

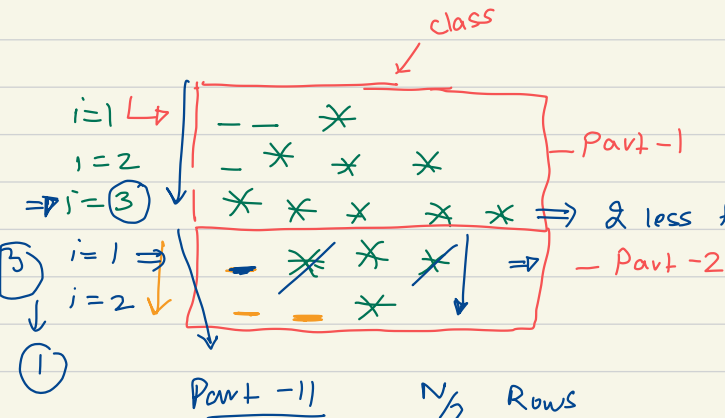


## Doubts

## ~~1~~ Diamond pattern

~~2~~ Integer to Char Typecast

### ③ Debugging (Class)



~~1st~~ = 3 Rows

$$n=3$$

2 less than the Part -)

last row	new species
3	
1	
0	

$N/2$  Rows  
Spaces Spaces  $\rightarrow i$   
 $i=1$  1  
 $i=2$  2 = 2(3) - 3  
3

