

# Introduction to Python

Python is a high-level, general-purpose programming language known for its readability and versatility.

# Variables and Data Types

Variables store data values. Declared by assigning a value with the ``=`` operator (e.g., ``name = "Alice"``).

Common data types include:

Integers (int): whole numbers (e.g., 10, -5, 0)

Floats (float): decimal numbers (e.g., 3.14, -2.5)

Strings (str): text enclosed in quotes (e.g., "Hello")



# Operators

Operators perform actions on variables and values.

Arithmetic operators: ``+``, ``-``, ``*``, ``/``, ``//`` (floor division), ``%`` (modulo), ``**`` (exponentiation)

Comparison operators: ``==`` (equal to), ``!=`` (not equal to), ``>``, ``<``, ``>=``, ``<=``

Logical operators: ``and``, ``or``, ``not``

Assignment operators: ``=``, ``+=``, ``-=``, ``*=``, ``/=``, etc.

# Control Flow with Conditional Statements

`if`, `elif` (else if), and `else` statements control the execution of code based on conditions.

Indentation is crucial in Python to define code blocks.

Example:

# Loops

`for` loops iterate over a sequence (e.g., list, string, range).

`while` loops repeat a block of code as long as a condition is true.

Example `for` loop:

Example `while` loop:



```
resp_iter = self.stub.GetDataResponse()
statuses = {}
async for data in resp_iter:
    status = Status(
        status_id=data.id, name=data.name
    )
    statuses[status.name] = status
return statuses
```