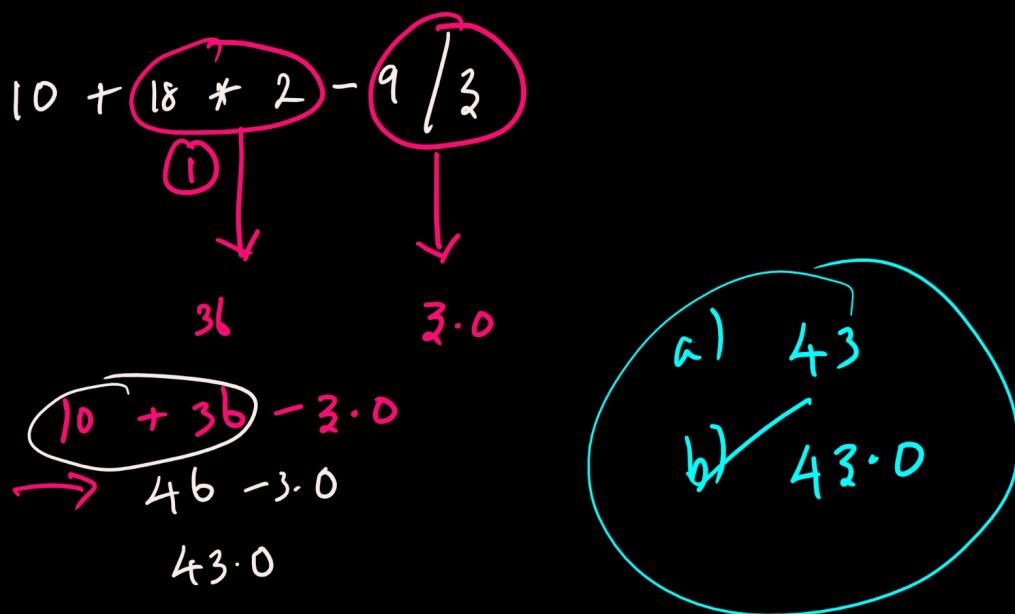


Agenda :

- ~ Operator Precedence
- ~ Unicode Representation
- ~ Conditional Statements

Operator Precedence :



4 ^ 2 << 3 + 48 // 24

^ << + //

XOR Left Shift add floor div

1. //
2. +
3. <<
4. XOR

$$4 \wedge 2 \ll 3 + 48 // 24$$

$$4 \wedge 2 \ll 3 + 2$$

$$4 \wedge 2 \ll 2$$

xor

$$\Downarrow n \times 2^k$$

$$2 \times 2^5 = 2^6 = 64$$

$$4 \wedge 64$$

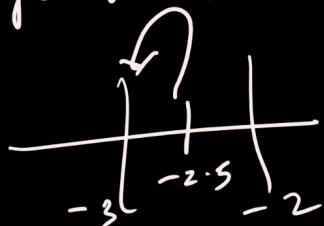
$$\begin{array}{ccccccc}
 64 & 32 & 16 & 8 & 4 & 2 & 1 \\
 0 & 0 & 0 & 0 & 1 & 0 & 0 \\
 \hline
 1 & 0 & 0 & 0 & 0 & 0 & 0
 \end{array} \quad (\text{xor})$$

$$\begin{array}{r}
 \overline{10000100} \rightarrow \\
 \downarrow \qquad \qquad \qquad \downarrow \\
 64 + 4 = 68
 \end{array}$$

$$-5 // 2 // 2$$

$$-5 // 2 = \lfloor -2.5 \rfloor$$

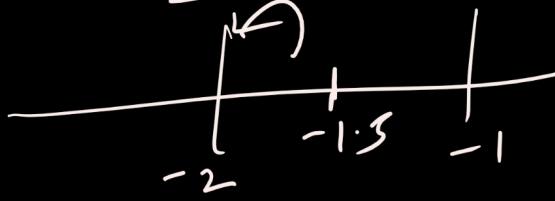
11 — floor div
Left to Right



$$-3 // 2$$

(-2)

$$\boxed{-1.5}$$



$$-5 // 2 // 2$$



$$\cancel{3^2 = 9}$$

$$3^{**}2^{**}3 \Rightarrow 3^8$$

\Downarrow

$$2^3 = 8$$

$**$ - Right to Left

$$10 > 7 == 7 < 10$$

↳ Kind of Chain Rule

$(10 > 7)$ and $(7 == 7)$ and $(7 < 10)$
True and True and True = True.

