

Comment

comment - single line # this is a single line comment

comment - multiline comments """ this is multi lines comments """

Variables Declaration

integer students_count = 1000

decimal rating = 4.99

boolean is_published = False

string - single line course_name = "Python"

string - multiple lines course_name = """ Multiple Lines """

string concatenation full_name = first_name + " " + last_name

formatted string full_name = f"{first_name} {last_name}"

assign multiple variables x, y, z = "John", "Alex", "May"

one value to multiple variables x = y = z = "Value"

unpack animals = ["monkey", "cat", "dog"]
x, y, z = animals

boolean - capitalise the first letter

single line - can use either single or double quote

multiple lines - use triple double quote to wrap the entire strings

formatted string - use 'f' and curly braces with the double quotes

wrap with the separated strings

Output Variables

text output print("Hello World")

variable output print(x + y + x)

Global Variable

```
def myfunc():
    global x
    x = " John"

myfunc()
print( " Hello " + x)
```

Data Types

text Type: str

numeric Types: int, float, complex

sequence Types: list, tuple, range

mapping Type: dict

set Types: set, frozenset

boolean Type: bool

binary Types: bytes, bytearray, memoryview

none Type: NoneType

Collection Types

List - like an array fruits = ['apple', 'orange', 'banana']

Dictionary - key value pair fruit = {'name':'apple', 'colour': 'red'}

Tuples - order is unchangable fruit = ('apple', 'orange', 'banana')

Set - set items are unchangable fruit = {'apple', 'orange', 'banana'}

If - else

while loop

for loop

function

Built-in function

check type of variable	x = 2.8	print(type(x))	<class 'float'>
casting	int(), float(), str()	x = int(3)	x will be 3
input	username = input("Enter your name")	user type	username = "John"



By shadowG (grimeswong)

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Strings

slicing strings	a = "Hello World"	print(a[2:7])	'llo W'
from index to the end		print(a[2:])	'llo World'
from start to index		print(a[:8])	'Hello Wo'
from negative to negative	-2 is not included 'd'	print(a[-7:-2])	'o Wor'

String Methods

upper case	print("Hello World".upper())	"HELLO WORLD"
lower case	print("Hello World".lower())	"hello world"
trim white space (leading & trailing)	print(" No Space ".strip())	"No Space"
replace string	print("Hello John".replace("John", "Alex"))	"Hello Alex"
split string	print("Hello, World".split(","))	return ["Hello", "World"]

String Concatenation

use '+' operator	" Hello " + " Wor ld"	"Hello World"
use join()	" ".join(["Hello ", " World"])	"Hello World"
use format()	age = 18 text = "I am {} years old" print(text.format(age))	"I am 18 years old"

"+" operator cannot combine string and number
{ } is a placeholder

Formatted String

```
# formatted string
first = " Mos h"
last = " Ham eda ni"
full = f"{f irst} {last} "
print( full)
```

Number

There are three types of number: integer, float & complex number

```
x = 1 # integer
x = 1.1 # float
x = 1 + 2j # a + bi # complex number
print(10 + 3) # addition
print(10 - 3) # subtraction
print(10 * 3) # multiplication
print(10 / 3) # division outcome with float
print(10 // 3) # division outcome with integer
print(10 % 3) # modulus, the remainder of a division
print(10 ** 3) # exponent, the power
```



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