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# PRANVI COMPUTECH

## SALIENT FEATURES:-

- Get trained yourself by professional corporate trainer.
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- Complete implementation of each example from scratch.
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- Online training is also available.

### Available Techonlogies:

C, C++, Java, HTML, CSS, Angular, NodeJS, MEAN Stack, Salesforce

### Assistance for:

Algorithms, Data Structures, Computer Graphics, Publishing Journal Papers Etc.

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# MEAN Full Stack Training Program Proposal

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This program includes HTML, CSS, Bootstrap, JavaScript, TypeScript, Angular, NodeJS, ExpressJS, MongoDB [105H]* and will follow through direct implementation of concepts from 'Contents' with interview related theoretical points.

At the end of program participants will get notes and practical examples in soft form covered during the same.

Target audience: - anyone literate with OOP.

Prerequisites: - basics of Object Oriented Programming.

| Module | Name | Hours* |
|---|---|---|
| 1 | HTML CSS | 20 |
| 2 | Bootstrap | 20 |
| 3 | Javascript | 15 |
| 4 | Typescript | 5 |
| 5 | Angular | 30 |
| 6 | NodeJS | 15 |

## Contents

### 1. HTML and CSS

a. Intoduction to HTML
b. History of HTML
c. Fetures of HTML
d. HTML Tags
e. HTML Skeleton
f. HTML Head Section
g. HTML Body Section
h. HTML Attributes
i. HTML Parameters
j. HTML Head Section Tags

k. HTML Body Section Tags
l. Introduction to CSS
m. History of CSS
n. Types of CSS
o. CSS Ruleset
p. CSS Selectors
q. CSS Colours
r. CSS Text formatting
s. CSS Text Decoration
t. CSS Text shadows
u. CSS Fonts
v. CSS Backgrounds
w. CSS Borders
x. CSS Outlines
y. CSS Links
z. CSS Forms

## 2. Bootstrap

a. Introduction To Bootstrap
b. Bootstrap Colours
c. Bootstrap Lists
d. Bootstrap Modals
e. Bootstrap Tables
f. Bootstrap Input Groups
g. Bootstrap Grid System
h. Bootstrap Forms
i. Bootstrap Badge
j. Bootstrap Breadcrumb
k. Bootstrap Spinner
l. Bootstrap Buttons
m. Bootstrap Cards
n. Bootstrap Alert
o. Bootstrap Progressbar
p. Bootstrap Navs
q. Bootstrap Nav bars

r. Bootstrap Carousel
s. Bootstrap Images
t. Bootstrap Positional Attributes
u. Bootstrap Jumbotron
v. Bootstrap Tool tip
w. Bootstrap Pagination
x. Bootstrap Popover
y. Bootstrap Accordian
z. Bootstrap Toast

## 3. Javascript#

a. Introduction
b. Environmental Setup
c. Variables
d. Functions
e. Prototype chaining
f. JSON
g. Promises
h. async and await
i. Callbacks
j. Call, apply and bind functions
k. Closure
l. Datastructures
m. IIFE
n. Event Bubbling and event capturing
o. Generators and iterators
p. Array Manipulators

## 4. Typescript#

a. Variables
b. Named functions
c. Anonymous functions
d. JSON
e. Classes

## 5. Angular

a. Introduction
b. Project Structure
c. Component
i. @Component Decorator
ii. First component in angular
iii. Generating Component using Angular CLI
iv. Configuration file
v. Registering components in Configuration File
d. Directives
i. ngModel
ii. click
iii. ngFor
iv. ngIf
v. ngSwitch
vi. ngSubmit
e. Single Page Application
i. Introduction to Routing and navigation
ii. Creating angular project with enabling Routing Options
iii. Basic Routing
iv. Configuring Routes
v. RouterOutlet
vi. Programmatic Navigation
vii. Nested Routing in SPA
viii. Passing and Getting route parameters in SPA
ix. Lazy Loading
x. Route Guards
f. Custom Modules
i. Introduction
ii. Advantages
iii. Generating Modules using Angular CLI
g. Custom Services
i. Generating Services using Angular CLI
ii. @Injectable Decorator

- h. Dependency injection
- i. Forms
  - i. TDF
  - ii. MDF
  - iii. Implementing Default Validations
  - iv. Implementing Custom Validations
- j. Component Communication
  - i. @ViewChild
  - ii. @ViewChildren
  - iii. @Input
  - iv. @Output
- k. Pipes
  - i. Predefined Pipes
  - ii. Custom Pipes
    - 1. @Pipe Decorator
    - 2. Generating Pipes using Angular CLI
- l. Testing
  - i. Introduction
  - ii. What is automation Testing
  - iii. Types of Tests
  - iv. Jasmin With Karma
- m. Custom Directives
  - i. Manipulation of DOM elements
  - ii. Attribute type custom directives
  - iii. Structural type custom directives
- n. HTTP Services
  - i. Handling Errors
  - ii. Handling Unexpected Errors
  - iii. Handling Expected Errors
  - iv. Throwing Application-specific Errors
  - v. Handling Bad Request Errors
  - vi. Interceptor
  - vii. Http get request
  - viii. Http post request
  - ix. Series calls
  - x. Parallel calls

    - xi. Interaction with static files
    - xii. Interaction with MySql
    - xiii. Token based authentication using MySql
    - xiv. Interaction with MongoDB
- o. Mini-Project

## 6. NodeJS

- a. Introduction of NodeJS
- b. Modules in NodeJS
    - i. Native modules
    - ii. Third Party modules
- c. HTTP Server
- d. HTTP Get parameters
- e. HTTP Post parameters
- f. Express Module
- g. Express Get parameters
- h. Express Post parameters
- i. Express URL parameters
- j. Creating Modules in Express
- k. Imports and Exports in Express
- l. Middleware in express
- m. File Operations
    - i. Synchronous and Asynchronous File Operations
    - ii. Opening a file
    - iii. File Opening Modes
    - iv. Reading a file
    - v. Writing data to files
    - vi. Appending data to file
    - vii. Deleting a file
- n. Interaction with MySql database
    - i. MySQL CRUD operations
- o. Token Based Authentication System
- p. Connection Pooling
- q. Uploading Images to Server
- r. Interaction with MongoDB
    - i. MongoDB CRUD operations

## 7. Add on

a. MongoDB
   - i. Introduction
   - ii. Installation
   - iii. MongoDB databases
   - iv. MongoDB Collections
   - v. MongoDB Documents
   - vi. Inserting Documents
   - vii. Fetching Documents
   - viii. Updating Documents

b. MySql

** Duration of program in approximate hours.*

*# includes ONLY required concepts.*