$$10 > 7 == 8 < 10$$

$(10 > 7)$ and $(7 == 8)$ and $(8 < 10)$

True and False and True \rightarrow False.

$$(10 > 7) == (8 < 10)$$

\Downarrow \Downarrow
True == True
True.

$$Q_1 (10 > 7) == 8 < 12$$

$$Q_2 10 > 7 == (8 < 12)$$

True == 8 \quad \quad $8 < 12$
 \rightarrow $\boxed{\text{True} == 8 < 12}$

True == 8 and $8 < 12$
False and True \rightarrow False.

$$\rightarrow 10 > 7 == \underline{(8 < 12)}$$

$$10 > 7 == \text{True}$$

$(10 > 7)$ and $(7 == \text{True})$
True and False \Rightarrow False.

$$10 > 1 == (8 < 12)$$



$10 > 1 == \text{True} \rightarrow (10 > 1) \text{ and } (1 == \text{True})$
True and True

(8)
 $\text{bool}(10) = \text{True}$
(8) $== \text{True}$
 $8 == \text{False}$

$10 > (7 == 8) < 12$
↓
 $10 > \text{False} < 12 \Rightarrow ((10 > \text{False}) \text{ and } (\text{False} < 12))$
True and True \rightarrow True.

$10 > (7 == 8) < -1$

$10 > \text{False} < -1$
 $((10 > \text{False}) \text{ and } (\text{False} < -1))$
True and False \rightarrow False.

$10 > (7 == 8) < -1$

$10 > \text{False} < -1$

$\text{True} < -1 \times$

$(10 > \text{False}) \text{ and } (\text{False} < -1)$

$10 > \text{False} < -1$

Virek scored 100

Rohit scored 90

Sachin scored 70

Sachin
>>>

Virek > Sachin < Rohit

Virek > Sachin and Sachin < Rohit
 $100 > 70$ and $70 < 90$

Unicode Representation :-

* Python uses Unicode representation to represent strings.

* ASCII → Values → C

Universal
Character
set
for
string
encoding.

ASCII

0 to 127

a - 97
b - 98
c - 99

Unicode

a

a	- 97	A - 65
b	- 98	B - 66
:	:	:
:	:	:
z	- 122	z - 90

O - 48

l - 49

.

.

9

ASCII values will remain
exactly same values in Unicode
format as well.

ASCII ('K') = X ↗

Unicode ('K') = X ↗

Take only limit characters to represent.

160000 - characters . . .

English
Hindi
Hindi
Chinese

2 characters



V I R A T
↑ ↑ ↑ ↑ ↑ ↑
0 1 2 3 4

2 ↗ 0 ↗ 1 ↗

Python supports Multilingual

'a' → 97
Char ↗ Unicode
 hexadecimal.

0 - 9 (10 Number)

0 - 1 (Binary)

(0 - 15) (hexadecimal)

