

Python is an interpreted, object-oriented, high-level programming language. Its high-level built in data structures, combined with dynamic typing and dynamic binding makes it very attractive for Rapid Application Development. Python's simple, easy to learn syntax emphasizes readability and therefore reduces the cost of program maintenance.

Module 1: Introduction to Python

Introduction

An Introduction to Python

The History of Python

Installation on Ubuntu-based Machines

Example of Python Program

Batch Script Mode

Writing Comments in Python

Indentation in Python

Objectives

Features of Python

Releases

Installation on Windows

Modes of Python

Interpreter Mode

Business Scenario

Indentation in Python (cont.)

Module 2: Python Data Type

Python Data Types

Variables

Types of Variables-String

Types of Variables-Boolean Variables

Adding Elements to a List

Types of Variables-Dictionary

Accessing the Elements of a Dictionary

Dictionary Methods (contd.)

Operators (cont.)

Logical Operators (cont.)

Order of Operands

Variables Comparison

Objectives

Types of Variables

Types of Variables-Numeric Types

Types of Variables-List

Accessing the Elements of a List

Adding Elements to a Dictionary

Dictionary Methods

Operators

Logical Operators

Arithmetic Operations on Numeric Value

Operators on Strings

Variables Comparison (cont.)



Module 3: Control Statements

Introduction
Pass Statements
Types of Conditional Statements
If...Else Statements
If...Else If...Else Statements
In Clause

Objectives
Conditional Statements
If Statements
If...Else If Statements
Nested If Statements
Ternary Operators

Module 4: Loops

Introduction
Loops in Python
For Loop
While Loop
Break Statements

Objectives
Range Function
For Loop (cont.)
Nested Loop
Continue Statements

Module 5: Functions

Introduction
Introduction to Functions
Calling Functions
Variable-Length Arguments
Recursion

Objectives
Creating Functions
Arguments and Return Statement
Variable-Length Arguments (cont.)

Module 6: Classes

Introduction
Classes
Creating a Basic Class
Adding Functions to a Class
Init Function

Objectives
Objects
Accessing Variables of a Class
Built-in Class Attributes
Example of Defining and Using a Class

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Module 7: Imports and Modules

Introduction

Modules

Using Modules

Python Interpreter Module Search

Dir() Function

Global and Local Functions

Packages in Python

Objectives

Creating Modules

Using Modules (cont.)

Namespace and Scoping

Dir() Function (cont.)

Reload a Module

Module 8: Advance Features

Files I/O

Classes/Objects

CGI programming

Networking

Multithreading

GUI Programming

Exceptions

Reg Expressions

Database Access

Sending Email

XML Processing

Further Extensions

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