Day-4

04-11-2025

⊛ operators :—

⇒ operators in Python are special symbols used to perform operations on variables & values.

⇒ they Define how data should be Processed :—

such as - Calculating Result
- Comparing values
- assigning data
- evaluating logical Conditions.

a + b = c

where a, b & c are "operands"

+ = "operators"

⊛ types of operators in Python :—

⇒ Arithmatic operators (+ - * / % // **)

⇒ Assignment operators (= += -= *= /= //= %= **=)

⇒ Relational operators (== != > < >= <=)

⇒ Logical operators (AND OR NOT)

⇒ Bitwise operators (~~in~~ ~~not in~~) (& | ~ >> << ^)

⇒ Membership operators (in not in)

⇒ Identity operators (is is not)

⊛ Arithmatic operators:-

⇒ Arithmatic operators in Python are Symbols used to Perform basic Mathamatical Calculation's.

⇒ (+ - * / % // **)

Program :-

* Read 2 integer numbers from user & Perform all arithmatic operators.

```
a = int (input ("Enter the Number :"))
b = int (input ("Enter the Number:"))
print (f"the sum of {a} & {b} is: {a+b} \n the sub of {a} & {b} is:
{a-b} \n the mul of {a} & {b} \n the div of {a} & {b}
is : {a/b} \n the mod of {a} & {b} is: {a%b} \
n the fdiv of {a} & {b} is: {a//b} \n the Power of
{a} & {b} is: {a** b} ")
```

(OR)

```
a=int (input ("Enter your Number" ))
b=int (input ("Enter your Number" ))
add = a+b
sub = a-b
mul = a* b
div = a/b
Mod = a% b
fdiv = a//b
Power = a** b.
```

⊛ Assignment operators :-

⇒ Assignment operators in Python are symbols used to assign values to variables and to update those values by performing operations.

⇒ = += -= *= /= //= %/= **=

★ Program :-

```
a = 2
print (a)
```
o/p 2

```
a = a+4
Print (a)
```
o/p. 6

```
a=2
a * =2
Print (a)
```
o/p 4

⊛ logical operators :-

a	b	and	or	nor (not+or)	xor	xnor	nand
0	0	0	0	1	0	1	1
1	0	0	1	0	1	0	1
0	1	0	1	0	1	0	1
1	1	1	1	0	0	1	0

⊛ Program :-

```
age = 14
test = "OK"
```

⊛ Defination :-

logical operators in Python are used to combine Multiple Conditions and return a Boolen result (True or False). they help in decision-Making by Evaluating Expressions using and, or & not.

⊛ Bitwise operators :-

⇒ Bitwise operators in Python are used to perform operations on binary (bit level) representation of integers.

⇒ & | ~ >> << ^

= (AND) (OR) (Not) (left shift) (Right shift) (XOR)

⊛ Membership operators :-

⇒ this operators in Python are used to test whether a value is present in a sequence such as a string, list, tuple, set, or dictionary.

⇒ in not in

Program :-

```
group = [1, 2, 3, 4, 5, 7]
2 in group
"true"
2 not in group.
"False".
```

⊛ Identity operators :-

⇒ Identity operators in Python are used to check whether two variables refer to the same objects in Memory.

⇒ Is, Is not