

# Core Python Essentials

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## Unleashing Python Potential



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# C PROGRAMMING

## Chapter 01- Getting Started

- Introduction
- Brief History and Release Versions
- Installations of Python – Windows, Linux and Mac
- Python Console
- Environment Variables
- IDLE
- Understanding Python Blocks
- Hello World Example Keywords and identifier
- Statement and Comments

## Chapter 02 - Variable, Data types and Operators

- Variables
- Data Types
- Numbers, List, Tuple, Strings, Set, Dictionary, Arrays
- Operators  
Arithmetic, Relational, Logical, Bitwise, Assignment, Special Operators

## Chapter 03 – Conditionals and Loops

- If, if-else, elif, and nested Conditionals
- Types of Loop  
For, While, Nested loop
- Loop Control Statements  
Break ,Continue ,Pass statement

## Chapter 04 – Function

- Defining and Function
- Calling a Function
- Function Arguments
- Global vs Local Variables
- Anonymous Functions
- The return statement
- Recursion

## Chapter 05- Modules & Package

- About Modules in Python
- Code Reusability
- Import statements
- About Packages
- Import Module From a Package

## Chapter 6- Python File I/O

- Opening and closing Files
- Python File Modes
- Reading and Writing Files
- Python File Methods
- Directories in Python

## Chapter 7- Python Errors and Built-in Exceptions

- Python Built-in Exceptions
- Exception Handling

## Chapter 8 – Multithreading

- Threading Module
- Thread Creation
- Starting and Joining Threads
- Thread Synchronization
- Daemon Threads

## Chapter 9 – Classes & Objects

- Overview of OOP Terminologies
- Creating a Class
- Variables of Class
- Creating an Objects
- Accessing Attributes
- Built-in Class Attributes and Objects
- Constructors
- Deleting Attributes and Objects
- Method Overriding
- Operator Overloading
- Inheritance ,Polymorphism

## Chapter 10 - Numpy

- [Numpy | ndarray](#)
- [Numpy | Array Creation](#)
- [Numpy | Data Type Objects](#)
- [Data type Object \(dtype\) in NumPy](#)
- [Numpy | Indexing](#)

- [Numpy | Iterating Over Array](#)
- [Numpy | Binary Operations](#)
- [Numpy | Mathematical Function](#)
- [Numpy | String Operations](#)
- [Numpy | Linear Algebra](#)
- [Numpy | Sorting, Searching and Counting](#)

## Chapter 11 - Pandas

- [Python | Pandas DataFrame](#)
- [Python | Pandas Series](#)
- [Python | Pandas Working With Text Data](#)
- [Python | Pandas Working with Dates and Times](#)
- [Python | Pandas Merging, Joining, and Concatenating](#)
- [Data analysis using Pandas](#)
- [Read csv using pandas.read\\_csv\(\)](#)
- [Merge, Join and Concatenate DataFrames using Panda](#)
- [Python | Delete rows/columns from DataFrame using Pandas.drop\(\)](#)
- [Python | Data Comparison and Selection in Pandas](#)