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Curriculum Of Full Stack With Python

WEB DESIGNING (HTML)

MODULE 1: WEB PROGRAMMING

INTRODUCTION

- ? Architecture of a website
- ? Different technologies in making the website
- ? Web Development Introduction

MODULE 2: HTML-INTRODUCTION

- ? History of HTML
- ? What you need to do to get going and make your first HTML page
- ? What are HTML Tags and Atributes?
- ? HTML Tag vs. Element
- ? HTML Atributes

MODULE 3: HTML-HEADERS

- ? Title
- ? Base
- ? Link
- ? Styles
- ? Script
- ? Meta

MODULE 4: HTML-BASIC FORMATTING

TAGS

- ? HTML Basic Tags
- ? HTML Formating Tags
- ? HTML Color Coding

MODULE 5: HTML-GROUPING USING DIV

SPAN

- ? Div Tag
- ? Span Tags

MODULE 6: HTML SEMANTIC ELEMENTS

- ? <article>
- ? <aside>

? <details>

? <figure>

? <footer>

? <header>

? <main>

? <mark>

? <nav>

? <section>

? <summary>

? <time>

MODULE 7: HTML-LISTS

- ? Unordered Lists
- ? Ordered Lists, Definition list

MODULE 8: HTML-IMAGES

- ? Image and Image Mapping
- ? Background Images

MODULE 9: HTML-HYPERLINK

- ? Anchor Tag.
- ? URL - Uniform Resource Locator
- ? Relative and Absolute Address

MODULE 10: HTML-TABLE

- ? < table >
- ? < th >
- ? < tr >
- ? < td >
- ? < caption >
- ? < thead >
- ? < tbody >
- ? < foot >
- ? < colgroup >
- ? < col >

MODULE 11: HTML-I FRAME

- ? Using I frame as the Target



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MODULE 12: HTML-FORM

HTML Forms
HTML Form Atributes
HTML Form Elements
HTML Input Types
HTML Input Atributes
HTML Input form Atributes
< text area >
< buton >
< select >
< label >

MODULE 13: HTML GRAPHICS

HTML Canvas Graphics
HTML SVG Graphics

MODULE 14: HTML MEDIA

HTML Media
HTML Video & Audio
HTML Plug-in
HTML YouTube

MODULE 15: HTML APIS

HTML Geolocation
HTML Drag/Drop
HTML Web Storage & Workers
HTML SSE

CSS

MODULE 1: CSS INTRODUCTION

What is CSS?
Why Use CSS?
CSS Syntax

MODULE 2: CSS CORE PROPERTIES

CSS Color
CSS Backgrounds

CSS Box Model

CSS Borders
CSS Margins
CSS Paddings
CSS Box Sizing

MODULE 3: CSS UNITS

Absolute Units, Relative Units
Max-Width, Min-Width

MODULE 4: CSS STYLING

CSS Text
CSS Fonts
CSS Outline
CSS Alignment
Important

MODULE 5: STYLING ELEMENTS

Links
Lists
Dropdowns
Tables
Images
Image-Sprite
Image-Filters
Clip-Path
Forms

MODULE 6: NAVBAR

Vertical-Navbar
Horizontal-Navbar

MODULE 7: CSS SELECTORS

Simple Selectors
Combinator selectors
Pseudo-class selectors
Pseudo-elements selectors
Attribute selectors



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MODULE 8: CSS POSITIONS

- ❑ Position
- ❑ Z-Index
- ❑ Float
- ❑ Clear
- ❑ Overflow

MODULE 9: CSS LAYOUTS

- ❑ Display
- ❑ Block
- ❑ Inline
- ❑ Inline-Block
- ❑ Grid
- ❑ Flex-Box

MODULE 10: CSS TRANSFORMATION

- ❑ CSS 2D Transforms
- ❑ CSS 3D Transforms
- ❑ CSS Transition
- ❑ CSS Animations

MODULE 11: CSS RESPONSIVE

- ❑ Responsive Introduction
- ❑ Responsive Viewport
- ❑ Responsive Breakpoint
- ❑ Media Queries

JAVASCRIPT

MODULE 1: INTRODUCTION

- ❑ What is JavaScript?
- ❑ Why Use JavaScript?
- ❑ Syntax
- ❑ Statements
- ❑ Comments

