**Python**

**LAB 1**

**Python Syntax and print Statement**

# Example of printing "Hello, World!" using print statement

print("Hello, World!")

**Output:**

Hello, World!

**Input/Output with input() and print()**

# Example of taking input from user and printing it

txt = input("Type something to test this out: ")

print("You typed:", txt)

**Output:**

Type something to test this out: Hello!

You typed: Hello!

**Multiple Statements on a Single Line**

# Example of multiple statements on a single line

a = 5; b = 10

print("Sum:", a + b)

**Output:**

Sum: 15

**Indentation and Python Coding Style**

# Example demonstrating correct indentation and coding style

def greet(name):

# Function to greet a person

print("Hello,", name)

# Calling the function

greet("Alice")

**Output:**

Hello, Alice

**Data Types - Numbers and Booleans**

# Example of numbers and booleans in Python

x = 10

y = 3.5

z = complex(1, 2) # Creating a complex number

is\_true = True

print("x is of type:", type(x))

print("y is of type:", type(y))

print("z is of type:", type(z))

print("is\_true is of type:", type(is\_true))

**Output:**

x is of type: <class 'int'>

y is of type: <class 'float'>

z is of type: <class 'complex'>

is\_true is of type: <class 'bool'>

**Strings and Special Characters**

# Example of strings and special characters

message = "Python's syntax is easy to learn.\n\tIt's powerful!"

print(message)

**Output:**

Python's syntax is easy to learn.

It's powerful!

**String Indexing and Slicing**

# Example of string indexing and slicing

text = "PYTHON TUTORIAL"

print("Character at index 0:", text[0])

print("Character at index -1:", text[-1])

print("Substring (slice) from index 3 to 7:", text[3:7])

**Output:**

Character at index 0: P

Character at index -1: L

Substring (slice) from index 3 to 7: HON

**Lists and List Operations**

# Example of lists and list operations

color\_list = ["RED", "Blue", "Green", "Black"]

print("First item:", color\_list[0])

print("Last item:", color\_list[-1])

print("Slice from index 1 to 3:", color\_list[1:3])

**Output:**

First item: RED

Last item: Black

Slice from index 1 to 3: ['Blue', 'Green']

**Conditional Statements**

# Example of conditional statements

a = 5

b = 10

if b > a:

print("b is greater than a")

else:

print("a is greater than or equal to b")

**Output:**

b is greater than a

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