Python End-To-End

DataRockie School

How to get started

1. Personal Laptop
2. Web Browser + Internet Access
3. Coding experience not required :D

Guido van Rossum

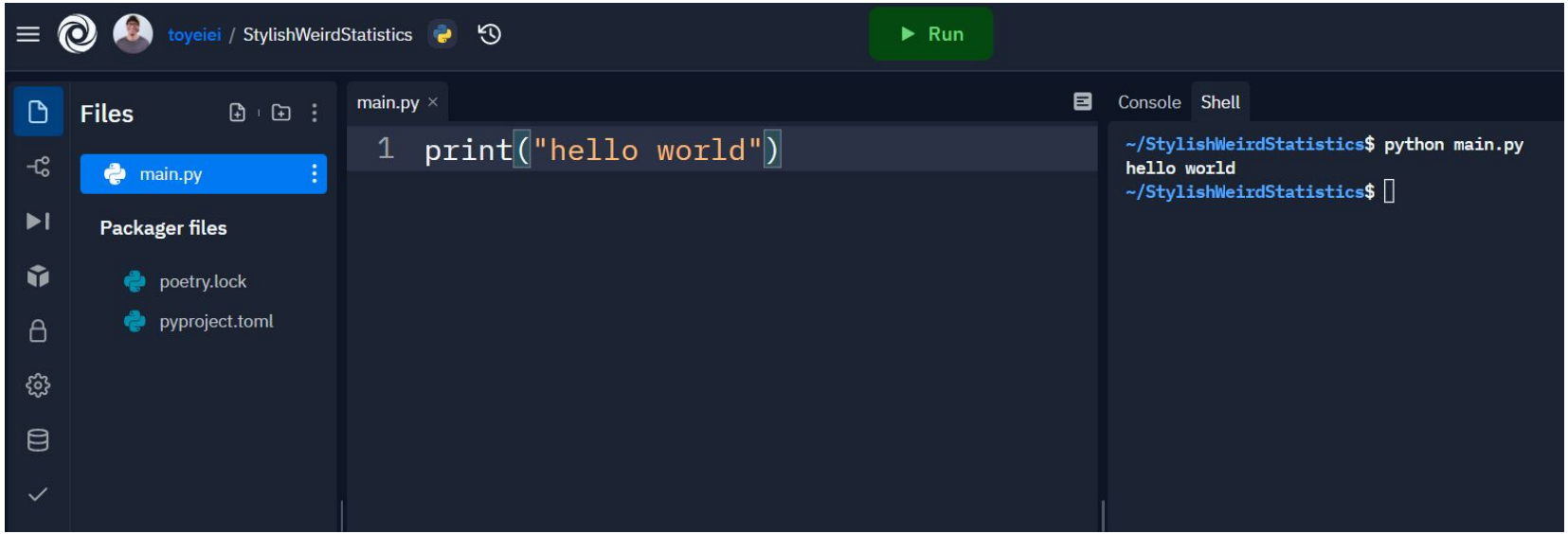
Inventor of Python

What is **Python**

Python is general-purpose language

- Software
- Web development
- API
- Data science

Text Editor


toyeiei / StylishWeirdStatistics
Run
Files
main.py
Packager files
poetry.lock
pyproject.toml
main.py
1 print("hello world")
Console
Shell
~/StylishWeirdStatistics$ python main.py
hello world
~/StylishWeirdStatistics$

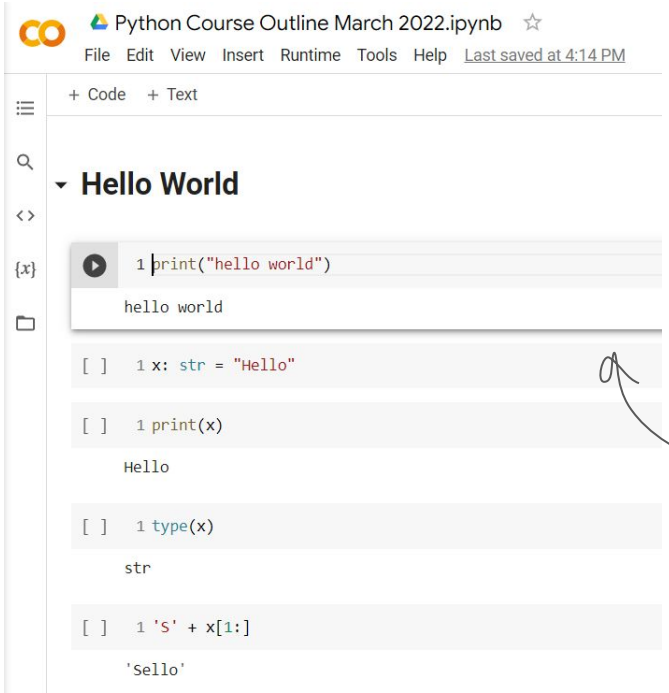
How to run Python **script .py**

```
## create a new file

print("hello world")

## save this file as
## main.py in folder
```


```
python main.py
```

Run python file in terminal

Google Colab (Notebook)



