Getting Started:

Python has a very direct syntax.

The simplest line of code you can have, is a basic print statement:

```
print("Hi there!")
```

The ***print*** function is used to display data (content of a variable, type of a variable, result of an operation, etc.), so it can be very useful for making sure your code is nice and coherent.

We can print multiple things with one print statement.

We just need to add a comma (,) to separate them:

```
print("Hi there!", "My name is Hammoud!", "I'm 88 years old")
```

Variables & Assignment:

We can create variables directly by assigning a value to a name:

```
name = "Mahmoud"
age = 20
height = 177.5
can_drive = False
```

REMEMBER:

- To assign a value to a variable, we ALWAYS use the equal sign **=**
- Use names that make sense to you. Don't name them something like "**fhskd**" or "**hhhgh**"
- Follow **snake_case** to name your variables. No spaces.

For example: **red_apples** ✔️, **red apples** ❌

Types of variables:

The most commonly used variable types are:

```
full_name = "Nouiri Houda"     # String (str)
age = 21                       # Integer (int)
height = 169.5                 # Float (float)
can_drive = True               # Boolean (bool)
```

REMEMBER: The quotation marks (" ") are ONLY used for strings.

We can check the type of a variable using the **type** function, like this:

```
print(type(name))        # <class 'str'> ← String
print(type(age))         # <class 'int'> ← Integer
print(type(height))      # <class 'float'> ← Float
print(type(can_drive))   # <class 'bool'> ← Boolean
```

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We can convert from one type to another, using built in functions:

```
int("22")              # 22
float("52.3")          # 52.3
str(15)                # "15"
bool(0)                # False
```

Numbers & Math:

Arithmetic operators:

```
10 + 4     # 14
10 - 4     # 6
10 * 4     # 40
10 / 4     # 2.5
10 // 4    # 2        ← Floor division (Division entière)
10 % 4     # 2        ← Modulo (10 = 4x2 + 2)
10 ** 4    # 10000    ← Power (10^4)
```

Some useful built-in functions:

```
abs(-5)               # 5
max(1, 10, -6, 12)    # 12
min(1, 10, -6, 12)    # -6
```

Input:

Sometimes, we want the program to work for **everyone**.

For example if we had this program:

```
name = "Amira"
print("Your name is", name)   # Your name is Amira
```

This only works for someone who is named "Amira".

When we want to make it for everyone, we use the input function:

```
name = input("What's your name?")
print("Your name is", name)
```

REMEMBER:

The input always returns a string, so if you want to use it for numbers, convert it using built-in functions, like this:

```
age = int(input("How old are you?"))
years_left = 100 - age
print("You will be 100 years old in", years_left )
```

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