Python Basics

→ printing statement → DOS

→ data types

→ if else , questions

→ Loops , questions

CamelCase

Method to name identifiers

eg:- totalCount

noOfGifts

Python print

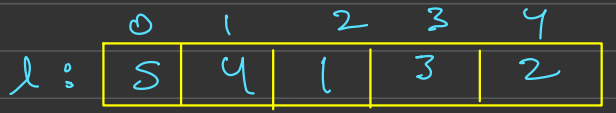
end → by what a print statement ends

sep(,) → value for sep

Python data types

Text Type:	`str`
Numeric Types:	`int`, `float`, `complex`
Sequence Types:	`list`, `tuple`, `range`
Mapping Type:	`dict`
Set Types:	`set`, `frozenset`
Boolean Type:	`bool`
Binary Types:	`bytes`, `bytearray`, `memoryview`
None Type:	`NoneType`

Hashtables ?



int

range -2147483648 through 2147483647

\+ - / * %

4/5 → implicit promotion / typecasting

int (4/5) → explicit typecasting

Modulo (%)

$0 \% 4 \rightarrow 0$

$1 \% 4 \rightarrow 1$

$2 \% 4 \rightarrow 2$

$3 \% 4 \rightarrow 3$

$4 \% 4 \rightarrow 0$

$5 \% 4 \rightarrow 1$

$6 \% 4 \rightarrow 2$

$7 \% 4 \rightarrow 3$

$8 \% 4 \rightarrow 0$

circular

$x \% n \rightarrow$ range $[0, b)$

Significance of %

↳ It is the number which signifies the extra value required to subtracted from the given number so as to make it divisible

eg:- $17 \rightarrow 16 + 1$

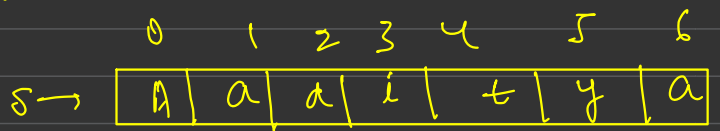
$17 \% 4 \rightarrow 1$

$8 + 0 = 8$

$8 \% 4 = 0$

strings

s = "Aaditya"



s[0] → A

slicing

s[0:4] → Aadi

[s:e] → [s, e)

