Basic Python

Notes By

Naveen

What is Python?

Python is an easy to learn, powerful programming language.

It has efficient high-level data structures and a simple but effective approach to object-oriented programming.

Python's elegant syntax and dynamic typing, together with its interpreted nature, make it an ideal language for scripting and rapid application development in many areas on most platforms.

Applications for Python

Python is used in many application domains. Here's a sampling.

- The Python Package Index lists thousands of third party modules for Python.

Web and Internet Development

Python offers many choices for web development:

- Frameworks such as Django and Pyramid.
- Micro-frameworks such as Flask and Bottle.
- Advanced content management systems such as Plone and django CMS.

Python's standard library supports many Internet protocols:

- HTML , XML and JSON
- E-mail processing.
- Support for FTP, IMAP, and other Internet protocols.
- Easy-to-use socket interface.

And the Package Index has yet more libraries:

- Requests, a powerful HTTP client library.
- BeautifulSoup, an HTML parser that can handle all sorts of oddball HTML.
- Feedparser for parsing RSS/Atom feeds.
- Paramiko, implementing the SSH2 protocol.
- Twisted Python, a framework for asynchronous network programming.

Scientific and Numeric

Python is widely used in scientific and numeric computing:

- SciPy is a collection of packages for mathematics, science, and engineering.
- Pandas is a data analysis and modeling library.
- IPython is a powerful interactive shell that features easy editing and recording of a work session, and supports visualizations and parallel computing.
- The Software Carpentry Course teaches basic skills for scientific computing, running bootcamps and providing open-access teaching materials.

Education

Python is a superb language for teaching programming, both at the introductory level and in more advanced courses.

- Books such as How to Think Like a Computer Scientist, Python Programming: An Introduction to Computer Science, and Practical Programming.
- The Education Special Interest Group is a good place to discuss teaching issues.

Desktop GUIs

The Tk GUI library is included with most binary distributions of Python.

Some toolkits that are usable on several platforms are available separately:

- wxWidgets
- Kivy, for writing multitouch applications.
- Qt via pyqt or pyside

Platform-specific toolkits are also available:

- GTK+
- Microsoft Foundation Classes through the win32 extensions

Software Development

Python is often used as a support language for software developers, for build control and management, testing, and in many other ways.

- SCons for build control.

- Buildbot and Apache Gump for automated continuous compilation and testing.
- Roundup or Trac for bug tracking and project management.

Business Applications

Python is also used to build ERP and e-commerce systems:

- Odoo is an all-in-one management software that offers a range of business applications that form a complete suite of enterprise management applications.
- Tryton is a three-tier high-level general purpose application platform.

Automated Testing

Image Processing and OCR

Machine Learning Applications

Audio and Video Applications

Blockchain Applications

Artificial Intelligence

Data Science

Devops

etc., ...

Python Download and Installation

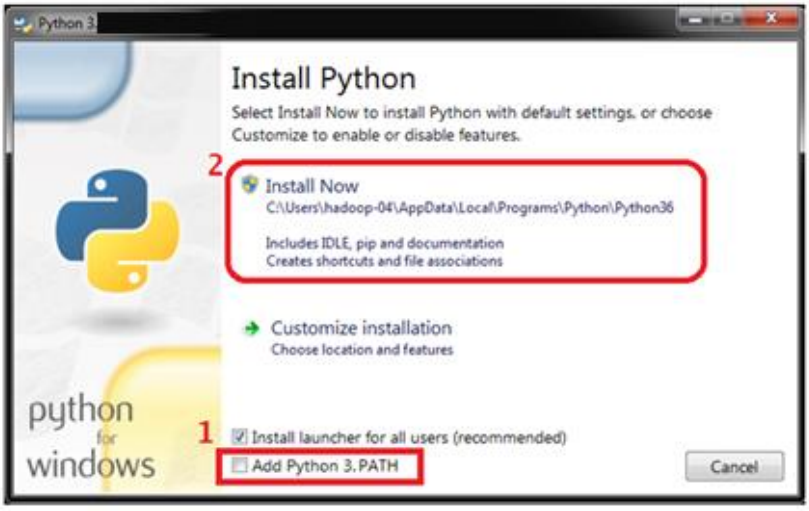
Open https://www.python.org/ website in web browser.

Select "Downloads" and click on Python 3.8.0 Button.

Once you download you can see a icon like 

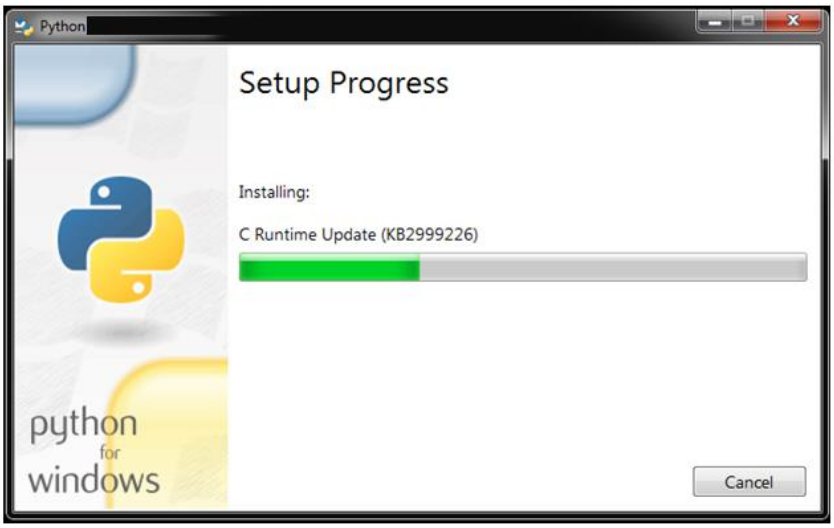
Double click on the icon to install the python.