MODULE 2: LANGUAGE SYNTAX

- ❑ Data Types

- ❑ Variable Declarations

- ❑ Var vs. Let
- ❑ Constant
- ❑ Dynamic Type
- ❑ Type of
- ❑ Type Conversion
- ❑ Objects
- ❑ Arrays

MODULE 3: OPERATORS

- ❑ JavaScript Operators.
- ❑ Arithmetic Operators
- ❑ Assignment Operators
- ❑ Comparison Operators
- ❑ Equality Operators
- ❑ Ternary Operators
- ❑ Logical Operators
- ❑ Bitwise Operators

MODULE 4: CONTROL STATEMENT

- ❑ if
- ❑ else
- ❑ if/else
- ❑ switch/case

MODULE 5: LOOP STATEMENT

- ❑ for
- ❑ for/in
- ❑ for/off
- ❑ while
- ❑ do/while
- ❑ Infinite loop
- ❑ Break
- ❑ Continue

MODULE 6: JAVASCRIPT HTML DOM

- ❑ HTML Document object Model
- ❑ DOM Methods



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- ? DOM Documents
- ? DOM Elements
- ? DOM HTML
- ? DOM Forms
- ? DOM CSS
- ? DOM Events
- ? DOM Event Listener
- ? DOM Navigation
- ? DOM Nodes
- ? DOM Collections
- ? DOM Node Lists

MODULE 7: JAVASCRIPT HTML BOM

- ? HTML Browser object Model
- ? JS Window
- ? JS Screen
- ? JS Location
- ? JS History
- ? JS Navigator
- ? JS Popup Alert
- ? JS Timing
- ? JS Cookies

MODULE 8: ARRAY

- ? Array Introduction
- ? Adding, Deleting, Modifying Element
- ? Searching Element
- ? Emptying Element
- ? Combining and Slicing Array
- ? Spread Operator
- ? Looping with Array
- ? Filtering with Array
- ? Mapping with Array
- ? Reducing an Array

MODULE 9: FUNCTIONS

- ? Function Declarations.
- ? Hoisting

- ? Arguments ? The Rest
- Operators ? Default
- Parameters ? Geter and
- Seters ? Try and Catch ?
- Local vs. Global Scope ?
- this keyword

MODULE 10: OBJECTS

- ? Basics
- ? Factory Functions
- ? Constructor
- ? Dynamic Nature of Object
- ? Functions are Objects
- ? Value vs. Reference Type
- ? Enumerating Properties of an Object
- ? Cloning an Object
- ? String
- ? Date

MODULE 11: BUILT-IN OBJECTS

- ? Number
- ? Math
- ? String
- ? Array
- ? Date
- ? Boolean
- ? Regex

MODULE 12: EVENTS

- ? Introduction
- ? Mouse, Keyboard, Form Events
- ? Document/Window Events

MODULE 13: INTRODUCTION TO OOP CONCEPT

- ? Prototype, Module patern
- ? Augmenting type



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- ❑ Closure
- ❑ ES6 Introduction
- ❑ Let & Const
- ❑ Arrow Functions
- ❑ Class and Inheritance
- ❑ Rest and Map Operators
- ❑ Export and Import
- ❑ Modules

MODULE 14: JAVASCRIPT WEB API

- ❑ API Introduction
- ❑ Forms API
- ❑ History API
- ❑ Storage API
- ❑ Worker API
- ❑ Fetch API
- ❑ Geolocation API

MODULE 15: JAVASCRIPT AJAX

- ❑ AJAX Introduction
- ❑ AJAX XMLHttpRequest
- ❑ AJAX Request
- ❑ AJAX Response

MODULE 16: JAVASCRIPT JSON

- ❑ JSON Introduction
- ❑ JSON Syntax
- ❑ JSON Data Types
- ❑ JSON Parse
- ❑ JSON Stringify
- ❑ JSON Objects
- ❑ JSON Arrays

