

Full History of Python Language (Founder, Release Date, All Versions)

What is Python Programming Language?

Python is a high-level programming computer language that provides instructions to teach the computer how to perform a task.

It offers efficient high-level data structures and an object-oriented programming style that is simple yet effective.

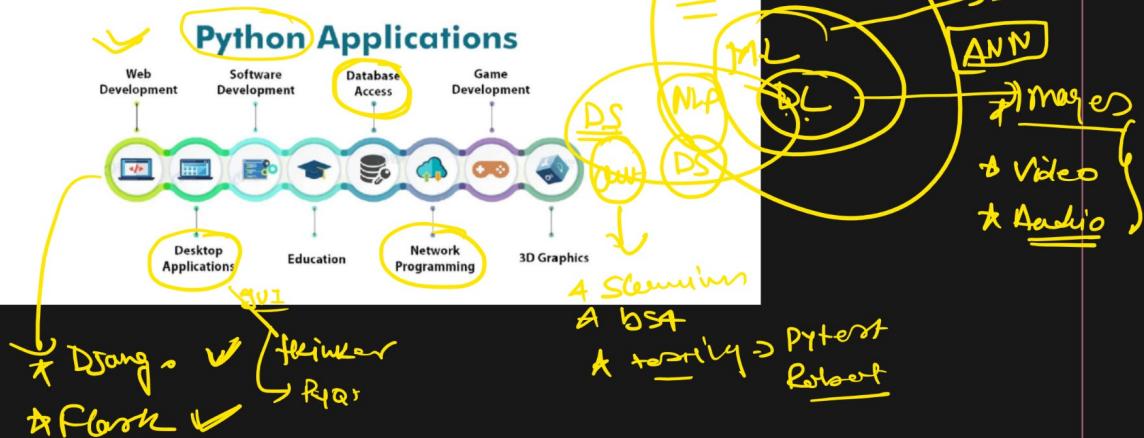
Python, a high-grade language, is a computer programming language that is meant to represent the needs of a problem and mimics natural language or mathematical notation.

It is a free and open-source language.



What is Python used for?

Python is commonly used for developing websites and software, task automation, data analysis, and data visualisation. Since it's relatively easy to learn, Python has been adopted by many non-programmers, such as accountants and scientists, for a variety of everyday tasks, like organising finances.



Fun Fact:

Guido van Rossum was reading the BBC's Monty Python's Flying Circus when developing Python. He named this language after Python, where he thinks the length is just right with a subtle mystery.

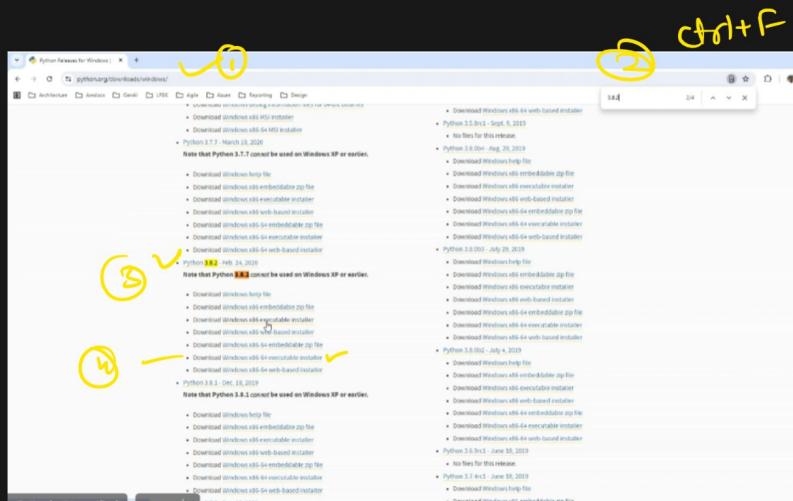
Who Developed Python Programming Language?