1st Screen

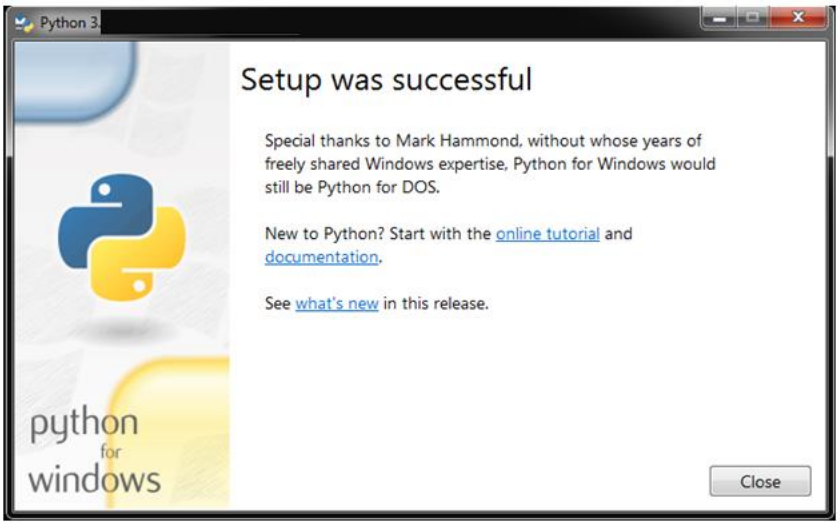


Note: Add Python3.8 to path check box must be checked. If this option is not available simply click on Install Now.

2nd Screen



3rd Screen

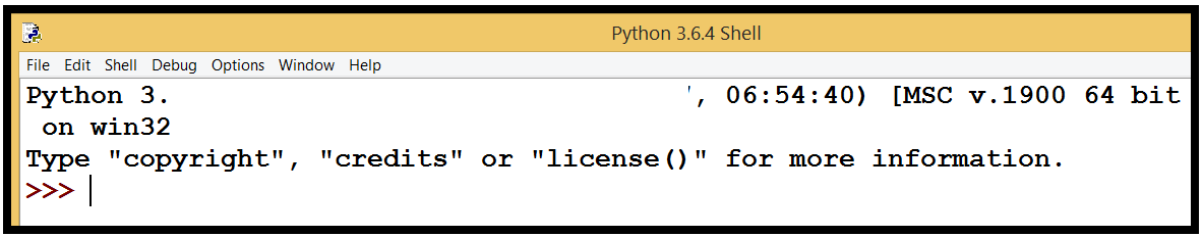


Congrats you have Installed Python Successful.

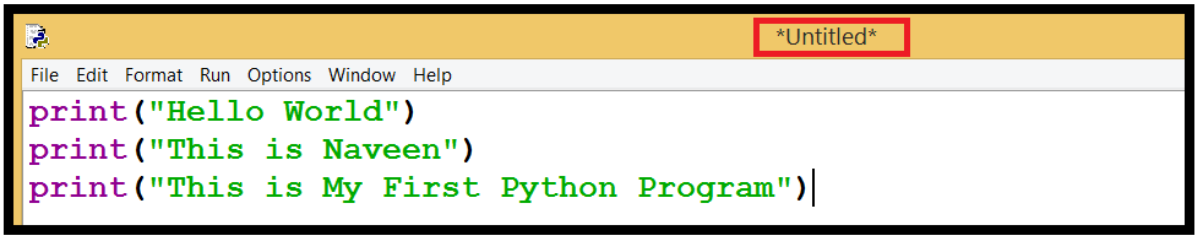
Steps to Create a python and run

Note: I am Using Python IDLE

1. IDLE stands for Integrated Development and Learning Environment or Language Environment.
2. In your computer open "start" menu and search for "IDLE" and open.



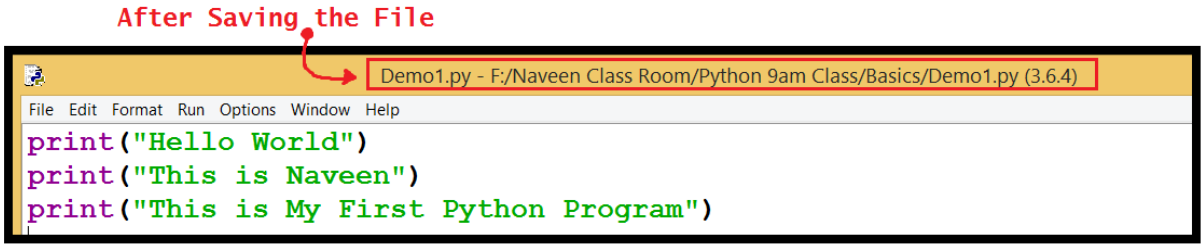
3. In IDLE menu select "File" and "New File" and write the program into the new file



Save the above file, (While saving we can give any name but the extension must be ".py" only)

Note: Save the python files properly into a particular location.

