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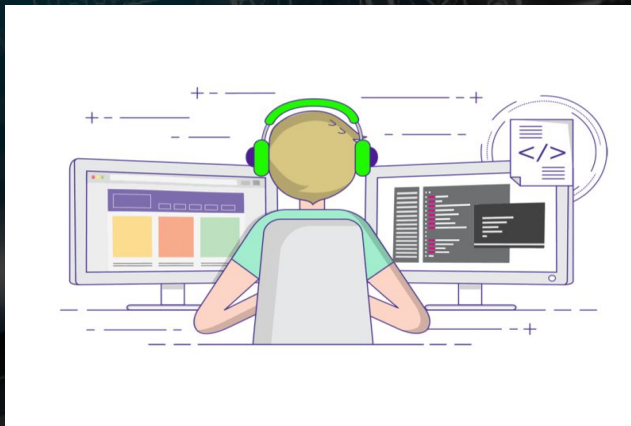


# AH 200

# Python Scripting Essentials

# MODULE: Python Scripting Essentials

Python Scripting Essentials For Cyber Security



# Python?

Python is a high-level, interpreted programming language that emphasizes readability and simplicity.

It is widely used for **automation**, **data analysis**, **web development**, and more.

## Why Learn Python?

- **Versatility:** Python is used in a wide range of applications, from web development to machine learning.
- **Ease of Use:** Its syntax is simple and easy to understand, making it beginner-friendly.
- **Integration:** Python can be easily integrated with other languages and tools, such as Bash and Linux systems.

## Basic Python Syntax

- Python uses indentation (rather than braces `{}`) to define code blocks.
- Python files are saved with a `.py` extension.

## Python's Role in Automation

- Python is often used in Linux environments for automating tasks, managing files, and interacting with the system.



# Basic Python Programming Concepts

## Variables and Data Types

- **Variables** store data values that can be used later in the program.



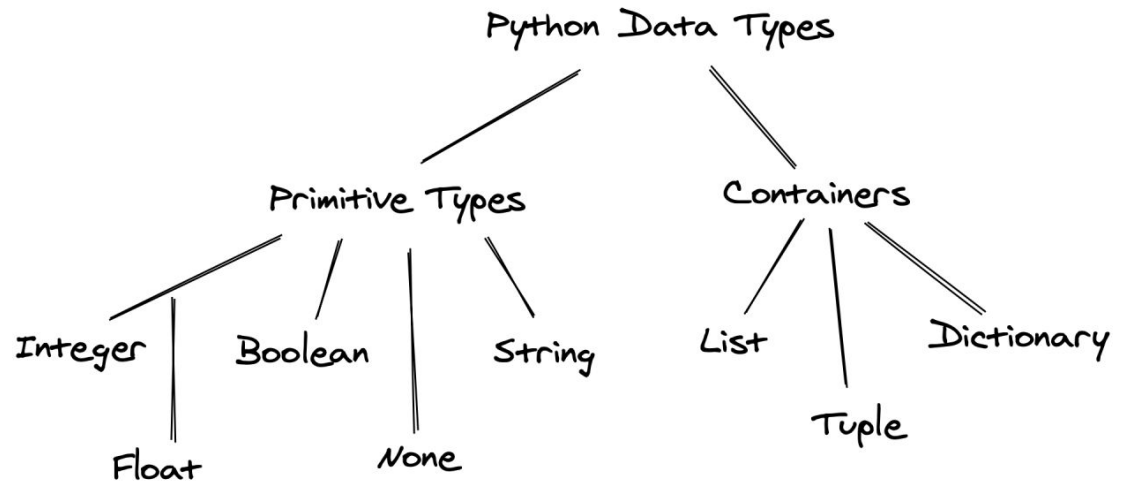
```
name = "John"
```

```
age = 30
```

# Python Basics Ctd...

## Common Data Types:

- **String:** "Hello, World!"
- **Integer:** 42
- **Float:** 3.14
- **Boolean:** True or False



# Python Basics Ctd...

## Conditional Statements

- Use **if**, **elif**, and **else** to execute code based on conditions.

```
if age >= 18:  
    print("Adult")  
else:  
    print("Minor")
```

# Python Basics Ctd...

## Loops

- **For Loop:** Iterate over a sequence (list, string, range, etc.).

```
for i in range(5):  
    print(i)
```



# Python Basics Ctd...

**While Loop:** Execute as long as the condition is true.



```
def greet(name):  
    print(f"Hello, {name}!")  
  
greet("Alice")
```

# Python Basics Ctd...

Functions group code into reusable blocks.



```
def greet(name):  
    print(f"Hello, {name}!")  
  
greet("Alice")
```

**Practical Time <3**

**Let's Prompt & Execute Some Python Scripts :)**

# Key Points for Python 101

## Python Fundamentals

Python is a powerful, high-level language used for automation, scripting, and more. Its syntax is simple, making it an excellent choice for beginners in programming.

## Key Concepts

Variables store data that can be reused throughout the script.  
Control structures like if-else and loops (for and while) manage program flow.  
Functions allow for modular, reusable code.

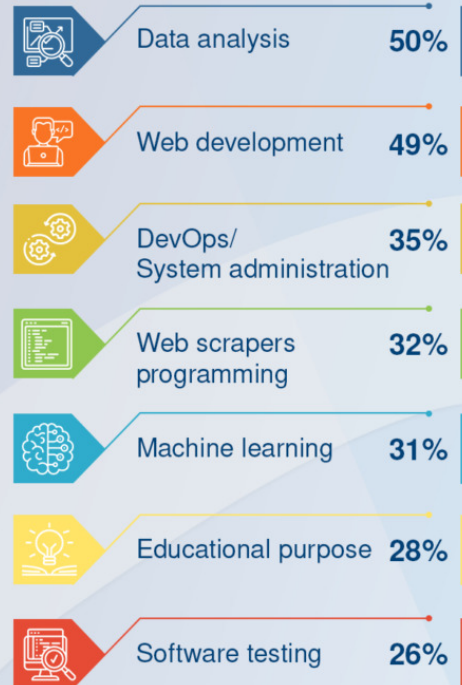
## Python for Automation

Python can automate repetitive tasks like file renaming, data processing, or system administration tasks.  
It integrates well with Linux systems, making it a great tool for system automation.

## Best Practices

Always comment your code to improve readability.  
Use clear and descriptive variable names to enhance understanding.  
Test your scripts in safe environments before deployment.

## PYTHON USE CASES, WHAT DOES PYTHON DO?



# The End...

Quid libi te docere potest de vita? Consuetudo illa perficit, et si semel aliquid conaris, fortasse non erit perfectum, et opus in eo habebis, si bonum esse vis.





# Thank You!

We have no words to thank you enough for making it this far, so we just copied the message above and pasted it down here again saying “Thank you!”