

# Python Crash Course

From Beginner to Interview-Ready



## PHASE 1

### PYTHON BASICS

#### DAY 1 – Introduction & Setup

Introduction to Python, Installation, IDE Setup, First Python Program, print()

#### DAY 2 – Variables & Types

Variables, Data Types, Type Conversion, Input and Output

#### DAY 3 – Operators

Arithmetic, Relational, Logical and Assignment Operators

#### DAY 4 – Conditional Logic

Conditional Statements: if, if-else, if-elif-else, Nested Conditions

#### DAY 5 – Loops

Loops: for, while, range(), break, continue, pass

#### DAY 6 – Logic Building

Nested Loops, Number Patterns, Star Patterns, Logic Building

## PHASE 3

### FUNCTIONS & MODULES

#### DAY 11 – Functions

Definition, Arguments, Return Values, Scope

#### DAY 12 – Adv. Functions

Lambda Functions, Recursion, map(), filter(), Built-in Functions

#### DAY 13 – Modules

Modules, Packages, math, random, datetime

#### DAY 14 – File Handling

Reading, Writing, Appending, with Statement

## PHASE 2

### DATA STRUCTURES

#### DAY 7 – Strings

Indexing, Slicing, String Methods and Operations

#### DAY 8 – Lists

Creation, Indexing, Slicing, Methods and List Comprehension

#### DAY 9 – Tuples & Sets

Operations, Methods and Applications

#### DAY 10 – Dictionaries

Key-Value Pairs, Methods, Nested

## PHASE 4

### OOP & EXCEPTIONS

#### DAY 15 – Exception Handling

try, except, else, finally, raise

#### DAY 16 – OOP Basics

Classes, Objects, Constructors, Instance Attributes and Methods

#### DAY 17 – Adv. OOP

Inheritance, Polymorphism, Encapsulation, Method Overriding

#### DAYS 18-20 – Final Projects

Build structured Python applications, Revision, and Mock Assessments.