



Python

OOPs

Data Structure Database

Connectivity

Files & Exception handling



EAGLEFLY SOLUTIONS

981434634 / 9711198265

Python is an easy to learn, powerful programming language. It has efficient high level data structures and a simple but effective approach to object-oriented programming python's elegant syntax and dynamic typing, together with its interpreted nature, make it an language for scripting and rapid application development in many areas on most platforms.

Python can be used to develop prototypes, and quickly because it is so easy to work with and read, most automation, data mining, and big data platforms rely on python. This is because it is the ideal language to work with for general purpose tests.



Python

1. An introduction to python:

- Brief History
- Why Python
- Where to use

2. Beginning python basics:

- The print statement
- Comments
- Python Data Structures & Data Types
- String Operations in Python
- Simple Input & Output
- Simple Output Formatting

3. Python program flow:

- Indentation
- The If statement and its' related statement
- An example with if and it's related statement
- The while loop
- The for loop
- The range statement
- Break & Continue
- Assert
- Examples for looping

4. Functions & modules:

- Create your own functions
- Functions Parameters
- Variable Arguments
- Scope of a Function
- Function Documentation/Doc strings
- Lambda Functions & map
- An Exercise with functions
- Create a Module
- Standard Modules

5. Exceptions:

- Errors
- Exception handling with try
- Handling Multiple Exceptions
- Writing your own Exceptions

6. File handling:

- File Handling Modes
- Reading Files
- Writing & Appending to Files
- Handling File Exceptions
- The with statement

7. Class:

- New Style Classes
- Variable Type
- Static Variable in class
- Creating Classes
- Instance Methods
- Inheritance
- Polymorphism
- Encapsulation
- Scope and Visibility of Variables
- Exception Classes & Custom Exceptions

8. Regular expressions:

- Simple Character Matches
- Special Characters
- Character Classes
- Quantifiers
- The Dot Character
- Greedy Matches
- Grouping
- Matching at Beginning or End
- Match Objects
- Substituting
- Splitting a String
- Compiling Regular Expressions
- Flags

9. Data structures:

- List Comprehensions
- Nested List Comprehensions
- Dictionary Comprehensions
- Functions
- Default Parameters
- Variable Arguments
- Specialized Sorts
- Integrators
- Generators
- The Functions any and all
- The with Statement
- Data Compression
- Closer
- Decorator

10. Database and Operations:

- Install postgres server on windows
- Install postgres server on linux
- Install postgres-Python connector
- Creating database
- Creating tables
- Insert data into database
- Inserting images
- Retrieving data
- Update data
- Delete data
- Practice, Questions and exercise

11. OOPs

- What are classes and objects?
- Defining classes and attributes
- Constructor
- Instance Methods
- Inheritance
- Abstraction and Encapsulation
- Polymorphism
- Method hiding
- private,public and protected variables
- Implementing stack, queue , deque and linked list
- Class and static methods decorators
- Special methods
- Practice, Questions and exercise

12. Advance Library's of Python

- Introduction to NumPy and Pandas
- Creating NumPy arrays from Python structure
- indexing and Slicing arrays
- rearrange and linspace methods
- what is Pandas used for
- pandas series
- what is data frames ?
- Creating data frames
- Reading csv, excel and txt files
- Practice, Questions and exercise

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