



TEXTUAL PYTHON



COURSE HIGHLIGHTS !

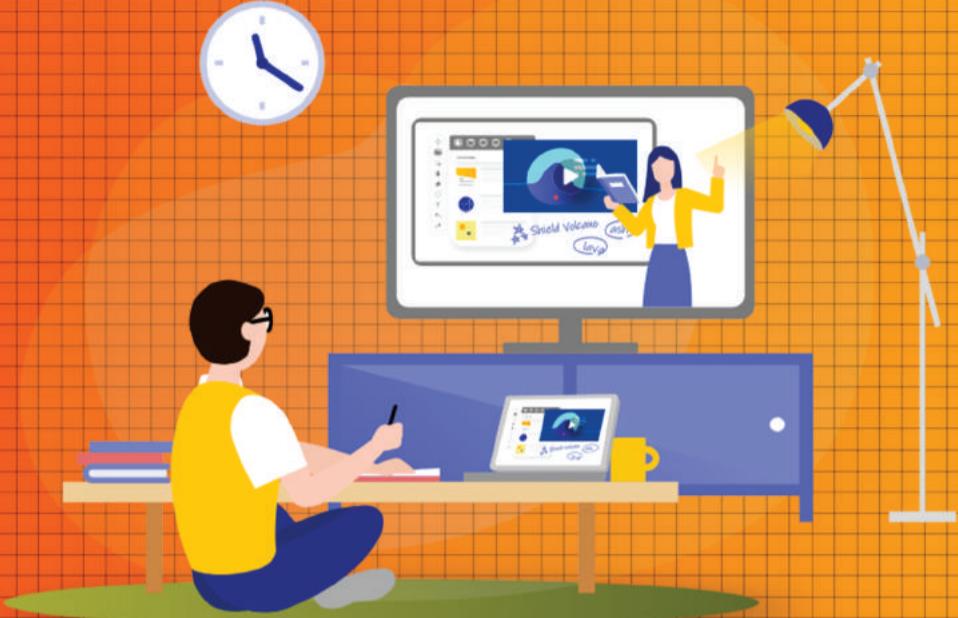
- Live 48 Hours of Sessions
- Detailed Coverage of fundamentals of Python Programming language
- Insides of Algorithms
- File handling with Python
- Error-handling & Debugging
- Object-Oriented Programming
- SQL Database Management
- Software development using Tkinter
- Game Development using PyGame
- Networking using Sockets
- **BUILD 8 REAL-APPLICATION BASED PROJECTS IN THE COURSE**
- LMS Access - Pre-recorded videos, Documents, Assignments, Codes

 Book your
FREE Demo now!



COURSE REQUIREMENTS

- Basic Understanding Of Block Based Programming
- No textual programming experience needed. We will cover everything in this course
- A Mac or Windows Computer
- Access to the internet



WHAT YOU'LL LEARN IN THE COURSE



How to use professional tools for programming



Build GUIs & Desktop applications with Python



Manage database with Python



Learn to use Python modules like Socket, Tkinter, Pygame, SQLite, Threading, Pandas etc.



Build Applications like English dictionary, A dashboard application,



Event registration app, Text editor software, Chat application

Introduction to Python & Primitive datatypes

- Installation of python & Pycharm
- basic function like Print, Input & Variable
- Python as a Calculator
- Integer, Float, Bool & String
- Datatype Conversion

START



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Textual Python

Beginner Level

Conditional Statement

- Conditional Statement in Python • If-elif-else
- Program to find Grade

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Advance Datatypes

List, Tuple, Set & Dictionary



Python Loops - 1

- Loops in Python • Working with the For loop
- For loop with range & list • Fibonacci Series



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Python loops - 2

While loop in Python.
Menu based program in Python.



Functions
Area Calculator



Modules

Math & Datetime module
in Python



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Mini Project

Mensuration Calculator



List Comprehensions

Search or modify list & tuples
using list comprehension



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RegEx Module

- Find the sequence of characters that forms a search pattern
- Check if a string contains the specified search pattern

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Algorithm -1

Binary search



Algorithm -2

Bubble Sort algorithm

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File handling -1

Open, read, write & Append file



Multi-threading

- Create multiple threads
- Perform multiple task at a same time using multithreading