4. ".py" stands for Python File.



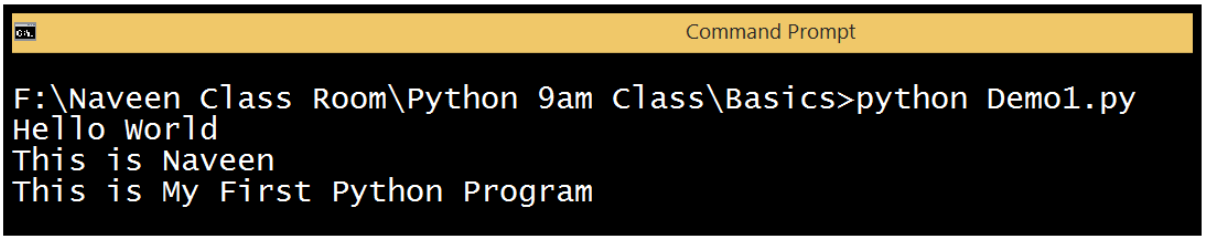
5. To run the above program press "F5" (Function key from keyboard)

6. Output of the above program

```
======= RESTART: F:/Naveen Class Room/Python 9am Class/Basics/Demo1.py
Hello World
This is Naveen
This is My First Python Program
```

Running the program using command prompt

1. Open the command prompt.
2. In command prompt move to python file location and type the command as "python file_name.py" and press enter.



Note: If python path is not set you cannot run in the command prompt.

Naming Styles

The table below outlines some of the common naming styles in Python code and when you should use them:

Type	Naming Convention	Examples
Function	Use a lowercase word or words. Separate words by underscores to improve readability.	function, my_function
Variable	Use a lowercase single letter, word, or words. Separate words with underscores to improve readability.	x, var, my_variable

Class	Start each word with a capital letter. Do not separate words with underscores. This style is called camel case.	Model, MyClass
Method	Use a lowercase word or words. Separate words with underscores to improve readability.	class_method, method
Constant	Use an uppercase single letter, word, or words. Separate words with underscores to improve readability.	CONSTANT, MY_CONSTANT, MY_LONG_CONSTANT
Module	Use a short, lowercase word or words. Separate words with underscores to improve readability.	module.py, my_module.py
Package	Use a short, lowercase word or words. Do not separate words with underscores.	package, mypackage

Keywords

Keywords are reserved words by python do define the syntax of a program.

In python as per 3.8 version we have 35 keywords.

Out of 35 keywords 3 keywords like **False, True** and **None** will begin with **capital letter** and rest of the 32 keywords will begin with small letter.

Note: Keywords may change from version to version.

To view list of Keywords in python IDLE type the program as,

```
import keyword

print(keyword.kwlist)
```

save the above program and run it.

Identifier

Identifier is a name given to an entity like Class, Function (or) Method and Variable.

To define an identifier we have to follow the below given rules.

1) Identifier must begin with an alphabet or an underscore (_).
2) Identifier can contain
    i) Capital or Small Alphabets (a to z or A to Z)
    ii) Digits from 0 to 9
    iii) Only One special that is underscore (_).
3) Identifier should not match with keywords.
4) Identifier should not be separated with white space.

Assignment

1) What is Identifier
2) What is the purpose of identifier
3) Can we declare variables/functions/classes without identifier
4) Can we declare Identifier with space
5) Can we declare identifier with starting character as '_'
6) Can we declare identifier with starting character as number
7) Can we declare keywords as identifier
8) Can we declare identifier with symbols
9) Can we declare 2 identifiers with same name
10) Identify In-valid identifier in the following list

Tell the below statements are valid identifiers are not.

