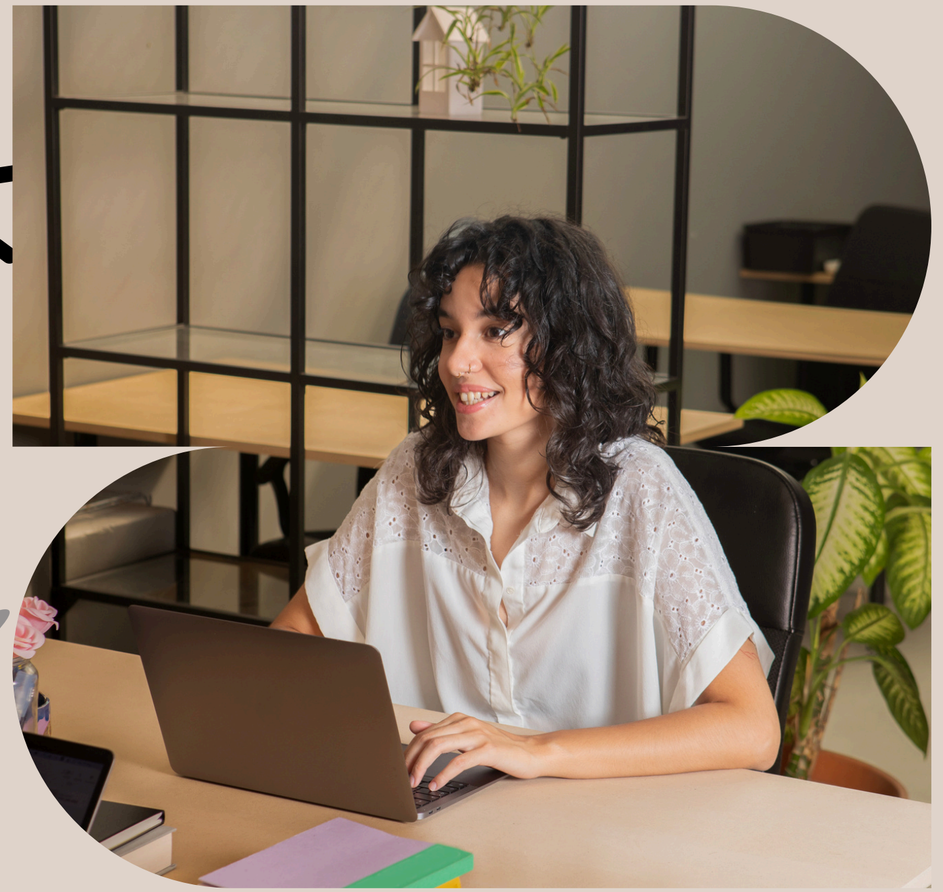
PYTHON

Intro of Python



what is python

Python is widely used general-purpose, high level programming language. It was created by Guido Van Rossum in 1991

why we use python

- Easy to Read and Learn. ...
- Reduces Maintenance Cost. ...
- Avoid the Harm of Software Bugs. ...
- Wide Applicability
- Easy Memory Management
- Large Community. ...
- Asynchronous Coding. ...
- Integration with Other Languages

Datatype

They determine the type of values variables can hold and specify the operations that can be performed on those values.

Data type in python

- Numeric
- Sequence Type
- Boolean
- Set
- Dictionary
- Binary Types

Numeric datatype

In Python, numeric data type represents the data that has a numeric value. The numeric value can be an integer, a floating number, or even a complex number. These values are defined as int, float, and complex classes in Python.