JQUERY

- ❑ Getting started with jQuery
- ❑ Selecting elements
- ❑ Manipulating the page

- ❑ Traversing the DOM and chaining
- ❑ jQuery Utility Methods
- ❑ Handling events and event delegation
- ❑ AJAX, JSON and Deferred
- ❑ Enhancing with Animation effects
- ❑ Grids, Tables with AJAX, Pagination, jQuery UI
- ❑ jQuery Best Practices

BOOTSTRAP 5

MODULE 1: INTRODUCTION

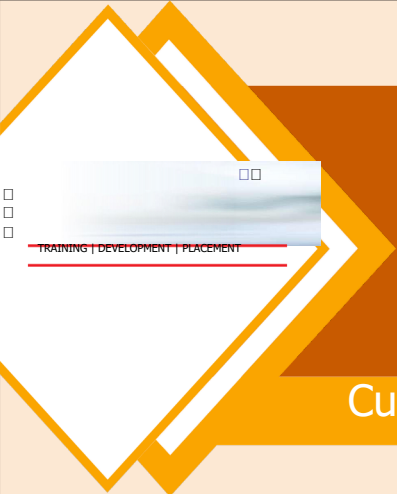
- ❑ Introduction
- ❑ Quick Start After Dark
- ❑ Our First Web Page
- ❑ What's inside?
- ❑ Scripts & Styles
- ❑ Core concepts
- ❑ Summary

MODULE 2: LAYOUT WITH BOOTSTRAP

- ❑ Introduction
- ❑ Grid Layouts
- ❑ Simple Layout
- ❑ Fixed Grids & Fluid Grids
- ❑ Responsive Design
- ❑ Responsive Utilities
- ❑ Inspiration
- ❑ Summary

MODULE 3: EVERYDAY BOOTSTRAP

- ❑ Introduction
- ❑ Typography
- ❑ Tables
- ❑ Forms
- ❑ Buttons
- ❑ Images & Icons
- ❑ Summary



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MODULE 4: BOOTSTRAP COMPONENT

- ? Introductions
- ? Drop Down Menu
- ? Buttons with Menus
- ? Tabs & Pill
- ? The Navbars
- ? Headers, Badgets
- ? Labels And media
- ? Summary

MODULE 5: BOOTSTRAP AND JAVASCRIPT

- ? Introduction
- ? More Buttons
- ? Modals
- ? Tooltips And Popovers
- ? Carousel
- ? Summary

REACT

MODULE 1: INTRODUCTION OF JAVASCRIPT ES 5 AND ES6

- ? Basic JavaScript
- ? Object Based JavaScript
- ? Introduction to ES6
- ? JavaScript Helpers (for Each, filter, map, Filter, every, some)
- ? String Literals
- ? Destructuring
- ? Rest parameters & spread operator
- ? Arrow function
- ? Default parameter
- ? Class: Inheritance, constructor
- ? Promise

MODULE 2: INTRODUCTION TO REACTJS

- ? What React JS?
- ? Why use React JS?
- ? What is Single Page Application?

- ? Why SPA?
- ? React JS Version
- ? REACT DOM
- ? REACT VIRTUAL DOM

MODULE 3: SET UP REACT JS ENVIRONMENT

- ? What is CLI: create-react-app project name
- ? Advantage using CLI
- ? How to debug React JS application.
- ? Installation CLI
- ? Install Node JS & React JS
- ? Create a hello world example
- ? Create React JS Project
- ? Understanding of Folder Structure
- ? How to debug React JS application
- ? Introduction of Babel

MODULE 4: BASIC FEATURES OF REACTJS AND COMPONENTS

- ? React Concepts
- ? JSX
- ? Render Elements
- ? Types of Components
- ? Class Components
- ? Life Cycle Method of Class components
- ? Functional Components
- ? HOOKS in detail
- ? Use of HOOK
- ? What is state
- ? React Forms
- ? Components and Props
- ? State and Lifecycle Handling Events
- ? Practice on above topics

MODULE 5: ROUTING WITH REACT ROUTER

- ? Setting Up React router



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- ❑ Install/ Uninstall React router
- ❑ React Router Version 5
- ❑ React router Version 6
- ❑ Setting up react router
- ❑ Understand routing in single page

applications

- ❑ Working with Browser Router components
- ❑ Configuring route with Route component
- ❑ Making routes dynamic using Route params
- ❑ Working with nested routes
- ❑ Navigating to pages using Link and Nav Link Component
- ❑ Redirect routes using Redirect Component

