### +91 8959490906



# **PyStack Pro** Python Full Stack Development Mastery

- 3 Days Free Trail Session
- 150 Live Interactive lectures
- 250+ hands-on exercises
  - 0000



231, Veda Business Park, Above Tinkus cafe, Bhawarkua Main Rd, near Apple Hospital, Indore

**More Information** 

Www.codemantra.org





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# FRONTEND USING REACT JS

#### Module 1: Introduction To Web Development

- Introduction To Web Development.
  Overview Of Html, Css, Javascript. Setting Up Development Environment.
- Introduction To Html: Structure, Tags, Elements. Creating Basic Html Documents. Part-1
- Introduction To Html: Structure, Tags, Elements. Creating Basic Html Documents. Part-2
- Html Forms And Input Elements.
  Understanding Form Elements Such As Input, Textarea, Select, Etc. Part-1
- Html Forms And Input Elements.
  Understanding Form Elements Such As Input, Textarea, Select, Etc. Part-2
- Introduction To Css: Syntax, Selectors.
  Basic Styling Concepts Including Colors, Fonts, And Backgrounds. Part-1
- Introduction To Css: Syntax, Selectors.
  Basic Styling Concepts Including Colors, Fonts, And Backgrounds. Part-2
- Css Box Model. Understanding Padding, Margin, Border. Part-1
- Css Box Model. Understanding Padding, Margin, Border. Part-2
- Css Layouts. Introduction To Positioning, Float, And Display Properties.
- Doubt Session 1 (day 11): Clarify Doubts Related To Html And Css Basics.

#### Module 2: Intermediate Css

- Understanding Flex Containers And Flex Items
- Flexbox Properties And Alignment.
- Learning Grid Containers And Grid Items.
- Grid Properties And Alignment.

- . Introduction To Responsive Web Design Concepts.
- Media Queries And Responsive Strategies.
- . Implementing Responsive Layouts Using Media Queries.
- Media Query Best Practices.
- Transition Properties And Timing Functions.
- Applying Transitions To Various Elements.
- Keyframes, Animation Properties, And Animation Timing.
- Creating Complex Animations.
- Building Responsive Layouts. Applying Css Techniques To Create Responsive Web Pages. Part-1
- Building Responsive Layouts. Applying Css Techniques To Create Responsive Web Pages. Part-2
- Clarify Doubts Related To Intermediate Css.

#### Module 3: Introduction To JavaScript

- Variables, Data Types. Declaring Variables, Understanding Data Types.
- Conditionals In Javascript. Using If-else Statements
- Loops In Javascript. Implementing For And While Loops.
- Defining Functions And Function Expressions.
- Understanding Function Scope And Block Scope.
- Creating Arrays, Accessing Elements, Array Methods.
- Common Array Methods Like Push, Pop, Shift, Unshift.
- Array Methods Like Map, Filter, Reduce.

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- Creating Objects, Accessing Properties, Object Methods.
- Understanding Encapsulation, Inheritance, And Polymorphism.
- Introduction To Dom Manipulation, Selecting Elements- Part-1
- Introduction To Dom Manipulation, Selecting Elements. Part-2
- Dom Manipulation. Implementing Interactive Features Using
- javascript Dom Manipulation. Part-1
- Dom Manipulation. Implementing Interactive Features Using Javascript Dom Manipulation. Part-2
- Clarify doubts related to Advanced JavaScript.

## Module 4: Advanced JavaScript

- Overview of ES6+ features.
- Understanding arrow function syntax and benefits.
- Destructuring arrays and objects
- Using spread and rest operators
- Understanding promises and asynchronous programming.
- Working with async functions and await keyword
- Implementing error handling using try-catch blocks.
- Understanding higher-order functions and their usage.
- Understanding closures and their practical applications
- Exploring prototype-based inheritance in JavaScript.
- Introduction to ES6 modules and module syntax
- Making HTTP requests using the Fetch API.
- Building Interactive JavaScript Applications. Integrating advanced JavaScript concepts into interactive web applications. PART-1

- Building Interactive JavaScript Applications. Integrating advanced JavaScript concepts into interactive web applications. PART-2
- Clarify doubts related to Advanced JavaScript.

# Module 5: Introduction to React

- Introduction to React: Setting up Environment. Creating a React app.
- JSX Syntax. Understanding JSX syntax and its benefits.
- Components in React. Creating functional and class components
- Props in React. Passing data to components using props
- State in React. Managing component state.
- Lifecycle Methods. Understanding component lifecycle methods
- Handling Events in React. Implementing event handlers in React.
- Conditional Rendering. Rendering components conditionally
- Lists and Keys in React. Rendering lists and using keys
- Forms in React. Handling form submission and form inputs
- Styling React Components. Styling React components using CSS and inline styles
- React Router: Navigation. Implementing client-side routing in React applications.
- Building React Application. Building a complete React application with multiple components and features. PART-1
- Building React Application. Building a complete React application with multiple components and features.PART-2
- Building React Application. Building a complete React application with multiple components and features.PART-3
- Building React Application. Building a complete React application with multiple components and features.PART-4

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- Building React Application. Building a complete React application with multiple components and features.PART-5
- Building React Application. Building a complete React application with multiple components and features.PART-6
- Building React Application. Building a complete React application with multiple components and features.PART-7
- Clarify doubts related to React.