Python was created by Guido van Rossum, a Dutch programmer. He started working on Python in the late 1980s, and the first official release, Python 0.9.0, came out in February 1991.

Obviously, when talking about the history of Python language, the first question that arises is who developed Python. And, Guido van Rossum is known as the founder of Python.

Guido studied mathematics and computer science at the University of Amsterdam. His early exposure to programming languages like ABC influenced the development of Python.

He began working on Python in the late 1980s while working at the Centrum Wiskunde & Informatica (CWI) in the Netherlands.



Env. Path's

① C:\Python38



Python.exe

② C:\Python38\Scripts



Pip.exe

43.P.P

own file

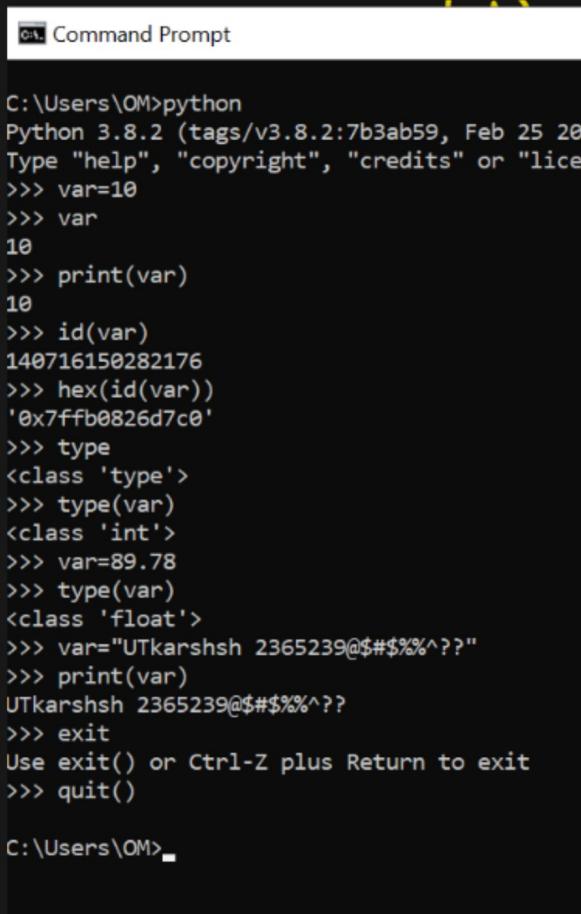
online or web

Pythonhosted.org

easy-install.exe

offline

- ① int → 69
- ② float → 69.8
- ③ string → 'Abc 123'
or
"Nishant"



