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Python
It is high level, interpreted, object oriented program, indented, dynamically is called as python

Features of Python
* Simple Syntax / easy to learn
* Libraries
* Open Source
* platform independent
* less memory
* execute fast compared to some program

Applications of python
* Web development
* Mobile app development
* Machine learning / deep learning
* AI
* Cyber security
* graphics
* IOT
* automation
* desktop app development

4/9/25
→ Comments :-
They are part of code but they won't consider in execution time

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Two types of Comments
1. Single line comment
#My 1st program
2. Multi line comments
''' ''' Or """ """

→ Key words :-
They are the reserved words used for particular task and they cannot used as identifiers (variable, function name.... etc)
ex:- True / False, for, if, else, while, break

→ variables :-
it is places where to store our values
Ex: a=5
A is the variable 5 is the value
* valid variable declaration
a=5
A=10
Num=1
NUM=11
Emp_ID=123
emp_name="Nisha" or 'Nish'

* invalid variable declaration :-
- variable should not start with the numbers ex:- 1n=
- Stu#name@ = "arun"
- stu id = 345
should not give any space

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→ Data types :-
* it is a pre defined component and specify the data category

Python
Types of datatype :-
*int, float, complex (comes under numerical data type)
*Str, bool (real & imaginery)
eg :- 5j+7

Special datatypes (data structure) :-
*list
*tuple
*list
*dict

- Complex :-
Real imaginery
5j + 7 } input
type (a)
Complex → output

Ex: a = 2 a=2; b=3; c=4
b = 3 a,b,c = 4,6,7
c = 4

→ input and output function
input :- Anything we take it from user is called input input()
output :- Anything we display to user is called output output()

eg:- a = int (input())
1
b = int (input())
2
a+b
3

→ Write a program to read employee id, employee name, employee phone num and print the details

```
a = str (input ("enter employee name :"))
b = str (input ("enter employee ID :"))
c = int (input ("enter employee phone :"))
print(a)
print(b)
print(c)
```

output:- Enter employee name : Nisha
enter employee ID : U18BI210018
Enter employe phone : 6362621641
Nisha
U18BI210018
6362621641

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j --nh - dir=d:\
jupyter noatbook --notbook-dir=d:\

-> Read 2 float numbers from user

int
a = 2.
b = 4
print (a+b)
6

a = 2.45
b = 3.55
print (a+b)
6.00

```
x = float (input ("enter a value:"))
y = float (input ("Enter a value:"))
print (x+y)
```

or

```
print (x, "+" y, "=", x+y)
print ("sum of:", x, "+", y, "=", x+y)
print ("sum of {} + {} = {}". format (x, y, x+y))
```

↓

```
#. format method
print (f"sum of {x} + {y} = {x+y}")
```

5/01/2023

-> WAP to calculate area of triangle and circle with given input

AOT = 0.5 * b * h

AOC = 3.142 * r * r

program :- b = float (input())
h = float (input())
r = float (input())
AOT = 0.5 * b * h } formula
AOC = 3.142 * r * r

if print ("The area of triangle is {AOT} \n The area of circle is {AOC}")

y { formula }
{ formula }")

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→ Operators :-

Arithmatic operation , it gives only quotient value

\+ - * / % // **

% → it gives only remainder value

* Relational ope :-

\> < >= <= == !=

* logical ope :-

and Not OR XOR XNOR

A	B	AND	OR
Fail	Fail	False	False
F	Pass	F	True
P	F	F	True
P	P	T	T

* NOT

NOT (True) = FALSE

NOT (FALSE) = True

* Assignment op :-

= += -= *= **= %= //=

/=

Syntax :- var = var + value