#### **MODULE 6: GIT AND GITHUB**

- Introduction to Version Control and Git Basics. Understanding version control and basic Git commands.
- Working with Repositories. Creating repositories, adding files, and committing changes
- Git Workflow: Branching and Merging. Branching, merging, and resolving conflicts
- Collaborating with Git: Remotes and Forks. Working with remote repositories and forks.
- : Introduction to GitHub. Overview of GitHub and its features.
- Using GitHub Issues and Pull Requests. Managing project tasks and contributing code.
- Git Best Practices. Understanding best practices for Git usage.
- Using Git for Version Control.
  Collaborating on a project using Git and GitHub. PART-1
- Using Git for Version Control.
  Collaborating on a project using Git and GitHub. PART-2
- Clarify doubts related to Git and GitHub.

#### Module 7: Advanced React And Final Project

• Context Api And Redux. Managing State In Large React Applications.

- React Hooks. Understanding And Using React Hooks.
- Optimizing Performance In React.
  Performance Optimization Techniques In React.
- Testing React Applications. Writing Unit Tests For React Components.
- Advanced Styling In React. Styling React Components Using Css in-js Libraries And Other Advanced Techniques.part-1
- Advanced Styling In React. Styling React Components Using Css in-js Libraries And Other Advanced Techniques.part-2
- Advanced Styling In React. Styling React Components Using Css in-js Libraries And Other Advanced Techniques.part-3
- Advanced Styling In React. Styling React Components Using Css in-js Libraries And Other Advanced Techniques.part-4
- Advanced Styling In React. Styling React Components Using Css in-js Libraries And Other Advanced Techniques.part-5
- Advanced Styling In React. Styling React Components Using Css in-js Libraries And Other Advanced Techniques.part-6
- Working On The Final Project Incorporating Advanced React Concepts And Best Practices.part-1
- Working On The Final Project Incorporating Advanced React Concepts And Best Practices.part-2
- Working On The Final Project Incorporating Advanced React Concepts And Best Practices.part-3
- Project Presentation And Review.
  Presenting The Final Project And Receiving Feedback
- Final Doubt Clearing Session And Project Presentation.

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# PYTHON

#### Introduction to Python

- Overview of Python
- Installing Python
- Basic Syntax and Data Types
- Python syntax basics: variables, data types, and operators

### **Control Flow**

- Conditional statements: if, elif, else
- Looping constructs: for, while
- Break and continue statements

#### Data Structures and Collections Datatype

- Conditional statements: if, elif, else
- Looping constructs: for, while
- Break and continue statements

## **Functions and Modules**

- Defining Functions
- Parameters and Arguments
- Returning Values
- Lambda Functions
- Map, Filter
- Modules and Packages

#### **Object-Oriented Programming** (OOP)

- Classes and Objects
- Attributes and Methods
- Inheritance and Polymorphism
- Encapsulation and Abstraction

# **File Handling**

- Reading, Writing Files, Append and Delete
- Working with CSV and JSON Files

# **Error Handling**

- Exceptions and Errors
- Try-Except Blocks
- Finally Block

### **Error Handling**

- Exceptions and Errors
- Try-Except Blocks
- Finally Block

## Multithreading

- Threading Module
- Thread Creation
- Starting and Joining Threads
- Thread Synchronization
- Daemon Threads

# **DJANGO** Introduction to Django

- Overview of Django framework
- Installing Django
- Setting up a Django project

#### **Django Views**

- Creating Views
- Function-Based Views (FBVs) vs. Class-Based Views (CBVs)
- URL Mapping
- Django messages

#### **Templates**

- Django Template Language (DTL)
- Template Inheritance
- Jinja Tags
- Context Data

## **Django Models**

- Creating Models
- Fields and Field Options
- Migrations and Migrate
- Using Foreign key
- Custom User Model

#### Forms

- HTML Forms
- Django Forms
- Form Validation

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#### Django Admin

- Overview of Django Admin interface
- Customizing Django Admin

#### **Django ORM**

- QuerySets
- Filtering and Get, All Querying Data
- Aggregation and Annotations

#### Authentication and Authorization

- User Authentication
- Permissions and User Roles

#### **RESTful APIs with Django REST** Framework

- Introduction to REST APIs
- Setting up Django REST Framework
- Creating RESTful endpoints
- Api Using and Integration

#### **Capstone Project Development**

#### Deployment

- Preparing Django application for deployment
- Deploying Django application on platforms PythonAnywhere

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