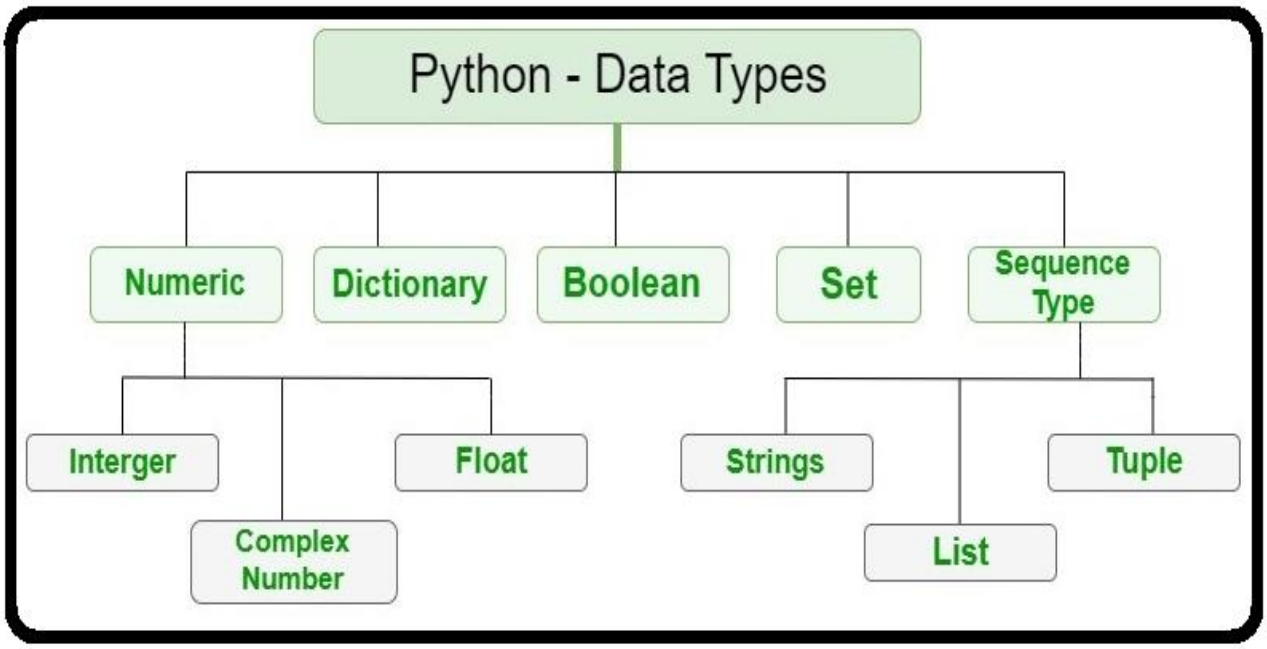
11) customer name
12) salary
13) sub1_marks
14) _eid
15) 7bc
16) true
17) loanAmount
18) Else
19) no.of.seats
20) if
21) discount_Amount
22) gstAmt
23) calTotalMarks
24) Employee
25) Loan
26) interest-Amount
27) customer2
28) __pid__

Solve these simple snippets

1. print(“Naveen Kumar”) Output:-	2. print(‘Sathya Technology’) Output:-
3. print(“ Python ‘) Output:	4. print(“Naveen Kumar\nPython”) Output:
5. print(“Core\tAdvanced”) Output:-	6. print(“Sathya@'Naveen' ”) Output:-
7. print(“Sathya “Technology” ”) Output:-	8. print(“S@athya \”Tech\” ”) Output:-
9. write code to get fallowing Output Hi Students, This is Naveen, From Sathya Tech, AMPT.	10. Write code to get fallowing Output Hello Students this is 'Naveen', I am a "python" Faculty in "Sathya" My Contact No is : '9052492329'
11. print(“Sathya”+ “Tech”) Output:-	12. print(5+2) Output:-
13. print(12 – 6) Output:-	14. print(“12” + “ 5”) Output:-
15. print(10/2) Output:-	16. print(“Sathya”, “Tech”) Output:-
17. print(“Core”, “-”, “Pyhton”) Output:	print(“\n”,“Sathya”, “-”, “Tech”) Output:-
18. print(“Python”+3) Output:-	19. print(3+3+ “Python”) Output:-

20. print("7" – 2) Output:	21. print("sathya" – "Tech") Output:
22. print("Sathya\n\tTech") Output:-	23. print("sathya\n\t\'Tech") Output:-
24. print("** Sathya Tech**) print("\n --- Python ---") output:-	25. print("\t\tNaveen\tKumar") print("\t\t==========") Output:

Data types



Note: In python no need to write data type while declaring a variable.

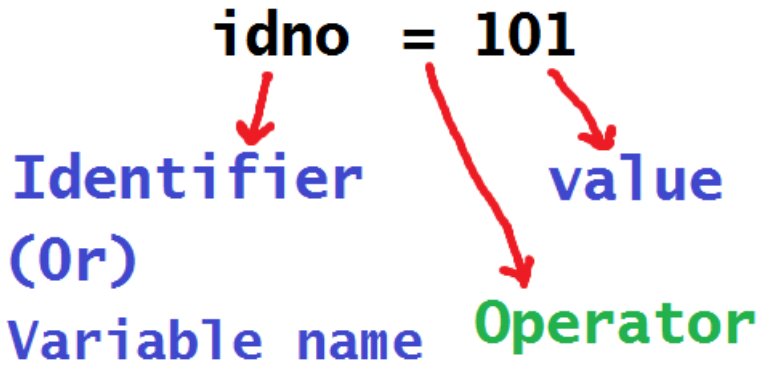
Variable

Variable is a named memory location which can store data temporarily

Syntax:

variable_name = value

Example:



name = "Ravi"

salary = 185000.00

status = False

Important point

In Python variables are dynamic typed it means the type of a variable is decided at run time.

In python we can declare multiple variables in one line.

In python we can assign multiple values to one variable.

In python a variable value can be any size not limit.
In python if multiple variables are holding same value will refer to one object instead of creating a new object.

