

COMPLETE PYTHON MASTERCLASS

SYLLABUS

Chapter 1: Introduction and Installation to Python
Chapter 2: Data Types in Python
Chapter 3: Indentation
Chapter 4: Comments and Documentation
Chapter 5: Date and Time
Chapter 6: Date Formatting
Chapter 7: Enum
Chapter 8: Set
Chapter 9: Simple Mathematical Operators
Chapter 10: Bitwise Operators
Chapter 11: Boolean Operators
Chapter 12: Operator Precedence
Chapter 13: Variable Scope and Binding
Chapter 14: Conditionals
Chapter 15: Comparisons
Chapter 16: Loops
Chapter 17: Arrays
Chapter 18: Multidimensional arrays
Chapter 19: Dictionary
Chapter 20: List
Chapter 21: List comprehensions
Chapter 22: List slicing
Chapter 23: groupby()
Chapter 24: Intro to Linked lists
Chapter 25: Linked List Node
Chapter 26: Filter
Chapter 27: Heapq
Chapter 28: Tuple
Chapter 29: Basic Input and Output
Chapter 30: Files & Folders I/O
Chapter 31: os.path
Chapter 32: Iterables and Iterators
Chapter 33: Functions
Chapter 34: Defining functions with list arguments
Chapter 35: Functional Programming in Python
Chapter 36: Partial functions
Chapter 37: Decorators
Chapter 38: Classes
Chapter 39: Metaclasses
Chapter 40: String Formatting
Chapter 41: String Methods



Chapter 42: Using loops within functions
Chapter 43: Importing modules
Chapter 44: Difference between Module and Package
Chapter 45: Math Module
Chapter 46: Complex math
Chapter 47: Collections module
Chapter 48: Operator module
Chapter 49: JSON Module
Chapter 50: Sqlite3 Module
Chapter 51: The os Module
Chapter 52: The locale Module
Chapter 53: Itertools Module
Chapter 54: Asyncio Module
Chapter 55: Random module
Chapter 56: Functools Module
Chapter 57: The dis module
Chapter 58: The base64 Module
Chapter 59: Queue Module
Chapter 60: Deque Module
Chapter 61: Webbrowser Module
Chapter 62: Intro to tkinter
Chapter 63: pyautogui module
Chapter 64: Indexing and Slicing
Chapter 65: Plotting with Matplotlib
Chapter 66: graph-tool
Chapter 67: Generators
Chapter 68: Reduce
Chapter 69: Map Function
Chapter 70: Exponentiation
Chapter 71: Searching
Chapter 72: Sorting, Minimum and Maximum
Chapter 73: Counting
Chapter 74: The Print Function (Advanced)
Chapter 75: Regular Expressions (Regex)
Chapter 76: Copying data
Chapter 77: Context Managers ("with" Statement)
Chapter 78: The __name__ special variable
Chapter 79: Checking Path Existence and Permissions
Chapter 80: Creating Python packages
Chapter 81: Usage of "pip" module: PyPI Package Manager
Chapter 82: pip: PyPI Package Manager
Chapter 83: Parsing Command Line arguments
Chapter 84: Subprocess Library
Chapter 85: setup.py



Chapter 86: Recursion
Chapter 87: Type Hints
Chapter 88: Exceptions
Chapter 89: Raise Custom Errors / Exceptions
Chapter 90: Commonwealth Exceptions
Chapter 91: urllib
Chapter 92: Web scraping with Python
Chapter 93: HTML Parsing
Chapter 94: Manipulating XML
Chapter 95: Python Requests Post
Chapter 96: Distribution
Chapter 97: Property Objects
Chapter 98: Overloading
Chapter 99: Polymorphism
Chapter 100: Method Overriding
Chapter 101: User-Defined Methods
Chapter 102: String representations of class instances: `__str__` and `__repr__` methods
Chapter 103: Debugging
Chapter 104: Reading and Writing CSV
Chapter 105: Writing to CSV from String or List
Chapter 106: Dynamic code execution with ``exec`` and ``eval``
Chapter 107: PyInstaller - Distributing Python Code
Chapter 108: Data Visualization with Python
Chapter 109: The Interpreter (Command Line Console)
Chapter 110: `*args` and `**kwargs`
Chapter 111: Garbage Collection
Chapter 112: Pickle data serialisation
Chapter 113: Binary Data
Chapter 114: Idioms
Chapter 115: Data Serialization
Chapter 116: Multiprocessing
Chapter 117: Multithreading
Chapter 118: Processes and Threads
Chapter 119: Python concurrency
Chapter 120: Parallel computation
Chapter 121: Sockets
Chapter 122: Websockets
Chapter 123: Python Networking
Chapter 124: Python HTTP Server
Chapter 125: Introduction to Flask
Chapter 126: Introduction to RabbitMQ using AMQPStorm
Chapter 127: Descriptor
Chapter 128: Input, Subset and Output External Data Files using Pandas
Chapter 129: Unzipping Files

Chapter 130: Working with ZIP archives
Chapter 131: Stack
Chapter 132: Abstract Base Classes (abc)
Chapter 133: Plugin and Extension Classes
Chapter 134: Immutable datatypes(int, float, str, tuple and frozensets)
Chapter 135: Python Serial Communication (pyserial)
Chapter 136: Basic Curses with Python
Chapter 137: Templates in python
Chapter 138: Pillow
Chapter 139: The pass statement
Chapter 140: CLI subcommands with precise help output
Chapter 141: Database Access
Chapter 142: Connecting Python to SQL Server
Chapter 143: PostgreSQL
Chapter 144: Python and Excel
Chapter 145: Mutable vs Immutable (and Hashable) in Python
Chapter 146: Virtual environments
Chapter 147: Python Virtual Environments - virtualenv
Chapter 148: Python speed of program
Chapter 149: Performance optimization
Chapter 150: Python Anti-Patterns
Chapter 151: (Bonus)Common Pitfalls
Chapter 152: (Bonus) Hidden features of python and what to do next?

