

🔗 2. Data Types in Python

Python has various built-in data types. Some common ones are:

- **int**: For integers (e.g., 1, -3, 100)
- **float**: For floating-point numbers (e.g., 3.14, -0.001)
- **str**: For strings (e.g., "Hello", "Python")
- **bool**: For boolean values (True or False)

🔗 Type Checking:

You can use the `type()` function to check the type of a variable.

```
x = 10  
print(type(x)) # Output:
```



1. Variables in Python

Variables in Python are used to store data values. They are created when you assign a value to them, and you don't need to declare their type (Python is dynamically typed).

Syntax for Variable Assignment:

```
x = 5    # Assigning an int
y = "Hello"  # Assigning
```

Variable Naming Rules:

- Variable names can contain letters (a-z, A-Z), numbers (0-9), and underscores (_).
- Variable names must start with a letter or an underscore.
- Variable names are case-sensitive (Name and name are different).

Example:

```
age = 25
```



🔗 3. Type Conversion

Python allows you to convert between data types using functions like `int()`, `float()`, `str()`, etc.

🔗 Example:

```
x = "10"    # x is a string  📄  
y = int(x)  # Convert str  
z = float(y) # Convert i  
print(z)    # Output: 10.0
```

5. Assigning Values to Multiple Variables

Python allows you to assign values to multiple variables in a single line.

Example:

```
x, y, z = 10, 20, 30
print(x) # Output: 10
print(y) # Output: 20
print(z) # Output: 30
```



You can also assign the same value to multiple variables in one line:

```
x = y = z = 100
print(x, y, z) # Output:
```



6. Variable Reassignment

You can change the value of a variable at any point in your program.

Example:

```
x = 5
print(x)    # Output: 5
x = 10
print(x)    # Output: 10
```



Homework

1. **Arithmetic Practice:** Write a Python program that performs basic arithmetic operations (addition, subtraction, multiplication, and division) on two numbers. Define the two numbers as variables within the code and print the results for each operation.
2. **Swap Two Variables:** Write a Python program that swaps the values of two variables with and without using a third variable.
3. **Build in Public:** Create a post on LinkedIn/X and share that you learn variables and data types in python and its day 1. (Use #engineeringinkannada and mention me)