

PYTHON FULL STACK DEVELOPER COURSE CONTENT

PYTHON

Core Python

Getting Started:

- What is Python?
- Comparison of Python with other languages
- Salient feature of Python
- Execution model of Python
- User Domains for Python
- Industries using Python

Introduction:

- Installing Python
- Python Installer
- Indentation in Python Editors
- Programming Elements
- Structure of Python program
- Comments in Python
- Python file extensions
- Setting Path in Windows
- Edit and Run python program without IDE
- Edit and Run python program using IDEs

Variable:

- String Formatting in Python
- Initialization of variables
- Input and Output operations

Operators:

- Arithmetic Operators
- Comparison Operators
- Assignment Operators
- Logical Operators
- Bitwise Operators

- Shift operators
- Membership Operators
- Identity Operators

Control Statements:

Conditional control statements

- If
- If-else
- If-elif-else

Loop control statements

- for
- while

Transfer statements

- Break
- Continue
- Pass

Data Types:

String

- What is String?
- How to Write String in Python?
- Methods of String

Number

- Introduction
- int
- float
- complex

Boolean

- Boolean Methods

Sequences

- List

- Tuple
- Set
- FrozenSet
- Dictionary

Functions

- What is Function?
- Advantages of functions
- Syntax and Writing function
- Calling or invoking function
- Classification of Functions
- No arguments and No return values
- With arguments and No return values
- With arguments and with return values
- No arguments and with return values
- Recursion

Functions Argument types

- Default argument functions
- Required (Positional) arguments function
- Keyword arguments function
- Variable arguments functions

Lambda functions

Nested functions

Recursion

Decorators

Generators

Iterators

Map()

Filter ()

Reduce()

Python Variables

- Local variables
- Global variables

Adv Python

Introduction to OOPS

- Classes and Objects
- How to define class in python
- Encapsulation
- DocStrings
- Constructor
- Types of variables – instance variables, class variables
- Types of methods – instance methods, class method, static

Inheritance

- Single Level Inheritance
- Multi Level Inheritance
- Hierarchical Inheritance
- Multiple Inheritance

Polymorphism

- Introduction
- Case Studies
- Operator Overloading
- Method Overloading
- Constructor Overloading
- Constructor Overriding

Abstract Classes

Exception Handling

- Introduction
- try
- except
- else
- finally
- raise

Modules

- How to Import Modules?
- alias name to the modules
- alias name to the members

Package

- Math module
- OS module
- Random Module
- datetime module

Access Modifiers

File Handling

Date and Time

Regular Expression

Multi-threading

Deep Copying and Shallow Copying etc.

JSON

MySQL:

- Introduction
- Installation
- SHOW DATABASES
- USE DATABASES
- CREATE DATABASES
- Delete Database
- Display Tables

CRUD OPERATIONS:

- C- Create table
- R- read data from a table
- U- update data in a table
- D- delete data from a table

- LIKE
- Logical Operators
- IN, NOT IN
- Between, Not Between
- IS NULL, IS NOT NULL
- ORDER BY Clause
- LIMIT Clause
- AS - Alias
- CONCAT()
- DISTINCT
- GROUP BY
- GROUP BY Aggregate Functions

Django:

Introduction

- Introduction to Web
- What is WEB?
- Features of WEB?
- Introduction to HTML & HTML5
- Introduction to CSS & CSS3
- Introduction to JAVASCRIPT
- Introduction to Bootstrap
- Creating Basic Web Pages

Django Web Framework

- What is a Framework
- Introduction to Django
- Django – Design Philosophies
- History of Django
- Django Features
- Environment setup
- Web Server

Getting Started with Django



- Creating the first Project
- Integrating the Project to PYCHARM & Other IDEs
- The Project Structure
- Running the in the server
- Setting Up Your Project
- Create and configure Django apps
- Django App Structure
- Configuring App in Project

URLs and Views

- What is URL?
- Define URL patterns
- What is View
- Configure URLs
- Developing different views

Django Templates

- Define Django Template
- Django MVT Pattern
- Django Template Configuration
- render() function
- Django Template Language
- Template Tags or Template Variables

Working with Static Files

- include Static Files inside Template
- Configuring static files
- Creating Project with static resources
- HTML, CSS, Images

DJANGO MODEL

- Define Database?
- What is Model?
- Database Configuration
- How to Check Django Database Connection
- Defining Django Models
- Django Model Fields
- Field Options

ELearn Infotech

Plot No 40, Vittal Rao Nagar, Madhapur, Hitech City Hyderabad - 081

Phone: +91 8464025086 **Email:** info@elearninfotech.com

www.elearninfotech.com



- What is a Migration?
- migrate Command
- Creation of Super User
- Register Model Inside Admin Interface
- Difference between makemigrations and migrate
- Define QuerySet
- The Python Template Engine
- Define Jinja2
- Faker Module

Django Forms or Model Forms

- What is Model Form?
- Advantages of Django Forms
- Creating Django Forms
- CSRF
- Creating a Login form
- Creating Registration Form