0, 1, 2, 3, 4, 5, 6, 7, 8, 9,

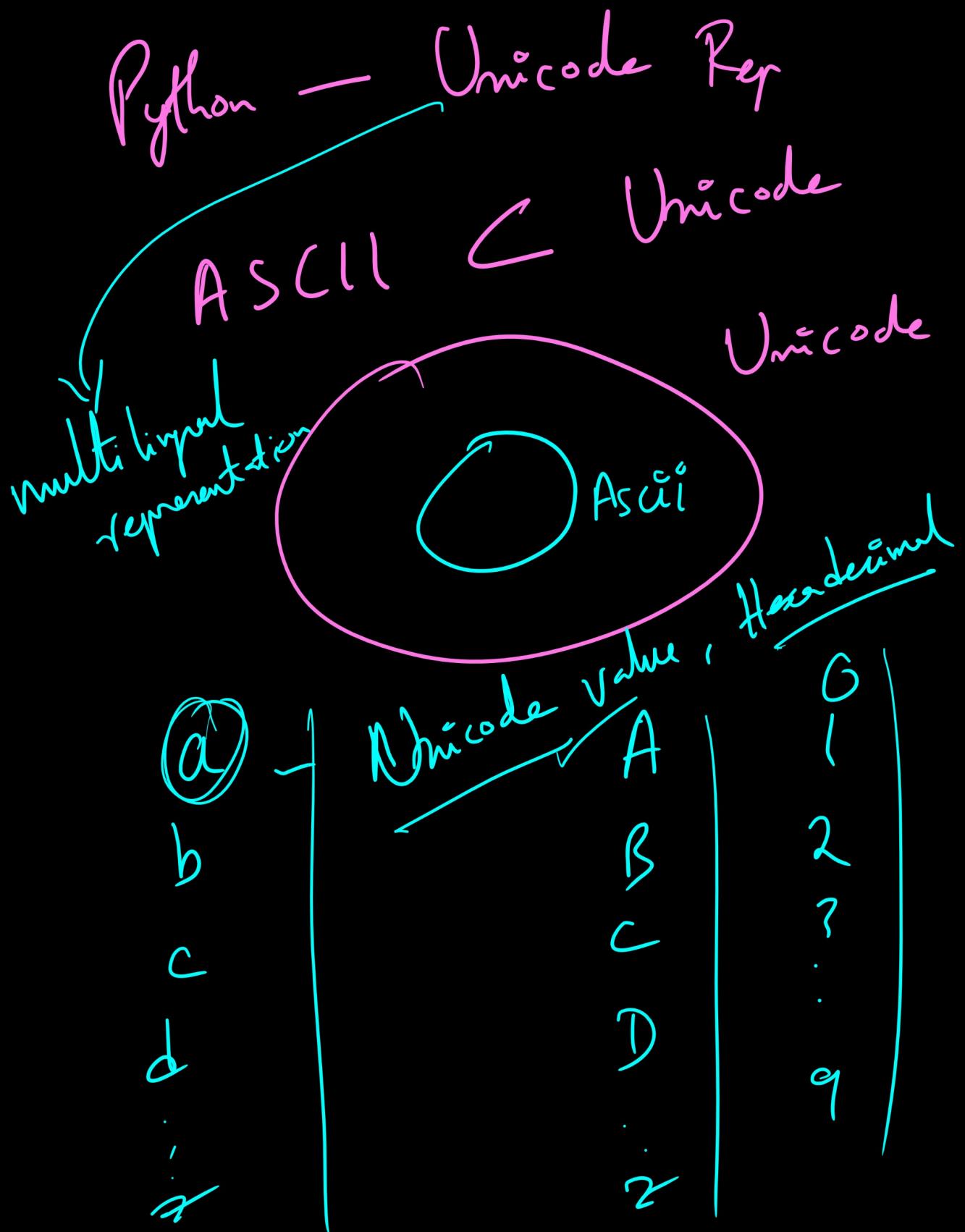
A, B, C, D, E, F
10 11 12 13 14 15.

$$\begin{array}{c}
 16 \text{ } | \text{ } 16 \\
 \diagup \quad \diagdown \quad | \quad \text{---} \\
 16^{\circ} \times 0 = 0 \\
 16^{\circ} \times 1 = 16
 \end{array}$$

$$16 \rightarrow 10$$

$$\begin{array}{c}
 16 \text{ } | \text{ } 975 \\
 \diagup \quad \diagdown \quad | \quad \text{---} \\
 16^{\circ} \times 1 = 1 \\
 16^{\circ} \times b - 9b = \overline{97}
 \end{array}$$

$$\begin{array}{c}
 a' \rightarrow 97 \rightarrow 61 \\
 \xrightarrow{\quad \quad \quad \quad \quad} \times 61
 \end{array}$$



F · 2¹⁰

40 minutes

Conditional Statements :-

if , else

Allows you to make some decisions based on some condition .

if (←) :

do this work 'A'

else :

do this work 'B'

rupees = 100

if rupees ≥ 80 :

action ← [Buy Diary Milk Slik]

else :

[Buy Milky Bar]

Python → uses strict indentation.