Assignment

1) What is variable
2) What is the purpose of variable
3) How to declare a variable
4) In python can we declare variable without assigning a value.
5) Is it possible to change variable value
6) a = 10

   a = 20

   What is the value of a = ?
7) bill = 250.50

   discountAmount = 50

   bill = bill + discountAmount

   i) Identify number of variables in above Program

   ii) Identify the Variable names in above program

   iii) At end of Program what is the value of bill
8) Is it possible to declare more than one variable with same name. Example
9) Do we follow any rules to declare variable name
10) Identify valid and In-valid declarations

    i) x = 10 ii) a, b = 5, 10 iii) p, q, r = 2,6,9,7

    iv) 25 = m

v) p = 5

q = 10

p + q = r

vi) x = 10

vii) age = 25

viii) gender = M

ix) rollno_ = 200

x) mno = 9052492329

xi) pin no=1234

xii) marks = 98.95

xiii) salary = 25478.35

xiv) pnr@no=1234567895

xv) email="pythonwithnaveen@gmail.com"

xvi) pnr_status=true

xvii) interest$rate = 8.2

xviii) creditcard1

xix) $aadharno

xx) break = 10

xxi) Break = 10

xxii) 3000 = x

Solve these simple snippets

1. a = 5 print(**"a"**) Output:-	2. a = 99.35 print(a) Output:-
3. a = 5 b = 6 print(**"a+b"**) Output:-	4. a = 5 b = 6 print(**"a"**+b) Output:-
5. a = 5 b = 6 print(a+b) Ouptut:-	6. a = 15 b = 6 c = a - b print(c) Output:-
7. a = 5 b = 6 c = a + b print(**"Sum is : "**,c) Output:-	8. a = 5 b = 6 c = a + b print(c,**"is Your Result"**) Output:-
9. a = 5 b = 6 c = a + b print(**"Sum "**,c,**"is your Result"**) Output:-	10. a = 5 b = 6 c = a + b print(a,**"and"**,b,**"sum is"**,c) Output:-

11.
```
cost = 2500
discount = 10
discAmt = (cost /100) * discount
print(discAmt)
```
Output:-

12.
```
a = 10
b = 20
a =  a + b
b =  a - b
a =  a – b
print(a, “\t”, b)
```
Output:-

13.
```
a = 20
a = "Naveen"
print(a)
```
Output:-

14.
```
a = 2
b = a
print(b)
```
Output:-

15.
```
n1 = "Naveen"
n2 = "with Python"
fname= n1+"-"+n2
print(fname)
```
Output:-

16.
```
a = "7"
b = "9"
c = a + b
print(c)
```
Output:-

17.
```
a = 7
b = 5
a = a * b
b = a // b
a = a // b
print(a,"\t",b)
```
Output:-

2.
```
a = 7
b = 5
c = a
a = b
b = c
print(a,"\t",b)
```
Output:-

3.
```
n = 12
sum = 0
r = n % 10
n = n // 10
sum = sum + r
r = n % 10
n = n // 10
sum = sum + r
print(n,"\t",sum)
```
Output:-

4.
```
c1 = "Advance"
c2 = " Django"
c3 = " Project"
c4 = c1 + c3 + c2 + c3
print(c4)
```
Output:-

5.
```
a = 5
b = 7
a,b = b,a
print(a,"\t",b)
```
Output:-

6.
```
p = 5
q = 3
r = 7
print(p,"\t",q,"\t",r)
```
Output:-

7.
```
p = 5
q = 3
r = 7
print(p,q,r)
```
Output:-

8.
```
p = 5
q = 3
r = 7
print(p,q,r,sep=",")
```
Output:-

9.
```
p = 5
q = 3
r = 7
print(p,q,r,sep="$")
```
Output:-

10.
```
p = 5
q = 3
r = 7
print(p,q,r,sep="-->")
```
Output:-

11. p = 5 q = 3 r = 7 print(p,q,r,sep="**V**") Output:	12. p = 5 q = 3 print(p,end="**\t**") print(q) Output:-
13. p = 5 q = 3 print(p) print(q) Output:-	14. p = 5 q = 3 print(p,end="**-**") print(q) Output:-
15. a = 2.523649 print(a) Output:-	16. a = 8 print("**%d**"%a) Output:-
17. a = 8 b = 4 print("**%d%d**"%(a,b)) Output:-	18. a = 8 b = 4 print("**%d\t%d**"%(a,b)) Output:-
19. a = 41.756 print("**%f**"%a) Output:-	20. a = 41.756 print("**%.2f**"%a) Output:-
21. a = 41.756 print("**%.4f**"%a) Output:-	22. a = 41.756 print("**%d**"%a) Output:-

23. a = 6 print("**A value is :{0}**".format(a)) Output:-	24. a = 6 b = 3 print("**{0}\t{1}**".format(a,b)) Output:-
25. a = 6 b = 3 print("**a={0}\tb={1}**".format(b,a)) Output:-	26. a = 6.43 print("**a={0}**".format(a)) Output:-

Sample Programs:- Not Logical Operators

1. Consider a is 5 and b is 3, store a in b print a and b?
2. Consider a is 3 b is 2.5 print a and b?
3. Consider a is 2.3 , b is 5 store sum of a, b in c print c?
4. Consider a is "sathya" b is "tech" store fullname in c print c?
5. Consider a is 2, b is 5 store a and b in c then print c?
6. Consider a is 2.3 b is 9 store a in b print b?
7. Consider a is 5 b is 3 store sum of a, b in c, display o/p
8. Consider x is 'a' y is 5 store x in y print x, y?
9. Consider x is 2.3f y is 3 store sum of x, y in z print z?
10. Consider a is 'x' b is 'y' store a and b in c print c?
11. Consider x is 5 y is 2 x divide by y store, in z print z?

