Python

#CodingMtlbVMM

HISTORY & INTRODUCTION

All about Python Language, Understanding Python Environment Running your First Python understanding Input and output

OPERATORS & BASIC OPERATIONS

Tokens , Data Types, Variables, Working with operators, Controls statements including if-else, loops,

DATA STORAGE

Using string(s) , List(s), Tuple(s), set & Dictionary To store data and understand Associated Library Functions

FUNCTIONS

Understanding their usage, working with Global Creating user-defined functions and extensively Variables and Recursion and Modules, Lambda, Reduce & Filter operations, Date time

FILE HANDLING

Working Text, Reading writing Text File, Binary files, working with CSV Files creating Console Based python APP with CSV files as backedn

OBJECT ORIENTED 1

Understanding concept of classes , objects, data members, member functions, self creating user defined classes , hiding data members

OBJECT ORIENTED 2

Using inheritance, polymorphism and using classes objects in modules

MYSQL

under standing Various DML Statements , Joins, concepts of Keys and learning to create efficient databases

CONNECTING PYTHON TO MYSQL

Using Python to connect with MYSQL Database ., performing CRUD operations in console applications

GRAPHICAL USER INTERFACE

Understanding concept of GUI using tkinter package working with various widgets and creating GUI based Python APP

VERSION CONTROL WITH GIT

Understanding concept of Git & importance of version control , working with core git commands clone, commit, push, pull , branch and merge

INCLUDES PROJECT

GUIDED PROJECT DEVELOPMENT · INDUSTRY ORIENTED PROJECT ·

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99144 87487

Django Framework

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Web Fundamentals

Understanding Difference Between static & Dynamic Website

HTML 5.0 & CSS 3

HTML Pages Understanding Block elements and inline Elements, Tables, Hyperlinks, Images, Videos, Div, Forms, Input Controls

Javascript

Creating Javascript Webpages, Variables, operators, Loops, Conditions, Array, DOM, JSON

Setting up Django

Installing Django Framework, Understanding MVC Architecture & Django Framework

Working With Django Templates

Using Jinja language to parse data in webpages and creating Dynamic Webpages by fetching data from model

Working with Request /Response

Understanding Forms , GET/POST request, HTTP response working with JSON and Dictionary Redirection

Working with Models

Working with ORM and performing SQLite3 CRUD operations with Models, Forms

Data Driven Web Pages

Using MVC Architecture to create Data Driven Web pages in Django

Continuing Django Web Pages

Using templates in django, customizing Look and feel deploying Djnago Webpages

GENERATIVE AI

Understanding LLMs (GPT, Claude, Gemini) integration

Building text generation, chatbots, image generation, summarisation, & content automation.

AGENTIC AI (AI AGENTS)

Designing autonomous AI agents that can plan, reason, and execute tasks

Integrating agents for customer support, task automation, and personalized user experiences.

 DOCKER ESSENTIALS: IMAGES, CONTAINERS & COMPOSE

 VERSION CONTROL WITH GIT

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