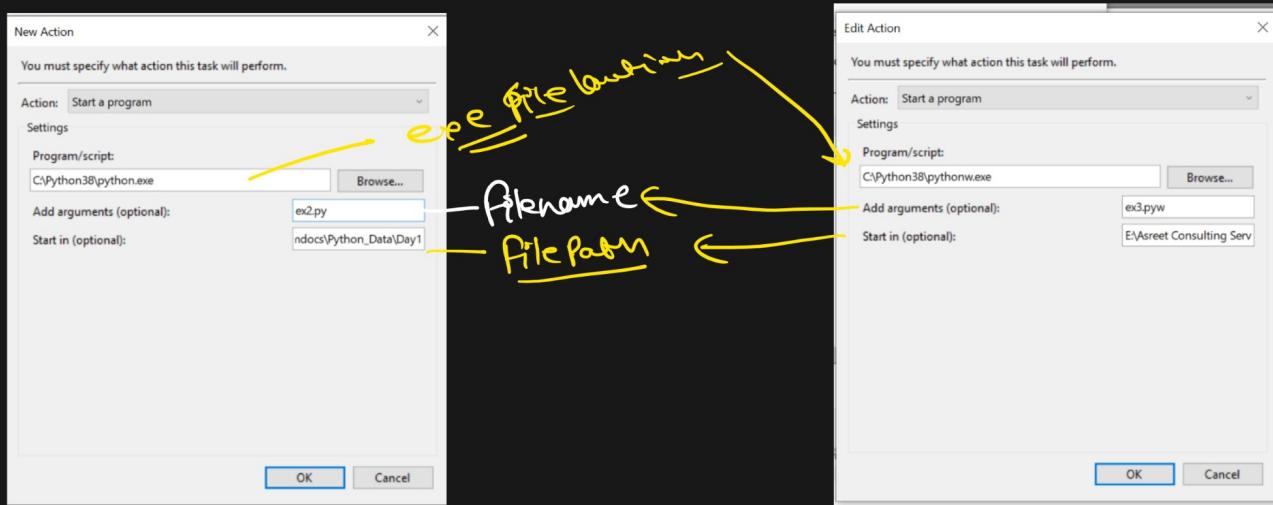
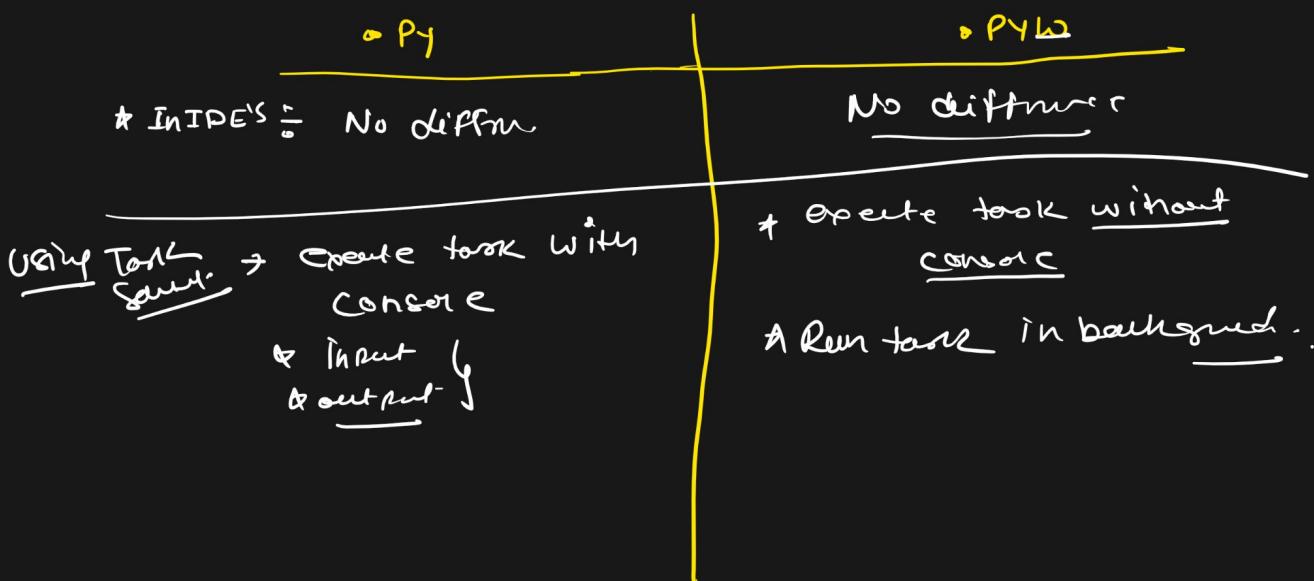
```
C:\Users\OM>python
Python 3.8.2 (tags/v3.8.2:7b3ab59, Feb 25 2020, 22:46:08)
Type "help", "copyright", "credits" or "license" for more information
>>> var=10
>>> var
10
>>> print(var)
10
>>> id(var)
140716150282176
>>> hex(id(var))
'0x7ffb0826d7c0'
>>> type
<class 'type'>
>>> type(var)
<class 'int'>
>>> var=89.78
>>> type(var)
<class 'float'>
>>> var="UTkarshsh 2365239@$$%%^??"
>>> print(var)
UTkarshsh 2365239@$$%%^??
>>> exit
Use exit() or Ctrl-Z plus Return to exit
>>> quit()

C:\Users\OM>
```

