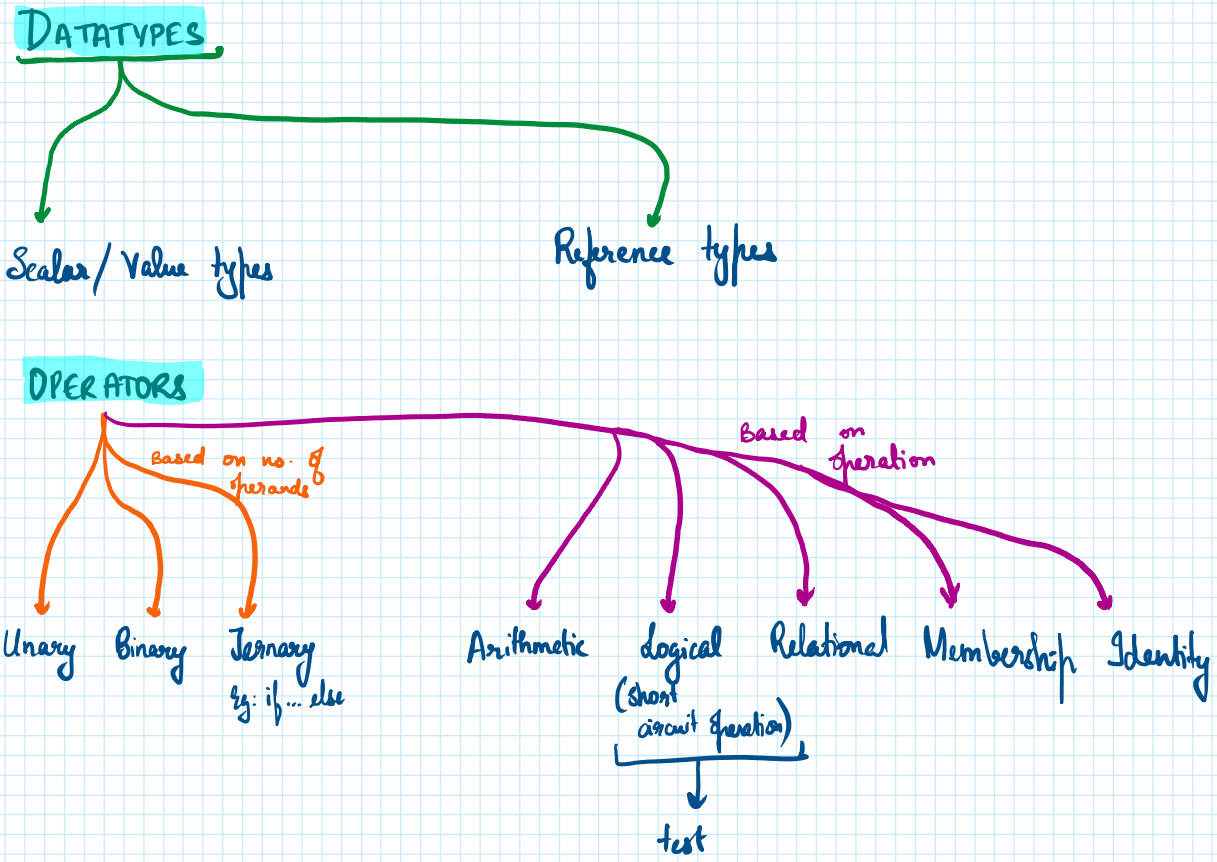
3. Datatypes, Operators, Control Statements

15 September 2023 11:43



HW: Why is id of variables different when assigned same no.?
B/w -5 and 255 values, ID remains the same
Outside this range, ID is different.. WHY?

- What is hash?

3 > 6 > 1 = 3 > 6 and 6 > 1

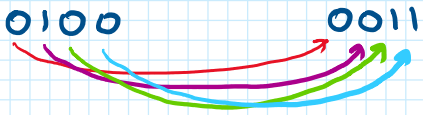
Precedence: Certain order of preference operators are evaluated in

Associativity: Order in which operators are executed when there are multiple of the same operator in one expression

BITWISE OPERATOR

Converts operands to binary and then performs an operation

4 & 3

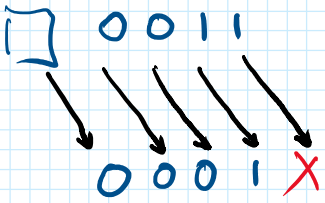


0000

0

Eg: & (and), | (or), >> (right shift), << (left shift), ~ (negation)

3 >> 1 → no of bits to shift by



NOTE: Right & left shift

3 >> 1 = 3 ÷ 2¹

15 >> 3 = 15 ÷ 2³

16 << 2 = 16 × 2²

11 << 1 = 11 × 2¹

NOTE:
Bitwise operators work only for integers

Negation

SHORT FORMULA

~a = -(a+1)

BACK END

3

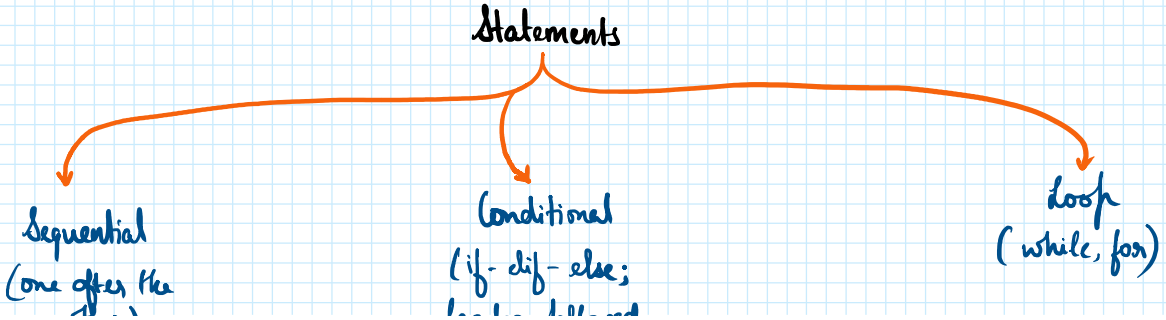
Binary: 00000011

1's complement: 11111100

2's complement (1's comp. +1): 11111101 (+1)

Negation returns 2's complement of given value.

CONTROL STATEMENTS



Sequential (one after the other)

Conditional (if - elif - else; leaders followed by suite/body)

Iterative (while, for)

if - else

- only takes expressions as conditions, not statements
- pass: used to fill empty suites. only for syntax purpose, lines after pass are still execute
- leaders must have a body suite ; error without it