PYTHON REACT FULL STACK TRAINING CURRICULAM

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Python – React Full Stack - Syllabus (90 Hrs.)

Module 1: Introduction To Python

- Short History & Features
- Python Installation
- Python Interpreter
- Python Basic Operators
- Python Variables

Module 2: Python Data Types

- Declaring & Using Numeric Data Types
- Using String Data Type & String Operations
- Defining List & List Slicing
- Python Tuples
- Dictionary Data Types

Module 3: Programming Concept

- Conditional Blocks using if, Else & Else if
- While Statements
- While Loop With Else Statement
- For & While Loops
- For Loop With Else

Module 4: Functiond and Modules

- Define a Function
- Call a Function
- Default Arguments
- Function Arguments

- Lambda Functions
- Recursive Functions
- Creating Modules
- Importing Modules
- Packages

Module 5: Python file operation

- Opening & Closing a File
- Read & Write Functions
- File Methods
- Directories in Python

Module 6: Python Exception Handling

- Handling Exceptions
- Exception With Arguments
- Raising an Exception
- User Defined Exception

Module 7: OOP concept with Python

- Concept of Class, Object & Instances
- Constructor, Class Attributes & Destructors
- Inheritance, Overlapping & Overloading Operators
- Encapsulation & Data Hiding
- Method Over Riding & Polymorphism

Module 8: Python Regular Expression

- Regular Expression Patterns
- Regular Expression Modifiers
- Powerful Pattern Match Function

- Replace & Search

Module 9: Python Database Interaction

- Database Connection Using Python
- Create a Database
- Creating DB Table
- Insert & Update Records
- Retrieve & Delete Records
- Disconnecting from a Database.

Module 9: Introduction to Django

- What is Django
- Django Features
- MVC- Model View Template Advanced Education Services
- Install & Setup Django
- Files in Django
- Database Connections

Module 10: URL patterns and Views

- Django Admin
- URL Pattern Advanced Education Services
- Generic Views
- Session, Cookie & Templates
- Form Classes
- Validation
- Authentication
- CURD Operations

React JS

Module 1: Introduction To React

- Introduction & Features
- Overview of JSX
- React Components
- Binding an Event Handler

Fragments in React

- Class Components
- GET & POST in React
- Folder Structure in React Js
- Functional Components
- Event Handling
- Indexing & Keys in React
- Error in Reacts

Module 2: React Js with Typescript

- What is TypeScript?
- Benefits of TypeScript with React
- Types in JavaScript
- Inference in React
- Void, Never Unknown Types in React
- Array, Tuple, Object in React
- Creating Generic Interfaces and Classes in React
- Component Props vs Object Props
- Type Function with useState
- Type Function with useReducer
- Type Ref Function Components

- Linting & Auto Formatting

- Babel

- Webpack

- Project with React using TypeScript

Module 3: Code Splitting

- Code Splitting & Suspense

- Route Based Code Splitting

- Lazy Loading

Module 4: Routing with react router

- Setting Up React Router

- Understand Routing in Single Page Applications

- Browser Router & Hash Router Components

- Configuring Route with Route Component

- Using Switch Component to Define Routing Rules

- Making Routes Dynamic Using Route Params.

- Working with Nested Routes

Module 5: FLUX , REDUX OVERVIEW

- Flux Architecture

- Flux Components

- Stores

- Dispatchers

- View Controllers

- Actions

- Views

- Flux and React Works Together

- Introduction to One Store
- Provider Component
- Actions

Module 6: HOOKS

- Understanding Hooks
- The Use State Hook
- Side Effects Using the Use Effect Hook
- The Use Context Hook
- The Use Reducer Hook
- Writing Your Own hook

Module 7: CODE SPLITTING

- Code Splitting & Suspense
- Route Based Code Splitting
- Lazy Loading

Module 8: ISOMORPHIC REACT

- Server Side Rendering
- SSR with React - Setup & Server
- SSR with React - The Tool Chain

Module 9: WEBPACK PRIMER AND ISOMORPHIC REACT

- Introduction to Webpack
- Setting up & Installing Webpack
- Working with the Configuration File of Web pack
- Working with Loaders & Plugins
- Setting Up a Hot Module Replacement

Module 10: Live Project Implementation