

Python



EXCEPTION
INPUT/OUTPUT
PANDAS
OOB OPERATOR
BASICS
DATA TYPES
CONTROL FLOW
STRINGS
MACHINE LEARNING

Python



NETSERV

Introduction to Python

What is Python and history of Python?

Unique features of Python

Python-2 and Python-3 differences

Install Python and Environment Setup

First Python Program

Python Identifiers, Keywords and Indentation

Comments and document interlude in Python

Command line arguments Getting User Input

Python Data Types

What are variables?

Python Core objects and Functions

Number and Maths

Week 1 Assignments

Control Statements

if-else

if-elif-else

while loop

for loop

break

continue

assert

pass

return



List, Ranges & Tuples in Python

Introduction

Lists in Python

More about Lists

Understanding Iterators

Generators, Comprehensions and Lambda Expressions

Introductio

Generators and Yield

Next and Ranges

Understanding and using Ranges

More About Ranges

Ordered Sets with tuples

Python Dictionaries and Sets

Introduction to the section

Python Dictionaries

More on Dictionaries

Sets

Python Sets Examples

Input and Output in Python

Reading and writing text files

Writing Text Files

Appending to Files and Challenge

Writing Binary Files Manually

Using Pickle to Write Binary Files



Python built in function

- Python user defined functions
- Python packages functions
- Defining and calling Function
- The anonymous Functions
- Loops and statement in Python
- Python Modules & Packages

Python Object Oriented

- Overview of OOP
- The self variable
- Constructor
- Types Of Variables
- Namespaces
- Creating Classes and Objects
- Inheritance
- Types of Methods
- Instance Methods Static Methods Class Methods
- Accessing attributes
- Built-In Class Attributes
- Destroying Objects
- Abstract classes and Interfaces
- Abstract Methods and Abstract class
- Interface in Python
- Abstract classes and Interfaces

Exceptions

- Errors in Python
- Compile-Time Errors
- Runtime Errors
- Logical Errors
- What is Exception?
- Handling an exception
- try....except...else
- try-finally clause
- Argument of an Exception
- Python Standard Exceptions
- Raising an exceptions
- User-Defined Exceptions

Python Regular Expressions

- What are regular expressions?
- The match Function
- The search Function
- Matching vs searching
- Search and Replace
- Extended Regular Expressions
- Wildcard

Python Multithreaded Programming

- What is multithreading?
- Difference between a Process and Thread
- Concurrent Programming and GIL
- Uses of Thread
- Starting a New Thread
- The Threading Module
- Thread Synchronization
- Locks
- Semaphore
- Deadlock of Threads
- Avoiding Deadlocks
- Daemon Threads



Using Databases in Python

Python MySQL Database Access
Install the MySQLdb and other Packages
Create Database Connection
CREATE, INSERT, READ Operation
DML and DDL Operation with Database

Graphical User Interface

GUI in Python
Button Widget
Label Widget
Text Widget

Django Web Framework in Python

Introduction to MVC and MVT architecture on web development.
Django folder structure flow of control.

Web scraping in python.

Introduction to Data Science.