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CERTIFICATE IN FULL-STACK DEVELOPMENT - PYTHON

DURATION: 240 Hours

TOTAL CREDITS: 8

COURSE SYLLABUS

Objective

Certificate In Full-Stack Development – Python enables a person to learn the core concepts of both the front-end and back-end programming, to get familiar with the latest web development technologies like Django, learn all about SQL databases, and learn the complete web development process

Exit Profile

- Expertise to develop applications using Python
- Expertise to develop complete web applications/web sites using DJANGO
- Expertise in Database Operations and MySQL

Career Path

- Full-Stack Web Developer - Python
- Frontend developer - Django
- Python developer
- Back-End Developer
- UI Designer

Course Outline

Course Name:	CERTIFICATE IN FULL-STACK DEVELOPMENT - PYTHON	Duration:	240 H
Module	Topic	Dur.	Total Dur.
MODULE -1	Introduction to UI/UX designing	6 H	120 H
	HTML	18 H	
	CSS	18 H	
	JavaScript	30 H	
	JQuery	30 H	
	Bootstrap	18 H	
MODULE -2	Python Programming	30 H	120 H
	RDBMS -MySQL	30 H	
	Web Application development using Django	48 H	
	Introduction to Cloud Computing, Git & GitHub	12 H	

Course in Detail

MODULE-1

INTRODUCTION TO UI/UX DESIGNING

- HTML
- CSS
- JavaScript
- JQuery
- Bootstrap
- Core Java Programming
- RDBMS -My SQL Server
- JDBC
- Servlets
- JSP
- Spring Frameworks
- Hibernate
- Introduction to Cloud Computing, GIT & GITHUB

HTML

- Introduction
- Building Blocks of Web Frontend
- Introduction To HTML
- Basic HTML TAGS
- Advanced HTML Tags & concepts.

CSS

- Introduction to CSS
- CSS Basics
- CSS Advanced

JAVASCRIPT

- Introduction to DHTML
- Javascript Basics
- Javascript Advanced
- Document Object Model
- Manipulating DOM using JS
- DOM Events

JQUERY

- JQuery Basics
  - What is JQuery?
  - Adding JQuery to a web page
  - JQuery Syntax
  - JQuery Selector
  - JQuery Events
- JQuery Advanced
  - HTML Manipulations
  - Effects
  - Traversing
  - Plugins

BOOTSTRAP

- What is Bootstrap?
- Adding bootstrap to your projects.
- Different predefined Element styles
- The Grid System
- Forms
- Templates

MODULE -2

PYTHON PROGRAMMING

- Overview of Programming Languages
- History of python
- Installing and Environment Setup
- Working with Python
- Operators & Expressions
- Decision Statements
- Loop Control Statements
- String Manipulation
- Lists
- Tuples
- Sets
- Dictionaries
- Functions
- Exceptions
- OOPS
- File Manipulation
- Introduction to Tkinter

RDBMS –MySQL

- Introduction to RDBMS
- Features of RDBMS
- Introduction to MySQL
- Installation of MySQL using XAMPP Open-Source Package
- SQL Command Types –DDL, DML & TCL Commands
- Simple Queries using Where Clause
- Built-in Functions in SQL

- Aggregate Functions
- Group By, Order By, Group By ... Having Clauses
- Views
- Indexes
- Constraints
- SQL Joins
- INTERSECT, UNION & MINUS Clauses
- TCL Commands (Commit, Rollback)
- PL/SQL

DJANGO

- Introduction to DJANGO
- Installation and Environment setup
- Installation of PyCharm Editor
- Rendering Web Pages Using Django
- Introduction to MVT (Model View Template)
- Static Files
- Template Inheritance
- Working with Django Forms
- CURD Operations in DJANGO
- Working with Django Model Forms
- Admin Interface In Django
- Master –Detail Models
- Model Inheritance
- Deployment of our application in the Live Environment

INTRODUCTION TO CLOUD COMPUTING, GIT & GITHUB

- What is cloud computing?
- Working of cloud Computing

- Advantages of Cloud Computing
- What is Git and Gitlab?
- Installing Git
- Git File Management
- Branching
- Pull Requests
- Common Workflows