

```
In [2]: print('Hello, Python!')

Hello, Python!
```

Writing comments in Python

```
In [3]: # Practice on writing comments

print('Hello, Python!') # This line prints a string
# print('Hello, Python!')

Hello, Python!
```

Errors in Python

```
In [4]: # Print string as error message

frint("Hello, Python!") # "print" is misspelled

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NameError                                Traceback (most recent call last)
/var/folders/cn/0zbpq_4n7556t3y1p2lb9w1w0000gn/T/ipykernel_31706/1173681441.py in <module>
      1 # Print string as error message
      2
----> 3 frint("Hello, Python!") # "print" is misspelled

NameError: name 'frint' is not defined

In [5]: # Try to see built-in error message

print("Hello, Python!) # Not closing the quote

File ~/var/folders/cn/0zbpq_4n7556t3y1p2lb9w1w0000gn/T/ipykernel_31706/1277567615.py", line 3
    print("Hello, Python!) # Not closing the quote
                                ^
SyntaxError: EOL while scanning string literal
```

Strings, Integers, Floats, Booleans

```
In [ ]: # String
Hello, World!

In [ ]: # Integers
90, 5, 100, 2500

In [ ]: # Float
10.5, 25.99, 200.333

In [ ]: #Boolean - True
True

In [ ]: #Boolean - False
False

In [6]: type(30)

Out[6]: int

In [9]: type(-84)

Out[9]: int

In [7]: type(20.8543)

Out[7]: float

In [8]: type('see you tomorr')

Out[8]: str

In [18]: type(True)

Out[18]: bool

In [19]: type(False)

Out[19]: bool

In [20]: True

Out[20]: True

In [21]: False

Out[21]: False
```

Converting between data types

```
In [10]: #integer to float
int(15.0)

Out[10]: 15

In [11]: float(35)

Out[11]: 35.0

In [12]: int('254')

Out[12]: 254

In [13]: int(4.2)

Out[13]: 4

In [14]: int(6.8)

Out[14]: 6

In [15]: str(55)

Out[15]: '55'

In [16]: str(75.2)

Out[16]: '75.2'

In [22]: int(True)

Out[22]: 1

In [23]: bool(0.2)

Out[23]: True

In [24]: type(10/5)

Out[24]: float

In [26]: type(10//5)

Out[26]: int
```

Expressions in Python

```
In [27]: 10+17

Out[27]: 27

In [28]: 11-8

Out[28]: 3

In [29]: 20+30+40

Out[29]: 90

In [30]: 30*3

Out[30]: 90

In [31]: 30/3

Out[31]: 10.0

In [32]: 30//3

Out[32]: 10

In [34]: int(30/3)

Out[34]: 10
```

Variables

```
In [35]: x = 5*5+10

In [36]: x

Out[36]: 35

In [37]: y = x+10

In [38]: y

Out[38]: 45

In [1]: area_desk = 16*7
area_desk

Out[1]: 112

In [3]: x = 12*3
y = 6*5
z = x*y

Out[3]: 66
```

String Operations

```
In [4]: "John Bull"

Out[4]: 'John Bull'

In [5]: 'John Bull'

Out[5]: 'John Bull'

In [6]: '465897'

Out[6]: '465897'

In [7]: '4 6 5 8 9 7'

Out[7]: '4 6 5 8 9 7'

In [9]: '@$%^&*'

Out[9]: '@$%^&*'

In [10]: name = 'John Bull'
print(name)

John Bull

In [11]: # Indexing the characters of a string - start from 0 (left to right) or -1(right to left)
name = 'John Bull'
name[6]

'u'

In [12]: name[-3]

Out[12]: 'u'

In [14]: len(name)

Out[14]: 9

In [15]: #using slicing to obtain multiple characters from a string
name[2:8]

Out[15]: 'hn Bul'

In [16]: name[0:7]

Out[16]: 'John Bu'

In [17]: name[:7]

Out[17]: 'John Bu'

In [18]: name[1:]

Out[18]: 'ohn Bull'

In [19]: # strides
name[::2]

Out[19]: 'Jh ul'

In [20]: name[::3]

Out[20]: 'Jnu'

In [24]: #concatenate
introduction = 'His name is' + name
introduction

Out[24]: 'His name isJohn Bull'

In [25]: 5*name

Out[25]: 'John BullJohn BullJohn BullJohn BullJohn Bull'

In [26]: #Escape sequence - backslash for new line
print('His name is \n John Bull \n but they call him \n JB')

His name is
John Bull
but they call him
JB

In [27]: #Double backslash places a backslash in the string

print('His name is John Bull \\ But they call him JB')

His name is John Bull \ But they call him JB

In [29]: #r at the beginning of the sting also places a backslash in the string
print(r' His name is John Bull \ But they call him JB' )

His name is John Bull \ But they call him JB

In [32]: #string operations - upper
x = 'She stayed home all day'
print('before upper:', x)

before upper: She stayed home all day

In [33]: y = x.upper()
print('after upper:', y)

after upper: SHE STAYED HOME ALL DAY

In [34]: #string operation - replace
y = x.replace('She', 'He')
print(y)

He stayed home all day

In [35]: #string operation - find
sentence = 'She stayed home all day'
sentence.find('home')

Out[35]: 11

In [36]: sentence.find('all')

Out[36]: 16

In [ ]:
```