Bootstrap Grid, Equal, Unequal columns.**
- **Bootstrap Typography (Default Settings, <h1> - <h6>, <small>, <mark>, <abbr>, <blockquote>, <dl>, <code>, <kbd>, <pre>, Context Colors & Backgrounds, More Typography Classes)**
- **Bootstrap Tables (Basic Table, Striped Rows, Bordered Table, Hover Rows, Condensed Table, Contextual Classes, Responsive Tables)**
- **Bootstrap Images (Rounded Corners, Circle, Thumbnail, Responsive Images, Image Gallery, Responsive Embeds)**
- **Bootstrap Jumbotron and Page Headers (Creating Jumbotron, Inside Container, Outside Container, Page Header)**
- **Bootstrap Wells, Alerts, Buttons, Button Groups, Glyphicons, Badges/Labels, Progress Bars, Pagination, Pager, List Groups, Panels, Dropdowns, Collapse, Tabs/Pills, Navbar, Forms, Inputs, Inputs2, Input Sizing, Carousel, Modal, Tooltip, Popover, Scrollspy, Affix**
- **Bootstrap Themes (Templates, Simply Theme, Company Theme, Band Theme)**

AngularJS

- **Angular Introduction (How to install, Basic Page, Comparing JavaScript with AngularJS, Directive, Expression, Module, Controller)**
- **Angular Expression, Directives, Controllers, Filters, #http/AJAX, Tables, SQL, DOM, Events, Modules, Forms, Validation, Angular API (Comparing Objects, Iterating Objects, Converting Data), AngularJS with Twitter Bootstrap, Page Includes, Routers in a SPA, Calling RESTful Service & consuming JSON Formats.**

node.js

- **node.js installation, Environment variable setup, node.js runtime environment, and first Hello program**
- **What is node.js, Features of node.js, Who uses node.js, Concepts, Where to use node.js**
- **Second application on node.js (Import required modules, Create Server, read Request and return Response)**

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- Installing modules using npm, Global Vs Local Installation, Using package.json, Attributes of package.json, Updating a module, Searching a module, Create a module
- node.js callback concepts (What is Callback, Blocking code example, Non-blocking code example)
- node.js Event Loops (Event Driven Programming, How Node Application Works)
- node.js Event Emitters - Event Emitter Class
- node.js Buffers (Creating Buffers, Writing to Buffers, Reading from Buffers, Converting Buffers to JSON, Concatenating Buffers, Compare Buffers, Copy Buffer, Slice Buffer, Buffer Length and other methods of Buffer)
- node.js Streams (What are Streams - Readable, Writable, Duplex, Transform, Reading from Streams, Writing to Streams, Piping Streams, Chaining Streams)
- node.js File System (Synchronous Vs Asynchronous, Open a File, Flags, get File Information, Writing File, Reading File, Closing File, Truncate File, Delete File, Create Directory, Read Directory, Remove Directory)
- node.js Global Objects (_filename, _dirname, setTimeout(cb, ms), clearTimeout(t), setInterval(cb, ms), Global Objects - Console, Process)
- node.js Utility Methods (OS Module, Path Module, Net Module, DNS Module, Domain Module)
- node.js Web Module (Web Application Architecture, Creating Web Server using Node, Making a request to node.js server, Creating Web client using Node)
- node.js Express Framework (Overview, Installation - body-parser, cookie-parser, multer, Hello World Example, Request & Response, Basic Routing, Serving static files, GET Method, POST Method, File Upload, Cookie Management)
- node.js RESTful API (What is REST Architecture, RESTful Webservice, Creating RESTful for a Library, List Users, Add User, Show Detail, Delete User,)
- node.js Scaling Applications (child processes - child.stdin, child.stdout, child.stderr, 3 ways to create child processes - exec, spawn, fork)
- node.js Packaging (JXCore installation, Packaging Code, Launching JXFile)

Angular2

Module 1: Introduction to Angular 2

- Setting up Angular Development Environment
- Understanding Angular Framework
- Angular Architecture
- Angular modularity
- Component Structure
 1. Decorators
 2. Selector
 3. Template
 4. Style
 5. Component Class

Module 2: Bootstrapping process

- Understanding Angular Bootstrap process

- Understanding system configuration
- Understanding the implementation of NgModule
- Building the first App - 'Hello Angular Js 2'

Module 3: Introduction to Typescript

- Introduction Typescript
- Configuring Typescript transpiler

Module 4: Developing an application with data binding and directives

- Components
- Attribute directives
- Structural directives
 1. *ngIf
 2. *ngFor
 3. ngSwitch ... ngSwitchCase
- Implement data transformation using Pipes
- Assignment

Module 5: Form inputs and Events

- Implement Data Binding
- Implement one-way and two-way data binding
- Implement Event handling
- Implement Error handling
- Assignments

Module 6: Apply styles to the components

- Create external Style components
- Apply styles
- Assignments

Module 7: Dependency Injection

- Understanding Importance refactoring
- Creating reusable components
- Implementing Dependency Injection to consume a component
- Implementing Promise pattern

Module 8: Implementing Routes

- Implement Route path
- Associate components to paths
- Route with search value
- Assignment
- Project Begins

Modules 9: Implement HTTP request for get and post operations on RestFul API

- HTTP client overview
- Implement RxJS module for HTTP request and Responses
- Fetch data with http.get
- Post data with http.post
- Processing JSON data
- Error handling
- Understand Promise vs. Observables
- Project

Module 10: Implement test environment in Angular

- Install Jasmine
- Configure jasmine
- Create test cases
- Project

Module 11: Project discussion

- Creating modules
- Publishing into Node package
- Capstone Project

Express.js

- Overview of Express.JS
- Express.js Environment
- HelloWorld Program
- Routing
- HTTP Methods
- URL Binding
- Middleware
- Templating
- Serving Static Files
- Form Data
- Database
- Cookies
- Sessions
- Authentication
- RESTful APIs
- Scaffolding
- Error Handling

MongoDB

- Overview of MongoDB
- Advantages
- Environment
- Data Modeling
- Create, Drop Database

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- Create, Drop Collection, Datatypes
- Insert, Update, Query, Delete Documents
- Projection, Limit Records, Sort Records
- Indexing, Aggregation, Replication, Sharding