12. Consider x is 5 product of x and x store in y print y?

13. Consider x is 3 cube of x store in y print x, y?

14. Consider x is 3 square of x store in s, cube of x store in c print s, c?

15. Consider x is 2, square of x store in s, cube of x store in c Sum of s and c store in sum print sum?

16. Consider x is 5 , y is 3 store product of x and y in z and sum of x, y, z store in p print p?

17. Consider principle value is 1000/- rate of interest is 15% time period is 5years Display total amount based on simple interest ?

18. Program to calculate total salary of employee.

    Consider basic salary as 10,000

    30% basic salary is hra.

    10% basic salary is da.

19. Consider 3 subject marks as 60,70,80 Display total marks and percentage

20. Product cost is 1000 RS.

    gst is 10% of product cost.

    calculate net price of a product.

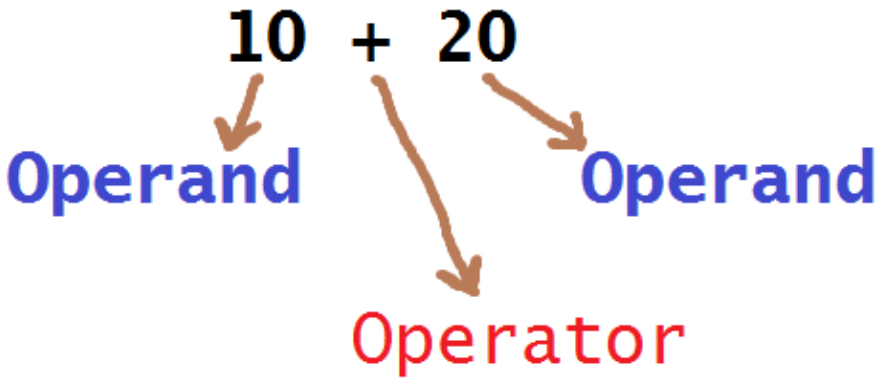
21. Net price of a product is 230.

    gst amount is 30

    calculate original cost of product .

Operators

Operator will perform operation on operands.



Types of Operator's

1) Arithmetic Operators

Operator	Operator Name	Example
+	Addition	I=4, J=2 >>>I+ J >>>6
–	Subtraction	I=4, J=2 >>>I – J >>>2
*	Multiplication	I=4, J=2 >>>I * J >>> 8
/	Division	I=30, J=20 >>>I /J >>> 1.5

%	Modulus	I=40, J=20 >>>I /J >>> 0
**	Exponent	I=10, J=3 >>>I /J >>> 1000
//	Floor Division	I=10, J=3 >>>I//J >>> 3

2) Relational Operators

Operator	Operator Name	Example
==	Equal to	I = 20, J = 20 (I == J) is True
!=	Not Equal to	I = 20, J = 20 (I == J) is False
<	Less than	I = 40, J = 20 (I < J) is False
>	Greater than	I= 40, J = 20 (I > J) is True
<=	Less than or equal to	I = 40, J = 20 (I <= J) is False
>=	Greater than or equal to	I = 40, J = 20 (I >= J) is True

3) Assignment Operator

Operator	Operator Name	Description	Example
=	Assignment	It assigns a value from the right-side operand to the left-side operand.	I = 40 It assigns 40 to I

4) Shorthand Assignment Operator

Operator	Operator Name	Example
+=	Add then assign	I+=J that means I = I + J
-=	Subtract then assign	I-=J that means I = I – J
*=	Multiply the assign	I*=J that means I = I * J
/=	Divide then assign	I/=J that means I = I / J
%=	Modulus then assign	I%=J that means I = I % J
**=	Exponent then assign	I**=J that means I = I ** J
//=	Floor division then assign	I//=J that means I = I // J

5) Logical Operators

Operator	Operator Name	Example
and	Logical AND	2<1 and 2<3 Result : False
or	Logical OR	2<1 or 2<3 Result = True
not	Logical NOT	Not (5>4) Result = False

6) Membership Operators

Operator	Example
in	my_friends = ["Kapil","Bhanu","Srikanth","Naveen"] "Bhanu" in my_friends # True "vijay" in my_friends # False
not in	my_friends = ["Kapil","Bhanu","Srikanth","Naveen"] "vijay" not in my_friends # True "Bhanu" not in my_friends # False

7) Identity Operators in Python

Operator	Example
is	a = 10 b = 20 c = 10 a is b # False a is c # True b is c # False
is not	a = 10 b = 20 c = 10 a is not b # True a is not c # False b is not c # True

8) Bitwise Operators in Python

For instance, suppose there are two variables,

I = 10 and J = 20

And their binary values are:

I = 10 = 00001010

J = 20 = 00010100

Operator	Operator Name	Example
&	Binary AND	I & J 0000 0000
|	Binary OR	I | J 0001 1110

^	Binary XOR	I ^ J 0001 1110
~	Binary Complement	~I 1111 0101
<<	Binary Left Shift	I << 2 40 i.e. 1111 0000
>>	Binary Right Shift	I >> 2 15 i.e. 1111