MODULE 6: KEY FEATURES OF REACTJS

- ❑ Conditional Rendering
- ❑ Lists and Keys
- ❑ Forms

MODULE 7: EVENT HANDLING IN REACT

- ❑ Understanding React event system
- ❑ Passing arguments to event handlers

MODULE 8: WORKING WITH FORMS

- ❑ Controlled components
- ❑ Understand the significance to default Value Prop
- ❑ Using react ref prop to get access to DOM element

MODULE 9: INTRODUCTION TO REDUX

- ❑ What is React Redux
- ❑ Why React Redux
- ❑ Redux Install and setup
- ❑ Actions

- ❑ Reducers
- ❑ Store
- ❑ High Order Component
- ❑ Understanding map State To Props and map Dispatch To Props Usage

MODULE 10: REDUX ADVANCED

- ❑ Async Actions
- ❑ Middleware
- ❑ What is redux saga
- ❑ Install and set up redux saga
- ❑ Working with Saga helpers (Crud Operation)
- ❑ Sagas vs Promises

MODULE 11: REACT WITH DESIGN FRAMEWORK

- ❑ Material UI for design
- ❑ Formic Validation

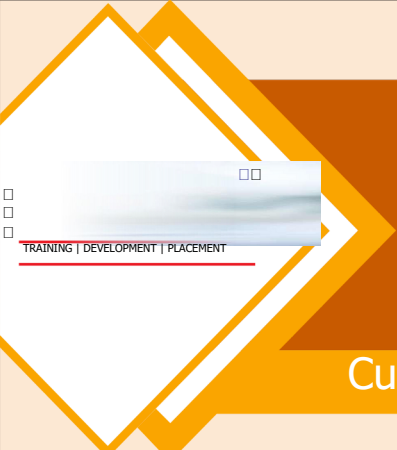
MODULE 12: REACT API'S

- ❑ Introduction https Request
- ❑ Introduction Axios NPM
- ❑ Introduction Slider NPM
- ❑ Integration of any NPM modules
- ❑ Introduction of Google Map NPM

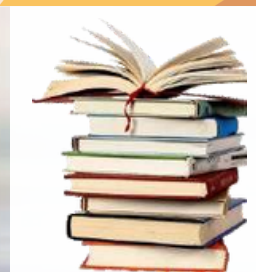
PYTHON

MODULE 1: INTRODUCTION TO PYTHON ❑ What is Python and history of Python? ❑ Unique features of Python ❑ Python-2 and Python-3 differences ❑ Install Python and Environment Setup ❑ First Python Program ❑ Python Identifiers ❑ Keywords and Indentation ❑ Comments and document interlude in

Python



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☐ Command line arguments ☐ Getting User Input ☐ Python Data Types ☐ What are variables? ☐ Python Core objects and Functions ☐ Number and Math's ☐ Week 1 Assignments

MODULE 2: LIST, RANGES & TUPLES IN PYTHON

☐ Introduction
☐ Lists in Python
☐ More About Lists
☐ Understanding Iterators
☐ Generators, Comprehensions and Lambda expressions
☐ Introduction
☐ Generators and Yield
☐ Next and Ranges
☐ Understanding and using Ranges
☐ More About Ranges
☐ Ordered Sets with tuples

MODULE 3: PYTHON DICTIONARIES AND SETS

☐ Introduction to the section
☐ Python Dictionaries
☐ More on Dictionaries
☐ Sets
☐ Python Sets Examples

MODULE 4: INPUT AND OUTPUT IN PYTHON

☐ Reading and writing text files
☐ writing Text Files
☐ Appending to Files and Challenge
☐ Writing Binary Files Manually
☐ Using Pickle to Write Binary Files

MODULE 5: PYTHON BUILT IN FUNCTION

☐ Python user defined functions
☐ Python packages functions
☐ Defining and calling Function
☐ The anonymous Functions
☐ Loops and statement in Python
☐ Python Modules & Packages

