UNIT I

Chapter 1 : Introduction and Syntax of Python Program 1-1 to 1-17

Syllabus : Features of Python - Interactive, Object -oriented, Interpreted, platform independent. Python building blocks - Identifiers, Keywords, Indentation, Variables, Comments. Python environment setup - Installation and working of IDE. Running Simple Python scripts to display 'welcome' message. Python Data Types : Numbers, String, Tuples, Lists, Dictionary. Declaration and use of data types.

UNIT II

Chapter 2 : Python Operators and Control Flow Statements 2-1 to 2-24

Syllabus : Basic Operators : Arithmetic, Comparison/ Relational, Assignment, Logical, Bitwise, Membership, Identity operators, Python Operator Precedence. Control Flow. Conditional Statements (if, if … else, nested if). Looping in python (while loop, for loop, nested loops). Loop manipulation using continue, pass, break, else.

UNIT III

Chapter 3 : Data Structures in Python 3-1 to 3-38

Syllabus : Lists : (a) Defining lists, accessing values in list, deleting values in list, updating lists. (b) Basic List Operations (c) Built – in List functions. **Tuples :** (a) Accessing values in Tuples, deleting values in Tuples, and updating Tuples (b) Basic Tuple operations. (c) Built – in Tuple functions.
Sets : (a) Accessing values in Set, deleting values in Set and updating Sets. (b) Basic Set operations. (c) Built – in Set functions
Dictionaries : (a) Accessing values in Dictionary, deleting values in Dictionary and updating Dictionary. (b) Basic Dictionary operations. (c) Built – in Dictionaries functions.

UNIT IV

Syllabus : Use of Python built : in functions (e.g. type/ data conversion functions, math functions etc.). User defined functions : Function definition, Function calling, function arguments and parameter passing, Return statement, Scope of Variables: Global variable and Local Variable. Modules : Writing modules, importing modules, importing objects from modules, Python built – in modules (e.g. Numeric and mathematical module, Functional Programming Module) Namespace and Scoping. Python Packages: Introduction, Writing Python packages, Using standard (e.g. math, scipy, Numpy, matplotlib, pandas etc.) and user defined packages.

UNIT V

Syllabus : Creating Classes and Objects. Method Overloading and Overriding. Data Hiding. Data abstraction. Inheritance and composition classes. Customization via inheritance specializing inherited methods.

UNIT VI

Chapter 6 : File I/O Handling and Exception Handling 6-1 to 6-28

Syllabus : I/O Operations : Reading keyboard input, Printing to screen. File Handling : Opening file in different modes, accessing file contents using standard library functions, Reading and writing files, closing a file, Renaming and deleting files, Directories in Python, File and directory related standard functions. Exception Handling : Introduction, Exception handling - 'try: except:' statement, 'raise' statement, User defined exceptions.

List of Practicals

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