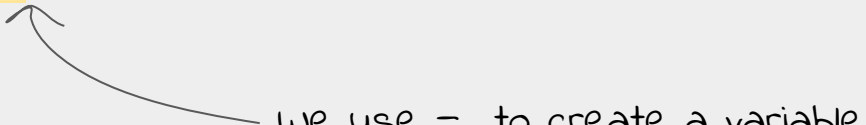
Code cell + text cell

Core Concepts of Any Language

1. Variable
2. Data Types
3. Data Structures
4. Control Flow
5. Function

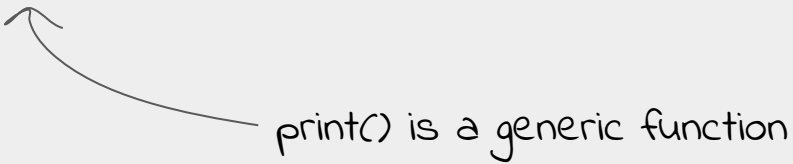
Variable

```
## create a new variable

my_name = “Toy”
my_age = 33
my_university = “Kasetsart”
movie_lover = True
```



Print Value

```
## print value of a variable

x = “Hello World”

print(x)    # Hello World
```



Data Types

1. Int
2. Float
3. String
4. Bool

Data Types

```
## we use type() to check type of a variable

type(“Toy”)
type(2022)
type(True)
type(3.41)
```

String Method

```
## create a new string variable

text = “a duck walks into a bar”

text.upper()
text.lower()
text.count(“a”)
```

https://www.w3schools.com/python/python_ref_string.asp

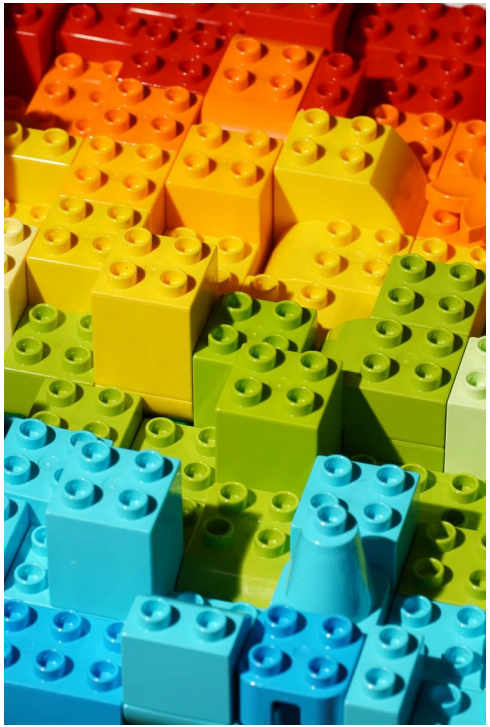
Index in Python starts **at 0**

```
## create a new string variable

text = “Hello world”

text[0]    # H
text[1]    # e
text[6:]   # world
text[0:5]  # Hello
```

What is Method

```
object.method()
```

method is a function applied
to a specific object (class)



Writing program is like building up a **LEGO**

we code up Piece by piece

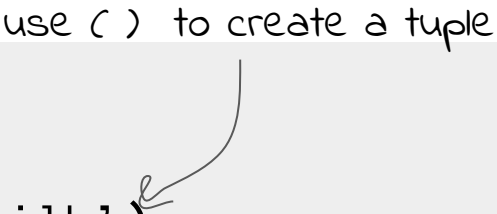
Data Structures

1. List
2. Tuple
3. Dictionary
4. Set

List

```
## list is mutable

shopping_list = [‘egg’, ‘bread’, ‘milk’]

shopping_list[0]  # egg
shopping_list[1]  # bread
shopping_list[2]  # milk
```

Tuple




```
## tuple is immutable

shopping_tuple = (‘egg’, ‘bread’, ‘milk’)

shopping_tuple[0]  # egg
shopping_tuple[1]  # bread
shopping_tuple[2]  # milk
```

Dictionary

```
## dict uses key-value pairs

customer = {
    “id”: 1,
    “first_name”: “David”,
    “last_name” : “Beckham”,
    “nationality”: “English”
}
```

Set

```
## set uses { } just like dict

shopping_set = {‘egg’, ‘bread’, ‘milk’}
```

Control Flow

1. if-else
2. for loop
3. while loop

If else

```
## if-else

score = 85
if score > 80:
    print(“Passed”)
else:
    print(“Failed”)
```

For Loop

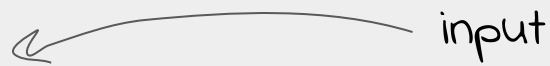
```
## for loop

shopping_list = [‘egg’, ‘bread’, ‘milk’]

for item in shopping_list:
    print(“I have to buy ” + item)
```

While Loop

```
## while loop

count = 0
while (count < 5):
    print(“Hello!”)
    count += 1   ## update count
```

Function

```
## create a new function

def greeting():
    print(“hello world”)

def greeting(name):
    print(“hello ” + name)
```




You are here :)

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