Phython for Data Scieun

Video 1 Data

Types of Data

int
float
str

type(X) : gives type of data

Type Castiny

float(2) : 2.0
int(1.1) : 1
int('1') : 1 String should be " " or ' '
int('A') : error
int(3.99) : 3
str(4.5) : '4.5'

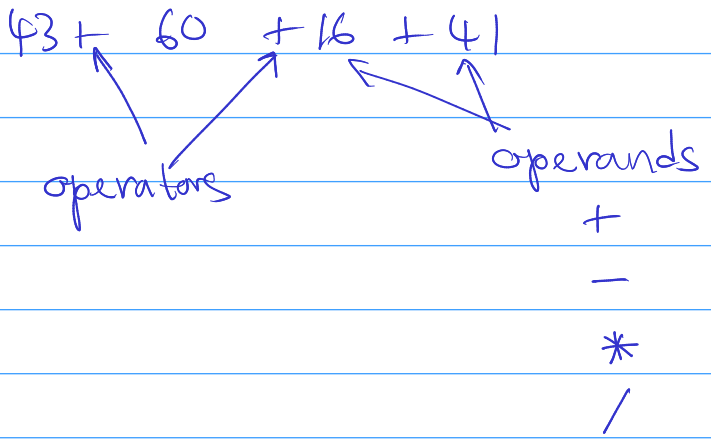
Booliany

int(True) : 1
int(False) : 0

bool(1) : True
bool(0) : False

Video 2 Expressions and Variables

Expressions : Mathematical Operations



25/5 : 5.0 (in Phyton 3)
25/6 : 4.166

25//5 : 5 type → int
25//6 : 4 ← rounded.
11//2 : 5

2*60+30 : 150
30+2*60 : 150
(30+2)*60 : 1920

Variables

my_variable = 1
my_variable : 1

my_variable = 10
my_variable : 10

```
x = 43 + 16 + 60 + 41
x = 160
y = x/60
y : 2.666
```

```
x = x/60
x: 2.666
type(x): float
```

Use meaningful variable names

```
total_min = 43 + 42
total_hr = total_min / 60
total_hr : 2.367
```

Lab: Your First Program

print('Hello, Plyton!') : Hello, Plyton!

import sys ← build in module
print(sys.version)

print('Hello world!') # Printing "Hello world!"

sys.float_info : System setting about float type

Video 3

String Operations

Sequence of characters with in two quotes or Single quotes.

"Dulith"
'Dulith'
'12345'

```
Name = 'Michael Jackson'
Name[0] : 'M'
Name[8] : 'J'
Name[-1] : 'n'
Name[-3] : 's'
Name[0:4] : 'Mich'
Name[::2] : 'McalJcsn'        every second variable
Name[0:5:2] : 'Mca'           0 to 4 by 2

len("Michael Jackson") : 15
len("M") : 1
```

Concatenate or combine strings

```
Name = "Dulitha"
Statement = Name + 'is the best"
```

output: Dulitha is the best

Tuples

3 * 'Dulitha' : Dulitha.Dulitha.Dulitha.

String : Immutable

```
Name = "Dulitha"
Name[0] = "J"
```

✗

```
Name = Name + " is the best"
```

✓

Dulitha is the best

Strings: escape sequences

\ are meant to process escape sequences.

escape sequences are strings that are difficult to input

print ("Michael Jackson \n is the best")

\n → new line

Michael Jackson
is the best

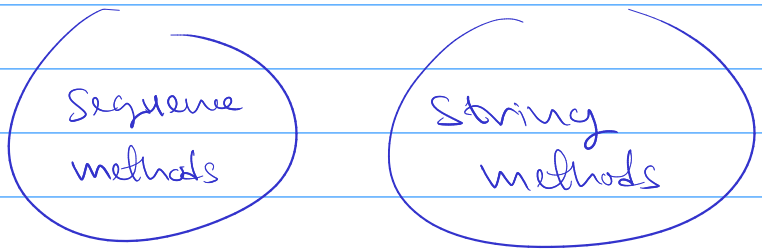
\t → Tab

\\ → \ alternative

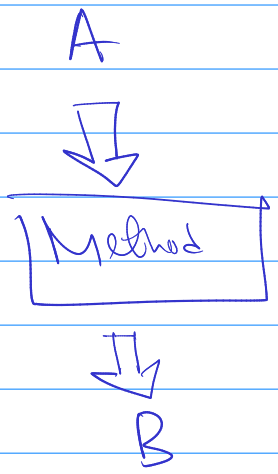
print (r"Michael Jam \ s the best")

gives Michael Jackson \ is the best

String Methods



Method



Example of Method → upper

A = "Dulitha"

B = A.upper() : DULITHA

B = A.replace("i", "xy") : Duxytha

B = A.find("Du") : 0

B = A.find("itha") : 3

B = A.find("Jaya") : -1

print("This is B:", B) : This is B -1