s[2, 0] → dity

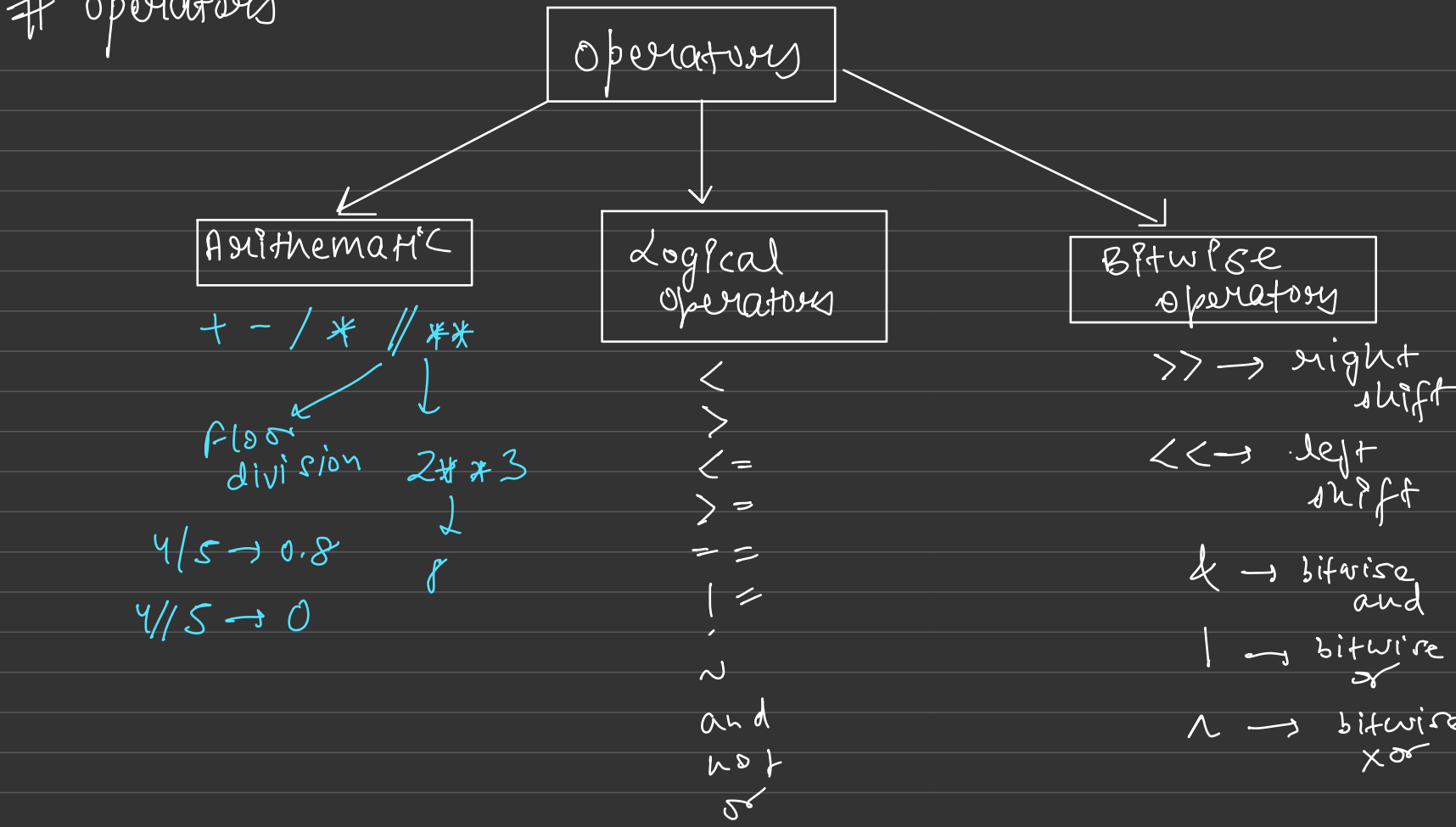
Conditionals

if, else, elif

Syntax:

```
if (/* condition */):
    // body or block of if
elif (/* condition */):
    // body of elif:
else:
```

operators


Operators
Arithemaric
+ - / * // **
floor division
4/5 → 0.8
4//5 → 0
2**3
2
8
Logical operators
<
>
<=
>=
==
!=
!
~
and
not
or
Bitwise operators
>> → right shift
<< → left shift
& → bitwise and
| → bitwise or
^ → bitwise xor

Q take two numbers, print maximum among them

eg:- 20
4

Maximum: 20

Q take three numbers, print maximum among them

eg:- 20
40
50

max among 20 40 50 : 50

20
40
40

max among 20 40 40 : 40

```python
a = int(input())
b = int(input())
c = int(input())

if a >=b and a >=c:
    print("Maximum among", a, b, c, "is", a)

elif b >=a and b >=c:
    print("Maximum among", a, b, c, "is", b)

elif c >=b and c >=a:
    print("Maximum among", a, b, c, "is", c)
```

a	b	c
40	40	30

else :

Q. Take celcius as input & print its corresponding farhenheit

eg:-

```
32
89.6
```

Operator precedence & associativity

Q what is an expression?

→ It is collection of operands & operators.

eg :- (4 * 2) ** 6

3 * 2 + 12 / 6

Table for precedance & Associativity

Precedence	Associativity	Operator	Description
18	Left-to-right	()	Parentheses (grouping)
17	Left-to-right	*f*(args...)	Function call
16	Left-to-right	*x*[index:index]	Slicing
15	Left-to-right	*x*[index]	Array Subscription
14	Right-to-left	**	Exponentiation
13	Left-to-right	~*x*	Bitwise not
12	Left-to-right	+*x* -*x*	Positive, Negative
11	Left-to-right	* / %	Multiplication Division Modulo
10	Left-to-right	+ -	Addition Subtraction
9	Left-to-right	<< >>	Bitwise left shift Bitwise right shift
8	Left-to-right	&	Bitwise AND
7	Left-to-right	^	Bitwise XOR
6	Left-to-right	|	Bitwise OR
5	Left-to-right	in, not in, is, is not, <, <=, >, >=, <>, == !=	Membership Relational Equality Inequality
4	Left-to-right	not *x*	Boolean NOT
3	Left-to-right	and	Boolean AND
2	Left-to-right	or	Boolean OR
1	Left-to-right	lambda	Lambda expression

Highest

lowest

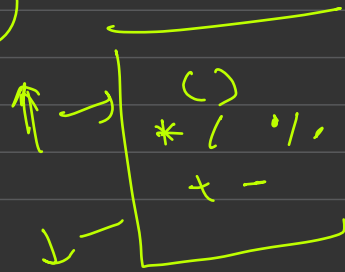
$(4 * 5 / 10 + 1) ** 2$

$(20 / 10 + 1) ** 2$

$(2 + 1) ** 2$

$3 ** 2$

9



Q) Take the salary of 3 people & print the avg. salary

i/p ← 3 → sal

process → avg → $\frac{(a+b+c)}{3}$

o/p → print avg

input()

↳ console ← string

doc string

↳ description

↳ . __ doc __

int (input())

float(input())

Comments

→ These are lines for developer.
→ Compiler/ interpreter ignores these

Single line → # Hi

Multiline line → """ Hi
there
"""

4) Take marks in 3 subjects & evaluate their percentage & highest marks among 3.

eg: 95
100
98

Highest : 100

Percentage : 97.66

Q n ← i/p

even

odd

eg:- 24 | 17

even | odd