#Learn_from_Home

Python Professional

Course Code : LFH/PY/04

Duration: 70 hrs

Course Syllabus

INTRODUCTION

This industry oriented course is developed by both the Software development division & Training division of **ipsr solutions limited**. IPSR is **a public limited IT company** with 20 years of expertise in Software product development, Training services, Placement services & Digital Marketing services. During the past 2 decades, IPSR has trained candidates from **50+ countries** and helped **40000+ candidates** to build their IT career. Our IT services division is a pioneer in development of **Academic solution products**, incorporating cutting edge technologies like Artificial Intelligence, Data Analytics and Machine learning. Live industry experts from this IT division contribute a major role in delivering this course. Our placement division is having **1500+ placement tie-up companies** and we are conducting recruitment on all days.

The Course curriculum is designed and developed by a team of expertise panel lead by following academicians

- ❏ **Dr. Mendus Jacob, M.Sc., M.Phil., Ph.D., MIoD**
    - ❏ M.D & C.E.O - IPSR & Valin Technologies, U.K.
    - ❏ Director - MCA, Marian College, Kuttikkanam (Autonomous)
    - ❏ Former Director of School of Applicable Mathematics, M.G. University.
    - ❏ Academician and Entrepreneur with 30+ years experience
- ❏ **Dr. Sunil Job K.A, M.Sc, M.Ed, M.Phil, Ph.D., RHCE**
    - ❏ Chief of Academic Solutions - IPSR
    - ❏ Former college Principal and a Specialist in Data Analytics & Machine Learning
    - ❏ Blogger and a Resource person for National conferences
    - ❏ Academician with 25+ years experience

What you'll learn

✅ Download and Install Python, Python Program Structure, Conditional and Loop

Constructs in Python, Sequences - List, Tuple, String, Set, Dictionary

✅ Functions, File Handling, OOPS, RegEx, Functional Programming

✅ Desktop application development using Tkinter and MySql

✅ Develop Web Applications using Django Framework

Description

This course covers Python Programming, Python GUI development using Tkinter and Python web development using Django Framework

COURSE OUTCOME (CO)

On successful completion of this course, candidates will be able to:

- Do basic Python programming.
- Explain various sequences in Python using unique features and uses.
- Create and use different kinds of functions and modules.
- Create and manipulate files and directories
- Understand and implement OOPS concepts

- Use Regular Expressions for pattern matching

- Create and manipulate databases and tables using Sqlite and MySql

- Develop GUI based desktop applications using Tkinter and MySql.

- Develop responsive web pages using HTML, CSS, JavaScript, JQuery and AJAX

- Develop websites using Django Framework.

What does this course give you?

Skills required to be a Python Programmer, Python GUI Developer, Python Web Developer

Course Contents

Introduction to Python

- What is Python

- The application areas of Python

- Download and install Python

- Execute Python program from command prompt and using IDLE

- Save programs with .py extension and execute it from prompt

Python Language Basics

- Data types and variables

- Operators and operator precedence

- Data type conversions

- Data input

- Comments

Python Flow Control

- If statement
- If.. elif.. else statement
- While loop
- For loop
- Break & continue
- Else clause

Python Sequences

- String
- List
- Tuple
- Dictionary
- Set

Shallow and deep copy

Functions and modules

- What is function
- Define a function
- Pass arguments
- Arguments with default values
- Arbitrary arguments
- Local and global variables
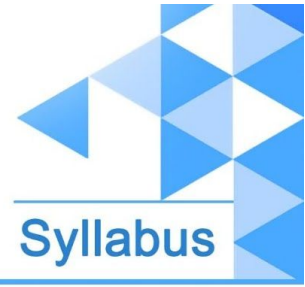- Return a value from function

- Mathematical functions
- Random number functions
- Mathematical constants
- Recursive functions

File Handling

- Reading & Writing
- File manipulations
- Directories

Python classes and objects

- Class definition
- Creating objects
- Constructors & Destructors
- Accessing attributes
- Build-in class attributes
- Inheritance
- Overriding
- Overloading
- Data hiding

Regular Expressions

- Match()
- Search()
- findall()
- sub()
- Modifiers
- Patterns
- Character classes
- Repetitions

Database programming

- With SQLite
    - Installing SQLite browser
    - Creating database
    - CRUD operations
- With MySQL
    - MySql datatypes
    - CRUD operations
    - Subquery
    - Join
    - Aggregate functions
    - Procedures

Python GUI Programming with Tkinter

- Widgets
- Geometry managers / layout managers
- Variable classes
- Events and binding

Functional Programming

- Iterators
- Generators
- The lambda construct
- Comprehensions
- Map
- Reduce
- filter

Web Development Basics

- Web server
- Web client
- HTML
- CSS
- Java script

Python Web MVC framework – Django

- Installation
- Configuration
- Urls and Views
- App creation
- Model
- Template integration
- Form Processing
- Database connection
- Sessions
- AJAX and jQuery
- Image/files uploading

Contact Us

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We have branches at Kochi, Thiruvananthapuram, Calicut and Bengaluru.