1. Integer datatype

Int. Int, or integer, is a whole number, positive or negative, without decimals, of unlimited length.

for example

```
c = 5
print(type(c))
```

2. float

Float is a function or reusable code in the Python programming language that converts values into floating point numbers.

for example

```
c=5.5
print(type(c))
```

3. complex

The complex data type in python consists of two values, the first one is the real part of the complex number, and the second one is the imaginary part of the complex number.

for example

```
a = -3+4j
print(type(a))
```

Boolean datatype

The boolean data type is either True or False. In Python, boolean variables are defined by the True and False keywords. The output <class 'bool'> indicates the variable is a boolean data type. Note the keywords True and False must have an Upper Case first letter.

example

```
print(type(True))
print(type(False))
```

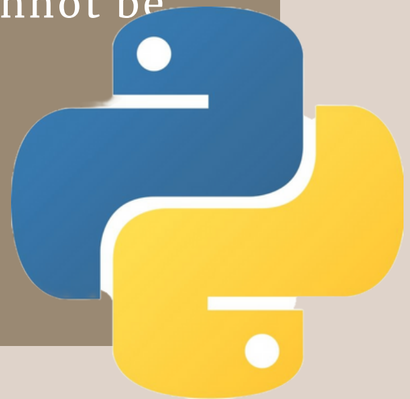
Sequence

What are the 3 types of sequences in Python? The three types of sequences in Python are lists, tuples, and strings. Lists are mutable and defined by square brackets, tuples are immutable and enclosed in parentheses, and strings are a sequence of characters enclosed in single or double quotes.

String

In Python, a string is a sequence of characters enclosed within either single quotes (' ') or double quotes (" "). It is an immutable data type, which means once a string is created, it cannot be modified.

example
string = ‘hello upflair’
print(type(string))



a). str.upper() :- convert all characters of the string to uppercase .
b). str.lower() :- convert all characters of string to lowercase.
c) str.find() :- return the lowest index in the string.
d) str.replace() :- return a copy with all substring old replaced by new .

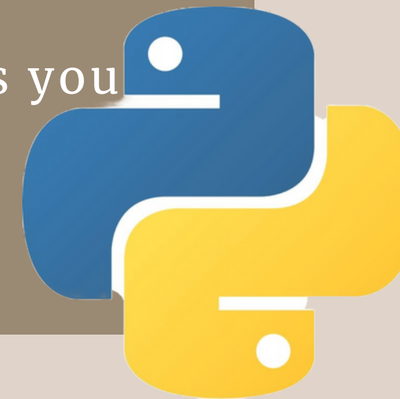
list

Python's list is a flexible, versatile, powerful, and popular built-in data type. It allows you to create variable-length and mutable sequences of objects.

a). list.append :- The append() method appends an element to the end of the list. Description: This parameter is required for this method which may be an element of any data type (string, integer, float, object, etc.)

b). list.pop :- In Python, the pop() method is a built-in method that allows you remove an item from a list.

c). list.sort :- sorts the list



d) list.insert(index,value) :- Return the list after Inserting value in list at that index
e) list.remove(‘key’) :- remove an element from a list by value in Python
f) list.min :- The Python list min() method compares the elements of the list and returns the element with minimum value.
g) list.max :- The Python List max() method compares the elements of the list and returns the maximum valued element. If the elements in the list are numbers, the comparison is done numerically

Tuple

a) tuple.count() :- Python Tuple count() The python create tuple technique allows placing multiple elements inside a parenthesis separated by commas. The python count method returns the number of times the element specified by the user has been repeated in the tuple slot gacorhariini.
b) tuple.index() :- Python index() method searches for the given element in a tuple and returns its position. It returns first occurrence of the element in the tuple.

Dictionary

a) dict.get() :- Returns the value for key if key is in the dictionary, else default.
b) dict.key :- The dictionary data type is similar to a list but uses keys instead of indexes to look up values.
c) dict.value() :- Python allows the values in a dictionary to be any type new value
d) dict.update() :-To update a dictionary in Python, you can use the update() method

Set

a) set.add(x) :- Adds an element x to the set.
b) set.remove(x) :- remove x element in set.
c) set.union(X) :- return a new set with element x and set elements
d) set.intersection :- return a new set with elements common to the set and all others.