if {
 ((Code))
}

space at the
beginning of
the code

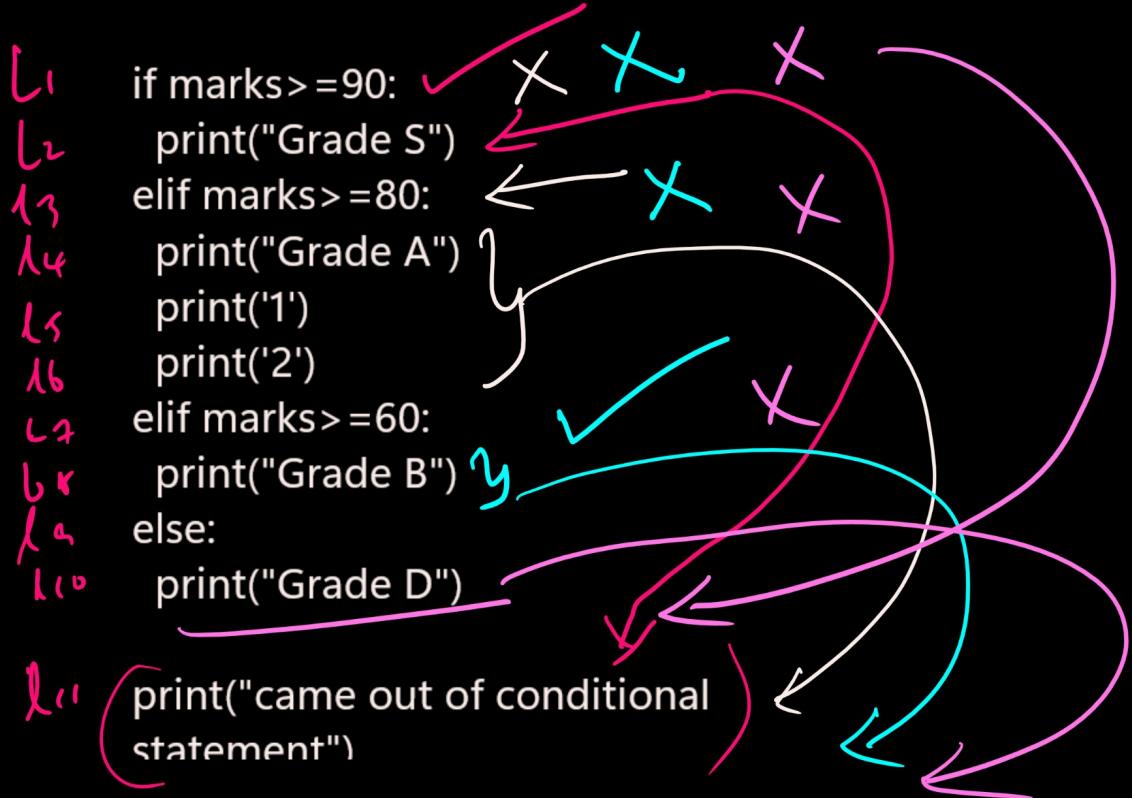