Assignment

1. How many types of operators in python.
2. What is the difference between logical and 'and' bitwise and.
3. What is the difference between logical or and bitwise or.
4. What are identity Operators.
5. Output of print(9//2)
6. What is the type a when a = 1,00,000
7. What is the type of 'inf'?
   a) Boolean
   b) Integer
   c) Float
   d) Complex

8. What does ~~~~~~5 evaluate to?
   a) +5
   b) -11
   c) +11
   d) -5

9. What is the purpose of **not** in operator.

10. What is the purpose **pass** statement in python.

11. Which function overloads the **>>** operator.

12. Output of **"format(10/3)"** and what is the return type.

13. Output of "Sathya" > "sathya".

14. Output of 10 and 10.

15. Output of 10 and 0.

16. Output of 0 and 10.

17. Output of 0 and 0.

18. Output of 0 or 10.

19. Which is the correct operator for power(x^y)?
   a) X^y
   b) X**y
   c) X^^y
   d) None of the mentioned

20. Which one of these is floor division?
   a) /
   b) //
   c) %
   d) None of the mentioned

21. What is the order of precedence in python?
i) Parentheses ii) Exponential iii) Multiplication iv) Division
v) Addition vi) Subtraction
a) i,ii,iii,iv,v,vi
b) ii,i,iii,iv,v,vi
c) ii,i,iv,iii,v,vi
d) i,ii,iii,iv,vi,v

22. Mathematical operations can be performed on a string. State whether true or false.
a) True
b) False

23. Operators with the same precedence are evaluated in which manner?
a) Left to Right
b) Right to Left
c) Can't say

24. What is the output of this expression, 3*1**3?
a) 27
b) 9
c) 3
d) 1

25. The expression Int(x) implies that the variable x is converted to integer. State whether true or false.
a) True
b) False

26. Which one of the following have the highest precedence in the expression?
a) Exponential b) Addition c) Multiplication d) Parentheses

27. Which of the following is invalid?

a) _a = 1

b) __a = 1

c) __str__ = 1

d) none of the mentioned

28. Which of the following is an invalid variable?

a) my_string_1

b) 1st_string

c) foo

d) _

29. Which of the following is not a keyword?

a) eval

b) assert

c) nonlocal

d) pass

30. Which of the following is an invalid statement?

a) abc = 1,000,000

b) a b c = 1000 2000 3000

c) a,b,c = 1000, 2000, 3000

d) a_b_c = 1,000,000

31. Which of the following cannot be a variable?

a) __init__

b) in

c) it

d) on

1. 2+3-5*6+7-9*3/2
2. 3*4-5/6+7-8*9+2-3*7
3. 6-7*8+9/5-8%3-7/2-3
4. 3*5-7+7*7-7/7+7%7
5. 3>=5-6+7-8
6. 2>=4 and3==4
7. 2>=4 or 3==4
8. What is the output?

```
i=5;  j=6;  i=i+j;  j=j-i;
print(i);
print(j);
```

9. What is the output?

```
i=2*3+5*6//7-3//2+7*6//3
j=i-3*4-5*6+7-3*4+7
i=i+j;   j=j-i*3/2;   i=i*7/-2+5;
j=j-3*4%7;
print(i);  print(j);
```

10. What is the output of below code snippet?

```
i = 3 * 4 - 6 + 7 // 2 + 4;
j = 3 * 5 - 6 // 7 + 8 % 9 - 3 * 5 + 7;
i = i + j;   j = j - i;
print(i);  print(j);
```

11. What is the output?

```
a = "sathya"
b = "Tech"
c = a + b
print(c)
```

12. What is the output?

```
s = "output is" + 2 + 3
print(s)
```

13. What is the output?

```
s =2 +3+5*6+7-3*5//6
print(s)
```

14. What is the output?

```
b = 5+2-3*5+7/2-3/4>6-
      5+4*3/9+9-2/3
print(b)
```

15. What is the output?

```
i = 7
j=3
b=i>=j
print(b)
```

16. What is the output?

```
print(2+3-5*6+7-8)
print(5**6); print(5*6)
print(2+4)
print(2+3.5)
print((2>3))
print(12//5+12%5)
```

17. 3>4 and 3<5
18. 5+3*7-9>4+5*6 and 4<5
19. 4**4
20. 6*2-3/4+4-3//2

Reading input From Keyboard

To read input from keyboard we use "input" function. The "input" function will read any given input from keyboard and it will return in string type.

```
# Write a script to Read name from User

x = input("Enter Your Name ")
print(x)
print(type(x))
```

```
# WAP to Read 2 no's from user and print sum
of the 2 nos.

no1 = input("1st No ")
no2 = input("2nd No ")

# The input function is returning string
so we are adding 2 Strings not int's

print("The sum = ",no1+no2)
```

Type Conversion

The process of converting a data type into another data type is known as type conversion.