int division

$2 \left( \frac{N}{2} \right) ! = N$

$\Rightarrow 2 \left( \frac{5}{2} \right) = 4$

$5$

$\rightarrow N = S$   
 $RowS = \frac{N + 1}{2}$

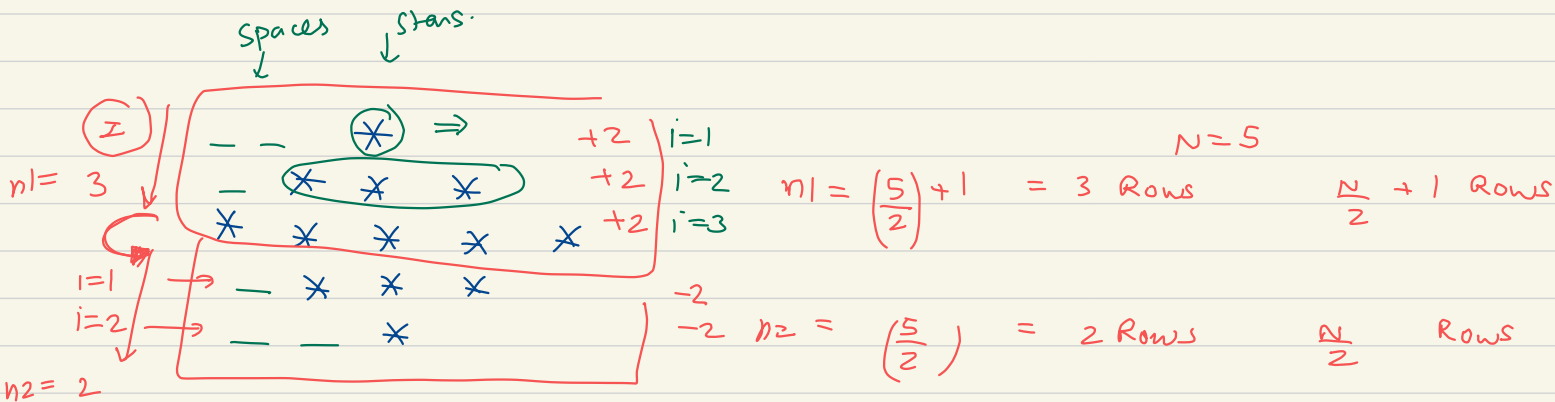
$2i-1$  stars

1

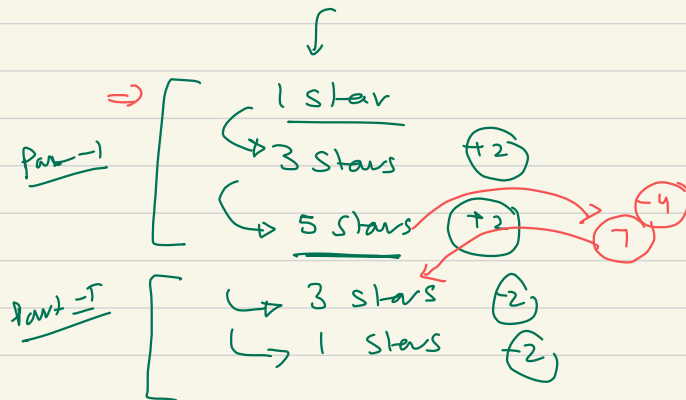
3

5 — Largest / Middle row

$$\begin{aligned} \text{stars} &= 2(1) - 1 - 2 \\ &= 2\left(\frac{N}{2} + 1\right) - 3 \\ &= \cancel{1} + \cancel{9} - 3 = 1 \end{aligned}$$

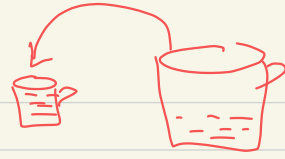


in Row =  $2i - 1$  stars.



2

Int to char  
↓ ↓



Char letter = 'A'

print(letter) . A'

65

char  $\Rightarrow$  2 bytes

int no = 65;

Char letter = (char) no;

Lossy  
conversion

print(no) 65;

print((char)no);

65

int  $\Rightarrow$  4 bytes

'A'

## Topics Left

- ① ++, -- operators
- ② Ternary op
- ③ Switch case-

increment op

for(int i=1; i<=10, i++) {

3

Post-inc

$i++$

Same as

$i' = i + 1$

Pre-inc

$++i$

Same as

$i' = i + 1$



$x = 10;$

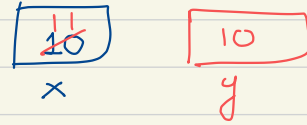
$x++;$

$x = x + 1$

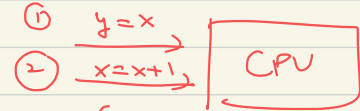
$\Rightarrow (11)$

## Scenario : Different Behaviour

int x = 10;



int y = x++; → Two instructions in one line.



print(x, y)  
↓ ↓  
11 10

Post-increment

Assign  
+ increment

int x = 10

int y = ++x

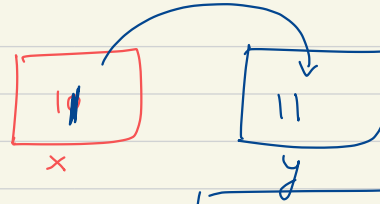
② y = (x = x + 1) ①

print ( x , y ) .

Pre inc ① x = x + 1

② y = x

CPU



-- x ;                      // Pre-dec  
x -- ;                      // Post-dec

### Compound Assignment operators

Compound Assignment  
↓

•  $a = a + 5;$                        $\Rightarrow$                        $a += 5;$

•  $a = a * 7$                        $\Rightarrow$                        $a *= 7;$

$a = 6$

$a * = 7$   
 $\Rightarrow (42)$

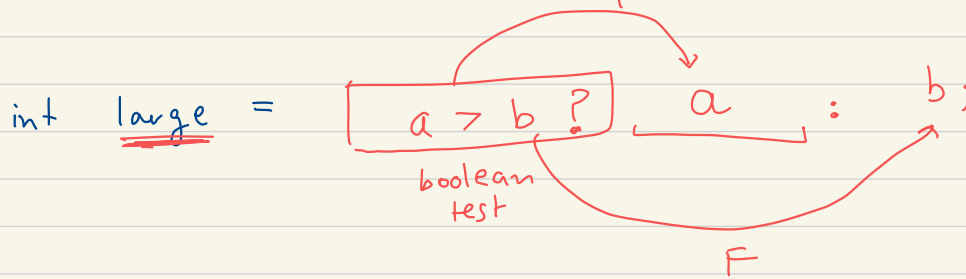
•  $a = a \% b$                        $\Rightarrow$                        $a \underline{\%} = b;$

•  $a = a / b$                        $\Rightarrow$                        $a \underline{/} = b;$



## Ternary Operator   ?   :

↳ Replacement for simple if else,



Switch Case (another way of writing lot of if-else with simple checks)

