



PYTHON

Language

GETTING STARTED WITH PYTHON

New to programming? Python is free and easy to learn if you know where to start!

- ✓ Introduction
- ✓ Python Programming Language
- ✓ Features of Python
- ✓ Advantages of Python
- ✓ Installing Python
- ✓ Interacting with Python (Python IDLE)
 - Python Shell
 - Command Line Interaction
 - Python Editor Window (Working in Script Mode)
- ✓ Exiting Python



PYTHON PROGRAMMING FUNDAMENTALS

✓ INTRODUCTION

✓ VARIABLES AND TYPES

TYPE()

MULTIPLE ASSIGNMENTS

VARIABLE NAMES

INT

FLOAT

COMPLEX

✓ KEYWORDS IN PYTHON

✓ EXPRESSIONS

✓ OPERATORS

MATHEMATICAL/ARITHMETIC OPERATORS

RELATIONAL OPERATORS

SHORTHAND ASSIGNMENT OPERATORS

ASSIGNMENT

LOGICAL

COMPOUND ASSIGNMENT OPERATORS

✓ USER INPUT

✓ USER-DEFINED FUNCTIONS

✓ INDENTATION IN PYTHON

✓ TOKENS

✓ COMMENTS



CONDITIONAL AND LOOPING CONSTRUCTS

- ✓ Introduction
- ✓ Introduction to Planning
Flow Charts
Decision Tree
- ✓ Program Control Flow



DECISION-MAKING & ITERATION

Decision-making



- ✓ if Statement
- ✓ if-else Statement
- ✓ if-elif-else Statement
- ✓ Nested if-else Statement

Iteration



- ✓ For Loop
- ✓ While Loop
- ✓ Nested Loops
- ✓ Break Statement



STRINGS IN PYTHON



- ✓ Introduction
- ✓ What are Strings?
- ✓ Creating Strings
- ✓ Traversing a String
- ✓ Special String Operators
- ✓ Concatenating Strings
- ✓ Replicating Strings
- ✓ Membership Operators
- ✓ Comparison Operators
- ✓ String Slicing



“LIST”

Introduction

Concatenation

Repetition

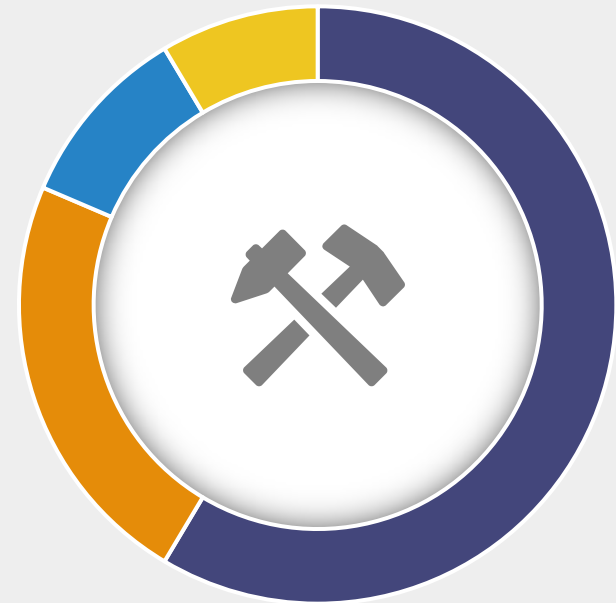
Membership Testing

Slicing

Indexing

TUPLES

- ✓ Introduction
- ✓ Tuple Creation
- ✓ Traversing
- ✓ Indexing
- ✓ Slicing
- ✓ Concatenation
- ✓ Repetition
- ✓ Count



DICTIONARY



- ✓ Introduction
- ✓ Dictionary Creation
- ✓ traversing
- ✓ Appending dic
- ✓ Upadating dic
- ✓ Removing item dic
- ✓ common dictionary function



DECISION-MAKING & ITERATION

Library



- ✓ Introduction Numpy
- ✓ Installing Numpy
- ✓ Importing Numpy
- ✓ Differences between Python & Lists and Numpy arrays

Numpy Array



- ✓ Creating Array
- ✓ From Python lists
- ✓ Using ar



PYTHON FILE HANDLING TOPICS

- ✓ INTRODUCTION TO FILE HANDLING
- ✓ OPENING A FILE (OPEN())
- ✓ FILE MODES (R, W, A, X, RB, WB, ETC.)
- ✓ READING FROM A FILE
- ✓ READ()
- ✓ READLINE()
- ✓ READLINES()
- ✓ WRITING TO A FILE
- ✓ WRITE()
- ✓ WRITELINES()
- ✓ CLOSING A FILE (CLOSE())
- ✓ FILE POINTER (TELL(), SEEK())
- ✓ WITH STATEMENT (CONTEXT MANAGER)
- ✓ DELETING AND RENAMING FILES (OS MODULE)
- ✓ CHECKING FILE EXISTENCE (OS.PATH, PATHLIB)
- ✓ HANDLING EXCEPTIONS IN FILE HANDLING
- ✓ WORKING WITH CSV FILES (CSV MODULE)
- ✓ WORKING WITH JSON FILES (JSON MODULE)
- ✓ PICKLING AND UNPICKLING (PICKLE MODULE)