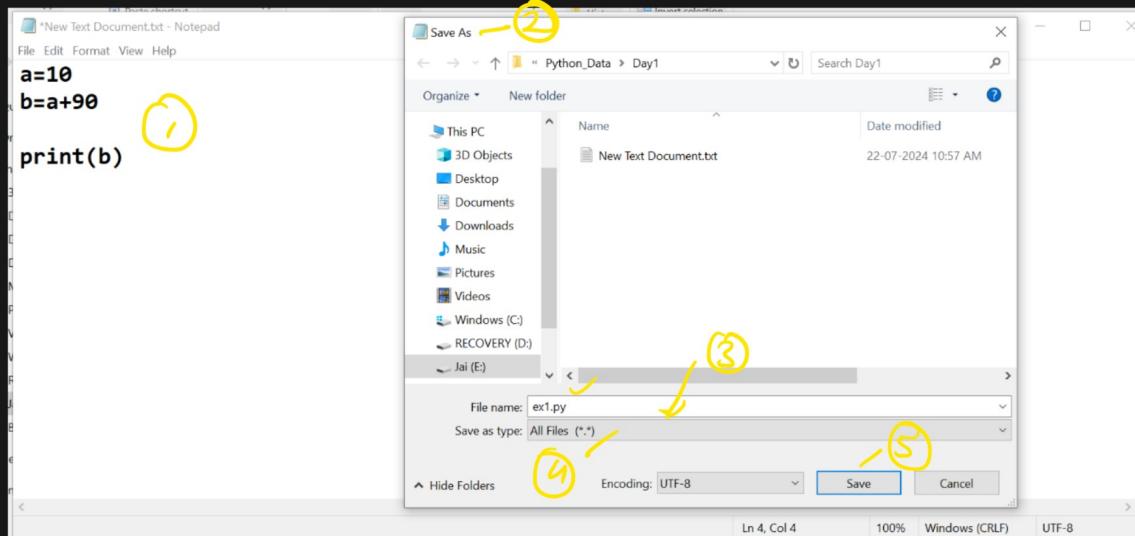
Create A Python Script?

- ✓ ① Text file (Notepad)
- ✓ ② IDLE (GUI of Python)
- ✓ ③ IDE's (PyCharm, Anaconda, Eclipse etc)
- ✓ ④ text editor (VS code, Sublime etc)

→ .py & .pyw



Create Python file using Notepad.



Execute A Python Script

① Install Python ✓

② Set the Path ✓

③ cd to file location.

④ Python filename.py

```
C:\Users\QM>cd E:\Asreet Consulting Services\Agenda_amdocs\Python_Data\Day1  
C:\Users\QM>e:  
E:\Asreet Consulting Services\Agenda_amdocs\Python_Data\Day1>dir  
Volume in drive E is Jai  
Volume Serial Number is 0C69-B921  
  
Directory of E:\Asreet Consulting Services\Agenda_amdocs\Python_Data\Day1  
  
22-07-2024 10:58 <DIR> .  
22-07-2024 10:58 <DIR> ..  
22-07-2024 10:58 24 ex1.py  
22-07-2024 10:57 0 New Text Document.txt  
2 File(s) 24 bytes  
2 Dir(s) 63,631,749,128 bytes free  
  
E:\Asreet Consulting Services\Agenda_amdocs\Python_Data\Day1>python ex1.py  
100
```

A bracket on the right side groups the steps ③ and ④, with an arrow pointing to the 'List of dirs' in the terminal output. Another bracket on the right side groups the terminal output, with an arrow pointing to the word 'output'.

Multiple Assignment:

Multiple assignment can be done in Python at a time.

