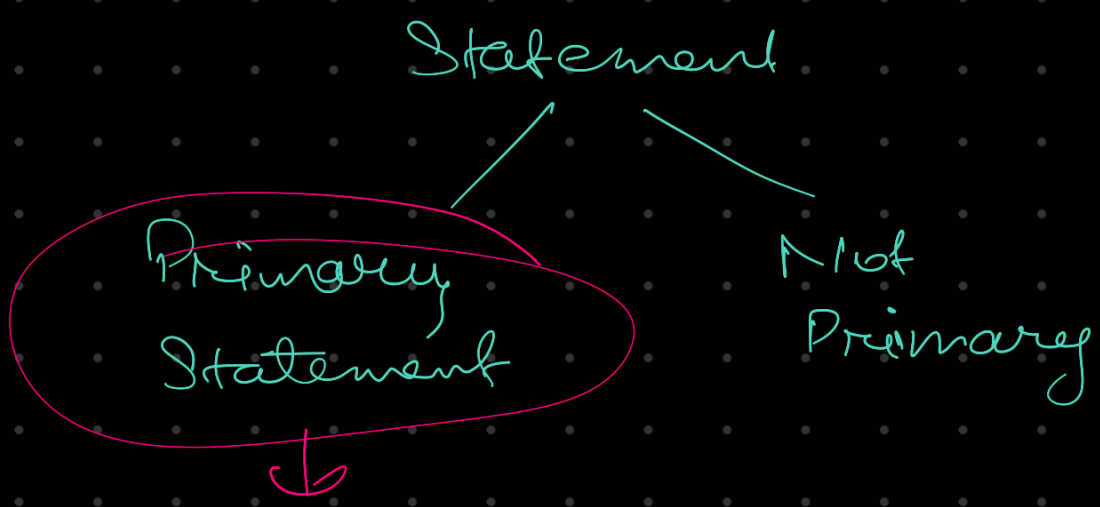
Logic



- Primary Statement has 2 values
  T, F
  1, 0

- Primary can't be broken further.

- Primary Statement denoted by
  A, B, C, D, E - - - -

- Primary
  Can be named as atomic statement
  ? Primary & primitive statement

Connectives :- $\wedge$, $\vee$, $\rightarrow$

P : It is raining today

$\neg$P : It is not raining today

If

P	: T
$\neg$P	: F

If

P	: F
$\neg$P	: T

Conjuction : $\wedge$

P	Q	$P \wedge Q$
T	T	T
T	F	F
F	T	F
F	F	F

Disjunction : $\vee$

P	Q	$P \vee Q$
T	T	T
T	F	T
F	T	T
F	F	F

P : Jack went up to hill

Q : Jill went up to the hill

$P \wedge Q$: Jack & Jill went up to ~~the~~ hill.

- $(P \wedge Q) \wedge Q \vee R$ — (2)
- $(P \vee \neg Q \vee R) \wedge (P \vee Q \vee R)$

where at

P — T R - T

Q - F

$(1 \vee 1 \vee 1) \wedge (1 \vee 0 \vee 1)$

$0 \vee 1 \vee 0$

(1)

1 ∧ 1

= 1 or TRUE

P	Q	R	Z
T	T	T	T
T	T	F	T
T	F	T	T
T	F	F	T
F	T	T	T
F	T	F	F
F	F	T	T
F	F	F	F

Features of Python

- Dynamically type
  Dont need to worry about data type
- Object Oriented Programming
- Open Source
- Platform Independent.
- Larg Standard library

- Extensible & Executable.
- Easy to learn
- Interpreted
  ↳ line by line & slow
- Dynamically implicity typed
- Case sensitive
- GUI Support

DAA

Algorithm : Set of instructions that can be executed on a computer / turing machine

- Stone program concept ;
- Algorithm has following characteristics
  (i) Finite sets of Instruction
  (ii) finite output
  (iii) finite input
  (iv) Terminal after finite time.

Types of Algorithm ;
1) Deterministic algorithm
ii) Non deterministic algorithm
  ↳ diff output will be obtained with the same input

Methods for designing an algorithm

1. Divide & conquer method:
2. Greedy Method