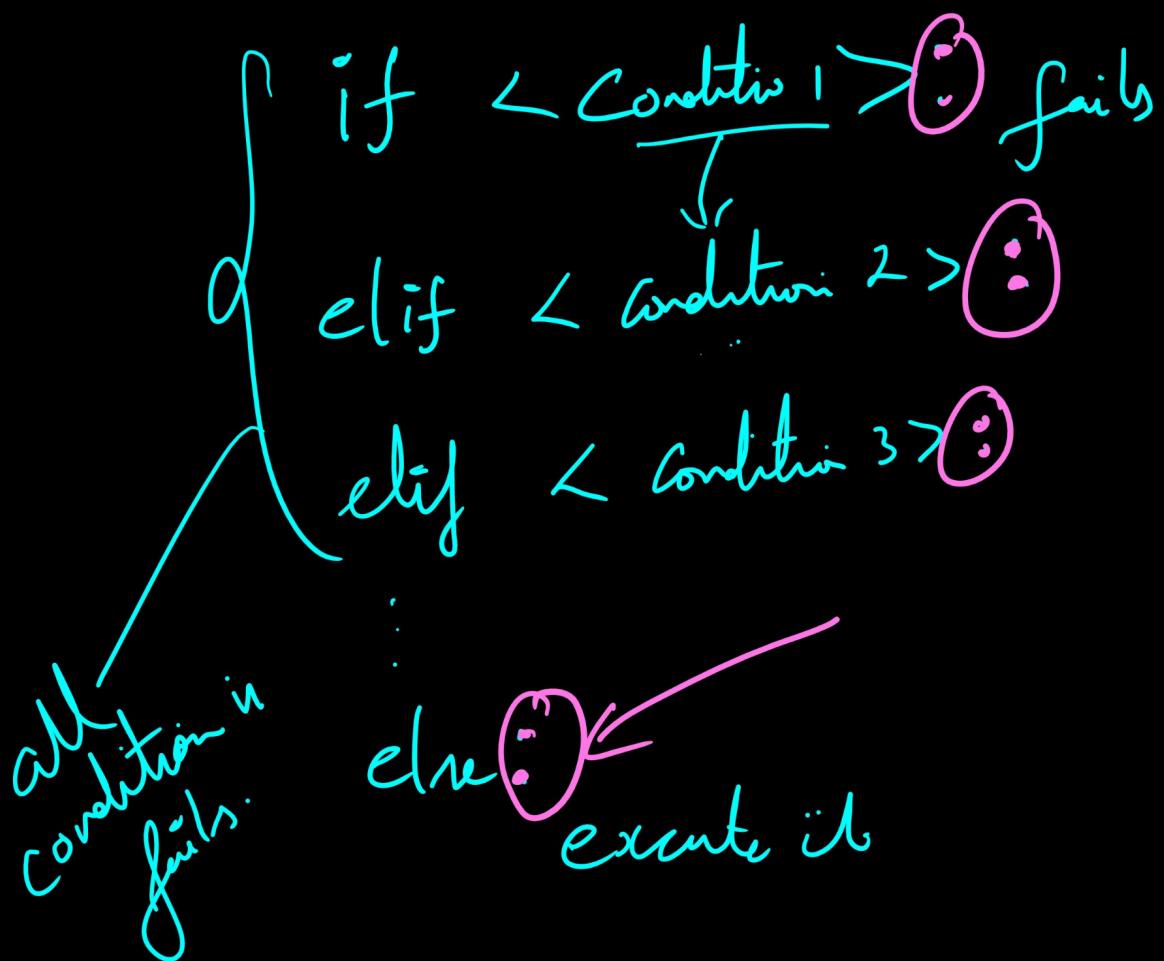
if <condition>:
...
 | line 1
 | line 2
 | line 3