API Request

API request for Weather & Currency Data



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Textual Python

Intermediate Level

Database Management - 1

- Sql queries in python
- Create table, Primary key



Database Management - 2

- Where Clause
- Insert
- Select, delete & update

Sending an Automatic Email

- Python SMTP & mailgun module
- for Automatic email

Milestone project 1 - Book store stock management

- Manage all the books in the store book name, Author, quantity in the database



Classes and objects - 1

- Classes, objects & methods
- creating Student class

Classes and objects - 2

- Decorators
- Inheritance
- Static methods & Classmethods



Error handling

- Try & catch raising Custom errors
- debugging in Python

GUI designing - 1

- Tinker module in python
- Introduction to Widget Label, Entry, Button

GUI designing - 2

- Check button, Radio Button, ComboBox etc



Advance GUI concepts- 1

- Menu bar ,Adding Images, Frames, Mouse click event, layout manager

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Advance GUI concepts- 2

- Messagebox,Fonts,Scrollbar, Spinbox, FileDialogbox



Milestone project 2 - English dictionary

- GUI design •Json file handling



Milestone project 3 - A Dashboard

- GUI App which Show weather, Currency rate, Gold rate



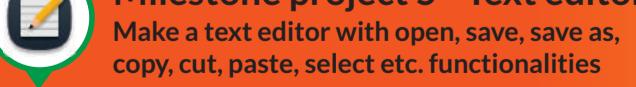
Milestone project 4 - Event registration application - 1

- Database interfacing •Tkinter GUI design



Milestone project 5 - Text editor

- Make a text editor with open, save, save as, copy, cut, paste, select etc. functionalities





HOW THIS COURSE WILL HELP YOUR CHILD

● CIC approach

Consumer to innovator to the creator

This course aims to turn the student from a consumer of technology to the creator of technology.

● Activity-Based learning

Learn the required programming concepts by performing activities

● Project - Based Learning

Learn the required programming concepts by performing activities

Instead of a theoretical and traditional way of learning, students will build projects during the course.

● Our PBL approach will help student in

Allows students to acquire key knowledge & skills through the development of projects that respond to real-life problems

Develop critical thinking

Retain the concept

Integration of different concepts

COURSE OUTLINE

Session Number	Activity name	Learning Outcome
1.	Introduction to Python & Primitive data types	Installation of python & Pycharm Basic function like print, input & variable Python as a calculator Integer, Float, bool & string Data type conversion
2.	Conditional Statement	Conditional statement in python, If-elif-else, Program to find Grade
3.	Advance data types	List, Tuple, Set & dictionary data types
4.	Python Loops - 1	Loops in python, Working with the For loop ,For loop with range & list, Fibonacci Series
5.	Python Loops - 2	While loop in python Menu based program in python
6.	Functions	Area Calculator
7.	Modules	Math & Datetime module in python
8.	Mini Project	Map, Filter, Reduce
9.	List Comprehensions	Search or modify list & tuples using list comprehension
10.	RegEx Module	Find the sequence of characters that forms a search pattern. Check if a string contains the specified search pattern.
11.	Algorithm -1	Binary Search
12.	Algorithm -2	Bubble Sort Algorithm
13.	File handling -1	Open, read, write & Append file
14.	File handling -2	CSV & json file handling
15.	Multi-threading	Create multiple threads, Perform multiple task at a same time using multithreading
16.	API Request	API request for weather & Currency data
17.	Database Management - 1	SQL queries in python Create table, Primary key