Outputting CSV with Django

- What is CSV?
- CSV Using Models
- Creating a Live CSV Project

Advanced Template Features

- Template Inheritance
- Template Filters

Session Management

- Cookies
- Django Session Framework

User Authentication

- Register
- Login
- Logout

CRUD Operations

ELearn Infotech

Plot No 40, Vittal Rao Nagar, Madhapur, Hitech City Hyderabad - 081

Phone: +91 8464025086 **Email:** info@elearninfotech.com

www.elearninfotech.com

- C= Create
- R= Retrieve
- U= Update
- D= Delete

Django ORM (Object Relational Mapper)

- Querysets in Django
- filters
- How to Implement OR queries?
- How to Implement AND queries?
- How to Implement NOT queries?
- How to Implement Union Operation for queries?
- How to work with aggregate functions?
- How to order queryset in sorting order?
- How to add/create records?
- How delete records?
- How to update records?

Django middleware

- What is middleware?
- How to define our own middleware?
- Process_exception()

UI Technologies

HTML

What is Markup Language

Basic Structure of HTML

Head Section and Elements of Head Section

Meta Tags

CSS Tags

Script Tag

Table Tag

Div Tag

Header Tags

Paragraph, Span, Pre Tags

Anchor Links and Named Anchors

Image Tag

Iframe Tag

Types of Lists

Forms

Form Tag

ELearn Infotech

Plot No 40, Vittal Rao Nagar, Madhapur, Hitech City Hyderabad - 081

Phone: +91 8464025086 Email: info@elearninfotech.com

www.elearninfotech.com



Attributes of Form

Text input, Text area

Dropdown List

Submit, Image, Normal, Reset Button

POST and GET Method

Checkbox and Radio Button

File Upload and Hidden Fields

Creating a Live Website Form

HTML 5

Introduction to HTML5

HTML5 DocType

Section

Article

Header

Designing a HTML Structure of Page

Audio Tag

Canvas and Svg Tag

New Attributes

Require Attribute

Autofocus Attribute

Number type

Range type

Features of HTML5

New Structure Tags

Nav

Aside

Footer

New Media Tags

Video Tag

Introduction to HTML5 Forms

Placeholder Attribute

Pattern Attribute

email, tel, url types

date type

Examples of Form

CSS

Introduction to Cascading Style Sheets

CSS Selectors

ID Selector

Types of CSS

Universal Selector

Tag Selector

Elearn Infotech

Plot No 40, Vittal Rao Nagar, Madhapur, Hitech City Hyderabad - 081

Phone: +91 8464025086 **Email:** info@elearninfotech.com

www.elearninfotech.com



Class Selector
Attribute Selector
First-line and First-letter Selector
CSS Properties
Background Properties
Border Properties
Real-time Implementation
CSS Menu Design (Horizontal, Vertical)

Child Selector
Group Selector
Before and After Selector
Type Properties
List Properties
Positioning Properties
Converting Table to CSSLayout
Form Designing

CSS 3

Introduction to CSS 3
First-f-type
Nth-child
Text-Shadow Property
Box Shadow
CSS Multiple backgrounds
Transform effect
CSS Media Queries

New CSS 3 Selector
Last-f-type
Custom Fonts
Rounded Corners
CSS Gradients
Transition effect
Animation effect
Using CSS3 in Practical Layout

BOOTSTRAP 3& 4

BS Home
BS Typography
BS Images

BS Grid Basic
BS Tables
BS Alerts

ELearn Infotech

Plot No 40, Vittal Rao Nagar, Madhapur, Hitech City Hyderabad - 081

Phone: +91 8464025086 **Email:** info@elearninfotech.com

www.elearninfotech.com



BS Buttons

BS Badges/Labels

BS Pagination

BS Panels

BS Collapse

BS Navbar

BS Inputs

BS Modal

BT Grids

BS Stacked/Horizontal

BS Grid Medium

BS Grid Examples

BS Button Groups

BS Progress Bars

BS List Groups

BS Dropdowns

BS Tabs/Pills

BS Forms

BS Input Sizing

BS Tooltip

BS Grid System

BS Grid Small

BS Grid Large

JAVA SCRIPT

Introduction to Client Side Scripting

JavaScript Types

Operators in JS

Java Script Loops

JS Events

Working with Arrays

JS Functions

Validation Forms

Introduction to Java Script

Variables in JS

Conditional Statements

JS Popup Boxes

JS Arrays

JS Objects

Using Java Script in Real-time

Related Examples

GITHUB

ELearn Infotech

Plot No 40, Vittal Rao Nagar, Madhapur, Hitech City Hyderabad - 081

Phone: +91 8464025086 **Email:** info@elearninfotech.com

www.elearninfotech.com



Source Editors

2 Live Projects

Resume Preparation & Interview Questions

Regular Assignments & Material Softcopy

Placement Assistance

ELearn Infotech

Plot No 40, Vittal Rao Nagar, Madhapur, Hitech City Hyderabad - 081

Phone: +91 8464025086 **Email:** info@elearninfotech.com

www.elearninfotech.com