## **What to Cover Practically in: Python Syntax & Indentation (PEP 8)**

### **✅ 1. Basic Syntax Structure**

basic Python script:

# Correct syntax

print("Hello")

x = 10

y = 20

print(x + y)

* No semicolons ;
* No need to declare variable types
* Simple and readable syntax

### **✅ 2. Importance of Indentation**

Now this:

# Correct indentation

if x > 5:

print("x is greater than 5")

print("Still inside if block")

print("Outside the if block")

🎯 Explain:

* Python uses **indentation instead of braces {} like C/Java**
* Default indentation is **4 spaces (not tab)** as per **PEP 8**

### **❌ 3. What Happens If Indentation Is Wrong**

example with an error:

# Incorrect indentation

if x > 5:

print("x is greater than 5")

▶️ Run it and the error:

IndentationError: expected an indented block

📢 Explain that **Python is strict** about indentation. Even 1 space mistake can break the code.

### **✅ 4. Nested Indentation**

how indentation works with nested blocks:

x = 10

if x > 5:

print("x > 5")

if x > 8:

print("x > 8")

print("Done")

Explain how each block is **indented deeper**, and how that represents **scope** in Python.

### **🧠 5. PEP 8 Style Guide (Quick Highlights)**

You don’t have to go deep — just mention:

* Use **4 spaces** for indentation (not tabs)
* Leave **2 lines between functions**, 1 between logic blocks
* Use **snake\_case** for variables and functions

### **✨ Bonus Tips**

* Use **split screen**: Code on left, output/error on right
* Keep a **"Wrong vs Correct"** side-by-side comparison
* Highlight key points with overlays like "❌ Wrong Indent" and "✅ Good Practice"

### **About the Author**

**Gowtham SB** is a **Data Engineering expert, educator,** **and content creator** with a passion for **big data technologies, as well as cloud and Gen AI** . With years of experience in the field, he has worked extensively with **cloud platforms, distributed systems, and data pipelines**, helping professionals and aspiring engineers master the art of data engineering.

Beyond his technical expertise, Gowtham is a **renowned mentor and speaker**, sharing his insights through engaging content on **YouTube and LinkedIn**. He has built one of the **largest Tamil Data Engineering communities**, guiding thousands of learners to excel in their careers.

Through his deep industry knowledge and hands-on approach, Gowtham continues to **bridge the gap between learning and real-world implementation**, empowering individuals to build **scalable, high-performance data solutions**.

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