There are two ways to assign values in Python:

1. Assigning single value to multiple variables:

x=y=z=50 — one line

print(x)

print(y)

print(z)

2. Assigning multiple values to multiple variables:

a, b, c = 10, 10.9, 'Hello'
One Array \rightarrow Tuple

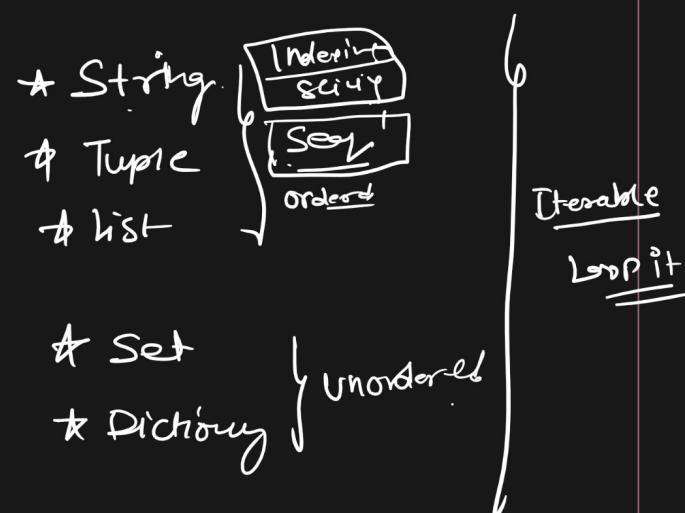
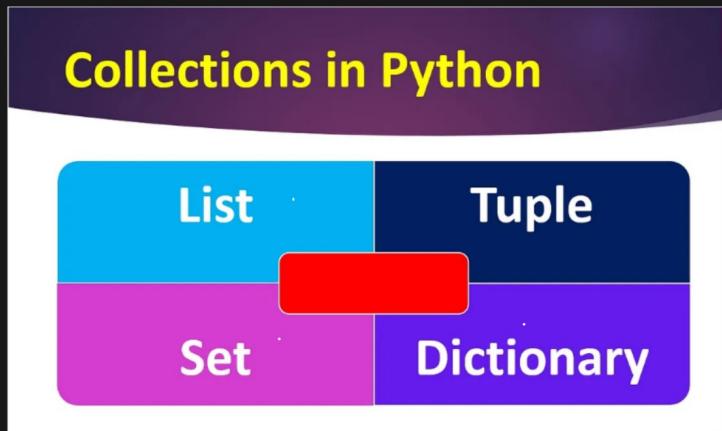
Unpack the values

* len(var) = len(values)

exception

One var = more than one val

Python Collections



Tuple

- ① Tuple object can store diff. kind of Data Types
- ② Tuple objects are ordered (Seq's) → Indexing, slicing.
- ③ Tuple objects are Iterable (Loop it)
- ④ Tuple objects are Immutable → C U R D
 ✓ X ✓ X
- ⑤ ↑ C → empty.

↑ C → empty.

```
#create a one value Tuple Object of UTKARSH ?  
a=("UTKARSH",)
```

```
1 a=()#empty  
2 a=(10,10.8,"Test",(1,1.9,("hello",89)))  
3 print(a)  
4 print(id(a),type(a),len(a))
```

Tuple

1

☆ C)

$\alpha \underline{('Hello')}$

4(1,2,3,4)

~~flexible~~
one value

The Industry.

Left - Right

Starts with → 0

-ve Indeply.

Front - Left

starts with $\rightarrow - \frac{1}{9}$

U

X

R
★ Indexing.

★ Indexing.

* Slicing.