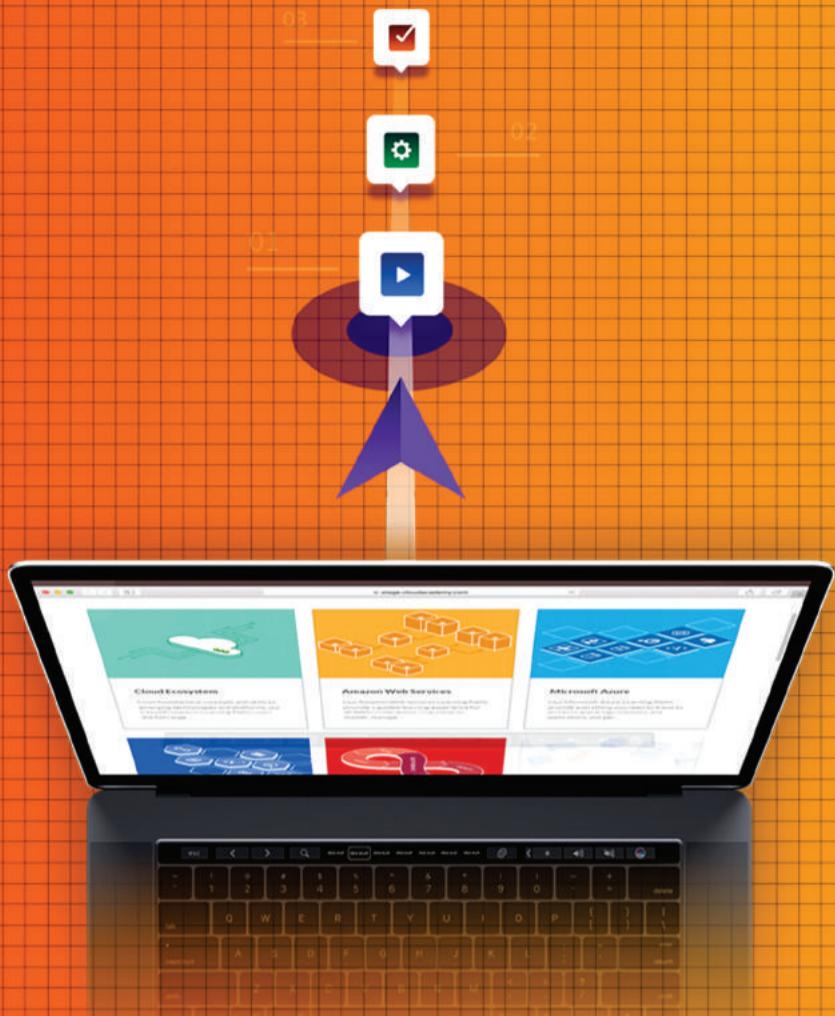
Session Number	Activity name	Learning Outcome
18.	Database Management - 2	Where clause Insert Select, delete, and update
19.	Sending an automatic Email	Python SMTP & mailgun module for Automatic email
20.	Milestone project 1 - Book store stock management	Manage all the books in the store book, Manage name, Author, quantity in the database
21.	Classes and objects - 1	Classes, objects, and methods , Creating Student class
22.	Classes and objects - 2	Decorators Inheritance Static methods & classmethods
23.	Error handling	Try and catch, Raising custom errors, Debugging in Python
24.	GUI designing - 1	Tkinter module in python,Introduction to Widget Label, Entry, Button
25.	GUI designing - 2	Check button, Radio button, ComboBox etc
26.	Advance GUI concepts- 1	Menu bar, Adding Images, Frames, Mouse click event, layout manager
27.	Advance GUI concepts- 2	Messagebox, Fonts, Scrollbar, Spinbox, FileDialog box
28.	Milestone project 2 - English dictionary	GUI design, Json file handling
29.	Milestone project 3 - A Dashboard	GUI App which show weather, Currency Rate, Gold rate
30.	Milestone project 4 - A Dashboard	Database interfacing Tkinter GUI design
31.		
32.	Milestone project 5 - Text editor	Make a text editor open, save, save as, copy, cut, paste, select etc. functionalities
33.		
34.	PyGame - Getting started in pygame	Installation of pygame, How game works, Creating a game window, Adding Images and surfaces, Adding events
35.	PyGame basics - 1	Rects, surfaces adding obstacles
36.	PyGame basics - 2	Collision Detection
37.	PyGame basics - 3	Rotation and animation

Session Number	Activity name	Learning Outcome
38.	PyGame basics - 4	Adding score, Game over screen, Add music
39.	Milestone project 6 - Ping pong game	Adding the Paddles, Controlling the Paddles, Adding a Bouncing Ball, Adding a Scoring system
40.		Adding the Paddles, Controlling the Paddles, Adding a Bouncing Ball, Adding a Scoring system
41.	Milestone project 7 - Flappy bird game	Adding the Paddles, Controlling the Paddles, Adding a Bouncing Ball, Adding a Scoring system
42.		
43.	Socket programming basics	Creating a socket ,Binding the socket & listening for connections, Accepting connection, Sending commands to the client
44.	Client Server Connection	Establishing connection between client and the server
45.	Multiple Client	Adding multiple client support, Handling connections from multiple clients
46.		Build a simple Python chat with a graphical user interface send text between client and the server
47.	Milestone project 8 - GUI chat using sockets	
48.	Doubt Solving Session	



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📞 India + 91-99-7119 2244, + 91-74-2836 6266
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