MODULE 6: PYTHON OBJECT ORIENTED

☐ Overview of OOP
☐ Creating Classes and Objects
☐ Accessing attributes
☐ Built-In Class Attributes
☐ Destroying Objects
☐ Pillars of OOPS
☐ Inheritance
☐ Encapsulation
☐ Polymorphism
☐ Abstraction

MODULE 7: PYTHON EXCEPTIONS HANDLING

☐ What is Exception?
☐ Handling an exception
☐ try....except...else
☐ try-finally clause
☐ Argument of an Exception
☐ Python Standard Exceptions
☐ Raising an exceptions
☐ User-Defined Exceptions

MODULE 8: PYTHON REGULAR EXPRESSIONS

☐ What are regular expressions?
☐ The match Function
☐ The search Function
☐ Matching vs searching
☐ Search and Replace



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MODULE 9: ADVANCE FUNCTION

- ❑ Lambda function
- ❑ Syntax of lambda function
- ❑ Execution of lambda function
- ❑ Filter function -how it work with normal & lambda function
- ❑ Map function
- ❑ Reduce function

MODULE 10: USING DATABASES IN PYTHON

- ❑ Python MySQL Database Access
- ❑ Install the MySQL dB and other Packages
- ❑ Create Database Connection
- ❑ CREATE, INSERT, READ, UPDATE and DELETE operation
- ❑ DML and DDL Operation with Databases
- ❑ Performing Transactions
- ❑ Handling Database Errors

DJANGO

MODULE 1: DJANGO INTRODUCTION

- ❑ Introduction about Django and Django Components
- ❑ Installing & Configuring Django Components Django
- ❑ Pre-Requisites Downloading & Installing Django Choosing a Database Creating a New Project

MODULE 2: DJANGO VIEW

- ❑ The basics: URLConfs, View functions, Shortcuts, Decorators,
- ❑ File Uploads: Overview, File objects, Storage API, Managing Files
- ❑ Class-based Views: Overview, Built-in display views, Built-in editing views, Using mixins, API reference

- ❑ Advanced: Generating CSV, Generating PDF

MODULE 3: DJANGO TEMPLATE

- ❑ Basics Overview
- ❑ Language overview, Built-in tags and filters
- ❑ Template API, Custom tags and filters
- ❑ Django Template Language
- ❑ Static and Media file
- ❑ Template merging using static and media file.

MODULE 4: DJANGO MODEL

- ❑ Models: Introduction to models, Field, types, Meta options, Model class
- ❑ Query Sets: Making queries, Query Set method, Lookup expressions
- ❑ Model Instances: Instance methods, Accessing related objects
- ❑ Migration: Introduction to Migrations
- ❑ Advanced: Managers, Transactions, Aggregation, Search, Custom fields, Query Expressions, Conditional Expressions Database Functions

MODULE 5: DJANGO FORMS AND MODEL FORMS

- ❑ The basics: Overview, Form API, Built-in fields, Built-in widgets
- ❑ Advanced: Forms for models, Integrating media, Form sets, Customizing validation
- ❑ Session and Cookies Management.
- ❑ Introduction of Session
- ❑ Type of Session storage
- ❑ Introduction of Cookies
- ❑ Advanced: Forms for models, Integrating media, Form sets, Customizing validation

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MODULE 6: DJANGO ADMIN

- 🔗 Admin site
- 🔗 Admin actions
- 🔗 Admin Customizations

MODULE 7: DJANGO REST FRAMEWORK

- 🔗 REST Framework Introduction
- 🔗 Installation of REST Framework
- 🔗 Web browsable API
- 🔗 Creating and Consuming REST API
- 🔗 Consuming and Sending JSON Data through REST
- 🔗 Requests and Responses.
- 🔗 Serialization, Model Serializer
- 🔗 Access REST using POSTMAN, JavaScript, Console Application, Window Application
- 🔗 Security in REST (BASIC, Session, Token Authentication)

MODULE 8: PROJECT WORK

- 🔗 Introduction E-commerce Project
- 🔗 Modules of E-Commerce (User, Admin, Customer, Account, Cart etc.)
- 🔗 Integration of all modules

MODULE 9: DEPLOYMENT PROCESS

- 🔗 Se ngs: Overview, Full list of Se ngs
- Cloud Deployment (Digital Ocean, Heroku, Python anywhere)

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