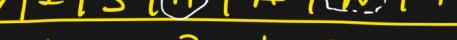
`a[: :-1]`

A Iteration(Loopit)

for i in x:

三

Indexing - Seq's \rightarrow Storing
Topic

Var = 'NISHANT' -ve List


$$\text{Var}_{-2} = \text{Var}[5] \text{ or } \text{Var}[-2]$$

↓ 'N' ↗
-ve Indexing

$\text{var}\{3\} \text{ or } \text{var}\{4\}$

1

Middle Chords

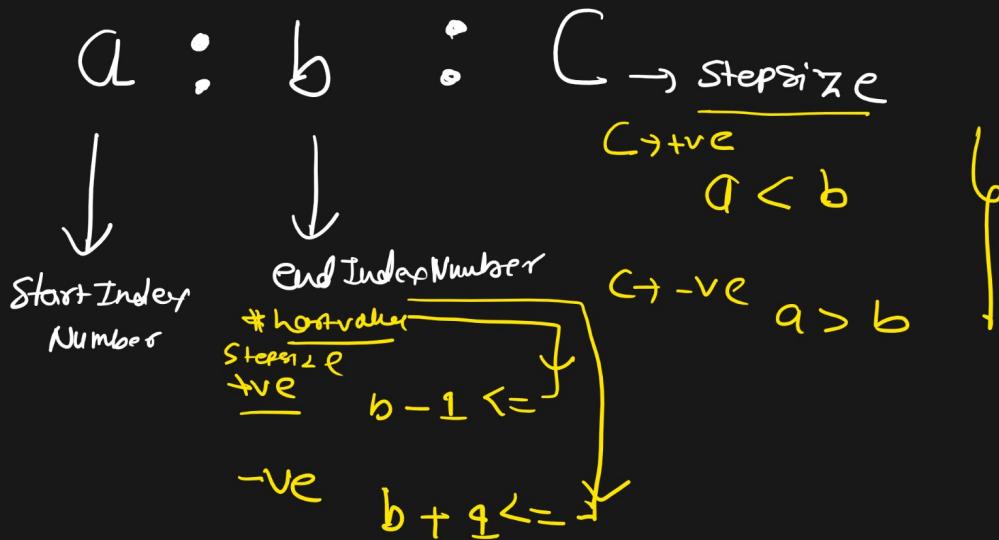
The Index

$\text{Var}\{1\}, \text{var}\{-6\}$

1

+ve Indeed.

* A.P $\Rightarrow a_1 \left\{ a_1, a_1+d, a_1+2d, \dots, a_1+nd \right\}$. Slicing + Seq's \rightarrow List + Tuple.



Body ①

① Stepsize -ve

$$-10 : -2 : -3$$

$a > b \rightarrow \text{true}$

$-10 > -2 \rightarrow \text{False}$ } No Execution

②

Step-1 Stepsize +ve

$$10 : 22 : 2$$

$$a < b \rightarrow T$$

$$10 < 22 \rightarrow T$$

Step-2 last value

Stepsize +ve

$$b-1 \leq \underline{\text{last value}}$$

$$21 \leq$$

$$21 \leq$$

$$a_1 \ a_1+d \ a_1+2d.$$

$$\boxed{10, 12, 14, 16, 18, 20} \times$$

③

$$-2^{\circ} - 26^{\circ} - 4$$

④

Step-1 Stepsize-ve =

$$a > b \rightarrow \text{True}$$

$$-2 > -26 \rightarrow \underline{\text{True}}$$

⑤ Step-2

last

Stepsize-ve

$$b+1 \leq \text{lastval}$$

$$-26+1 \leq$$

$$-25 \leq$$

$$q_1, q_1+d$$

$$\boxed{-2, -6, -10, -14, -18, -22} - \cancel{26}$$

$a = 'NISHANT'$
 $0 1 2 3 4 5 6$

$$b = a \left[\frac{2 : \text{len}(a) : 2}{\downarrow} \right]$$

$$2 : 7 : 2 = 2, 4, 6$$

b = 'SAT'

Var = 'NISHANT'
Var₂ : = 3]

C = 3

a = 0
b = len(var)

+restsize
Var [:]

a = 0
b = len(a)
c = 1

Var[0:10]

a = 0

b = 10

c = 1