mandatory

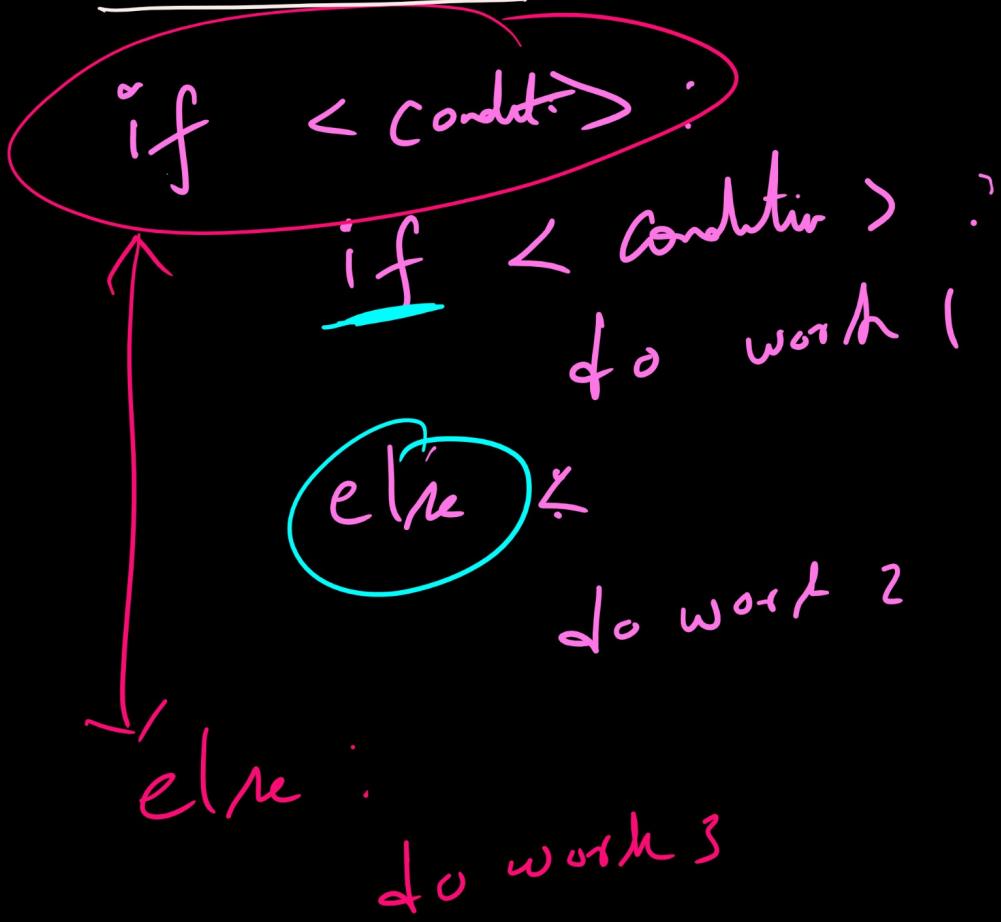
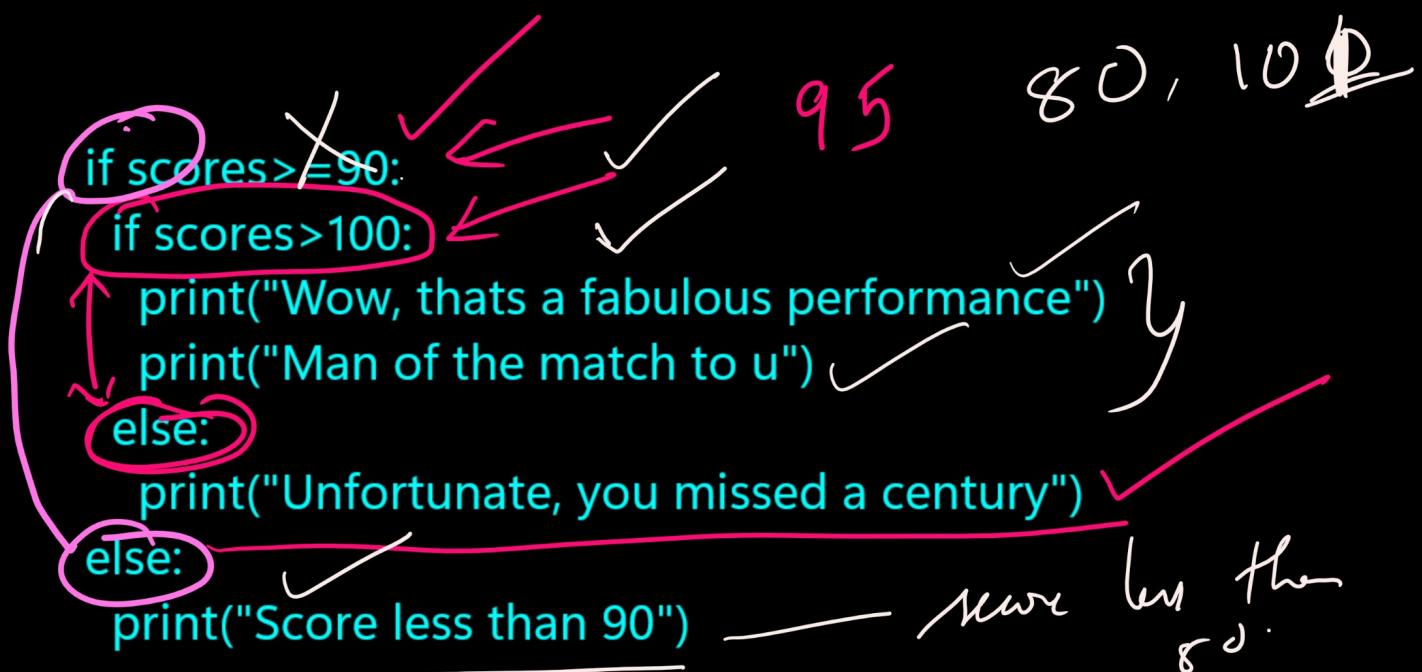
indentation
level.

{ 90 ≥ 'S'
80 - 90 ⇒ 'A'
70 - 80 ⇒ "B"
less than 70 ⇒ 'D' .

elif → *else if*



if
elif
else:



Loops in Python

COLAB - CLASS - 6:

<https://colab.research.google.com/drive/1yi3EnfXz18cWu9HOyNP-Gz6j-3CoCwZ7?usp=sharing>