Function	Description
int( )	It converts to an integer
float( )	It converts to a floating-point number.
complex( )	It creates to a complex number.
str( )	It converts to a string.
tuple( )	It converts to a tuple.
list( )	It converts to a list.
set( )	It converts to a set.
dict(y)	It creates a dictionary and *y* should be a sequence of (key,value) tuples.
ord( )	It converts a character into an integer.
hex(y)	It converts an integer to a hexadecimal string.
oct(y)	It converts an integer to an octal string
chr( )	It converts ASCII value to a character.

```
no1 = input("1st No :")
no2 = input("2nd No :")

# Converting Str to int

a = int(no1)
b = int(no2)

print("After Converting Sum = ",a+b)
```

Above program in short.

```
no1 = int(input("1st No :"))
no2 = int(input("2nd No :"))

print("Sum = ",no1+no2)
```

Above program in 1 line.

```
print("The sum = ",int(input("1st No :")) +
int(input("2nd No :")))
```

```
# Reading 2 no's from keyboard and converting
into float

no1 = float(input("1st No :"))
no2 = float(input("2nd No :"))

print("Sum = ",no1+no2)
```

```
# Legacy printing

x = 256.641484135541
print("Python-Lang Format :",x)

print("C-Lang Format %f"%x)

print("C-Lang Format %0.f"%x)
print("C-Lang Format %0.1f"%x)
print("C-Lang Format %0.2f"%x)
print("C-Lang Format %0.3f"%x)
print("C-Lang Format %0.4f"%x)
print("C-Lang Format %0.5f"%x)
print("C-Lang Format %0.6f"%x)
```

```
print("C-Lang Format %0.7f"%x)
print("C-Lang Format %0.8f"%x)
print("C-Lang Format %0.9f"%x)
print("C-Lang Format %0.10f"%x)
```

To read any input from keyboard we use eval()

This function will read int, float, str, bool, list, set, tuple, dictionary

```
x = eval(input(" Enter any type of Value :"))
print(x)
print(type(x))
```

```
# WAP to accept two numbers and perform
addition, Subtraction, Multiplication and
Division

no1 = int(input("Enter 1st no :"))
no2 = int(input("Enter 2nd no :"))
print("The Add = ",no1+no2)
print("The Sub = ",no1-no2)
print("The Mul = ",no1*no2)
print("The Div = ",no1/no2)
```

```
# WAP to find the type Of a Variable

x = eval(input("You can Enter any type of
Value :"))
print(x)
print(type(x))
```

Assignment

1. How to read data dynamically
2. What is the default data type for input( )
3. Is it possible to convert String type to int type
4. How to convert string data into int type
5. How to convert string data into float type
6. What is the purpose of eval( )
7. WAP to Display Welcome To Sathya Technologies
8. WAP to accept the Student Name and Display a message Welcome Student Name
9. WAP to accept two numbers and perform addition, Subtraction, Multiplication and Division
10. WAP to find the type Of a Variable
11. WAP to accept student first name and last name and Display the student full Name
12. WAP to accept a str value and convert the string value to int and print int value.
13. WAP to accept a str value and convert the str value to float and print double value.
14. WAP to accept student no, student name, marks1, marks2, marks3 and calculate total marks, average marks and print.
15. WAP to input two numbers and swap those values.
16. Sunitha Went to market, Purchased 4 sim cards. Read sim cost dynamically then calculate and display total bill.

17. Mr.Ravi went to shopping mall, purchased 2 products Read product cost dynamically then Calculate total bill amount.
18. Mr Advaith Went to CTC, purchased laptop, Read laptop cost dynamically, In CTC for every item 15% discount is available. Now display bill Amount, discount amount and total bill.
19. Read Lakshmi basic salary dynamically, Company provides ta,da,hra based on basic salary Ta is 10% , Da is 8 % Hra is 12% Now calculate total monthly salary of Lakshmi
20. Case: One acre of land is equivalent to 43,560 square feet. Write a program that asks the user to enter the total square feet s and find number of acres. And vice versa

Solve these snippet's

1. a = input() print(a) Output:-	2. a = input() print(a) print(type(a)) Output:-
3. a = input("Enter fname: ") b = input("Enter lname: ") c = a + b print(c) Output :-	4. a = input("Enter any no: ") b = input("Enter any no: ") c = a + b print(c) Output:-
5. a = int(input("Any no : ")) print(a) print(type(a)) Output:-	6. a = float(input("Any no : ")) print(a) print(type(a)) Output:-

7. a = int(input("Any no : ")) print(a) print(type(a)) Output:- Any no : 2.5	8. a = float(input("Any no : ")) print(a) print(type(a)) Output:- Any no : 5
9. a = eval(input("Any no : ")) print(a) print(type(a)) Output:- Any no : 2	10. a = eval(input("Any no : ")) print(a) print(type(a)) Output:- Any no : 5.4
a = chr(int(input("Enter any no : "))) print(a) Output:- **Enter any no : 65**	12. a = chr(int(input("Enter any no : "))) print(a) Output:- **Enter any no : 97**

Expression	**O/p**	**Expression**	**O/p**
int(123.654)		str(10.5)	
int(False)		str(True)	
int("10")		str(False)	
int("10.5")		z = float("3")	
int("ten")		print(10 > 9)	
float(10)		print(10 == 9)	
float(True)		float("ten")	
float(False)		bool(0)	
float("10")		bool(1)	
float("10.5")		bool(10)	