	<u>Input</u>	<u>output</u>
if	day = 1	- Sun
else if	day = 2	- Mon
	3	- Tue
	4	
	5	
	6	
	7	

Test

Switch ( day ) {

↓  
case 1: print(Monday)

↓  
case 2: print (Tuesday)  
≡

⋮  
case 7:  
}



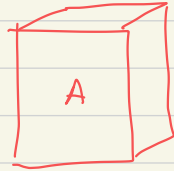
10.30

## Part-2

### Functions

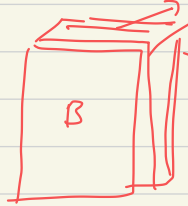
• Debugging

Making the Code "Modular"  
Solar Energy



Book 1

500 Pages



Book 2

Book 2

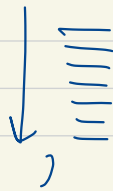
10 chapters

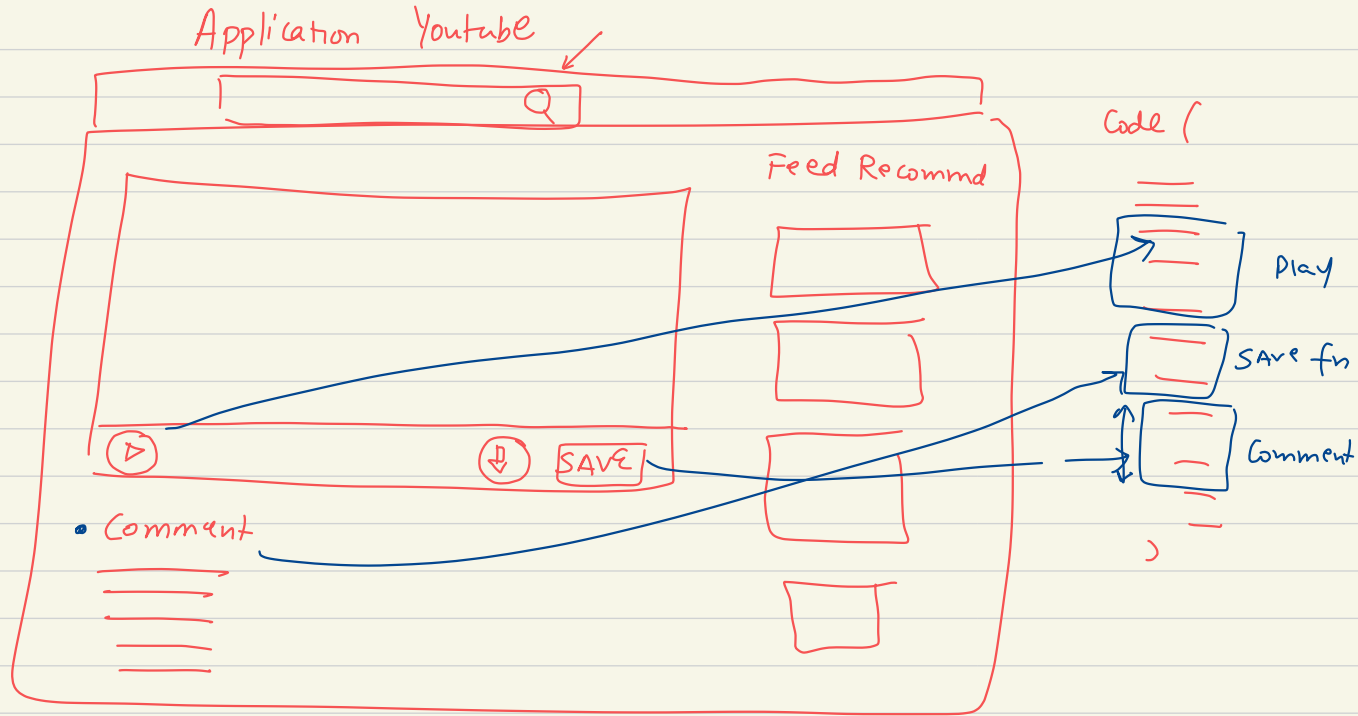
500 Pages

- Organised, Modular
- Easy to Read, Track
- Chapters can be "re-used"



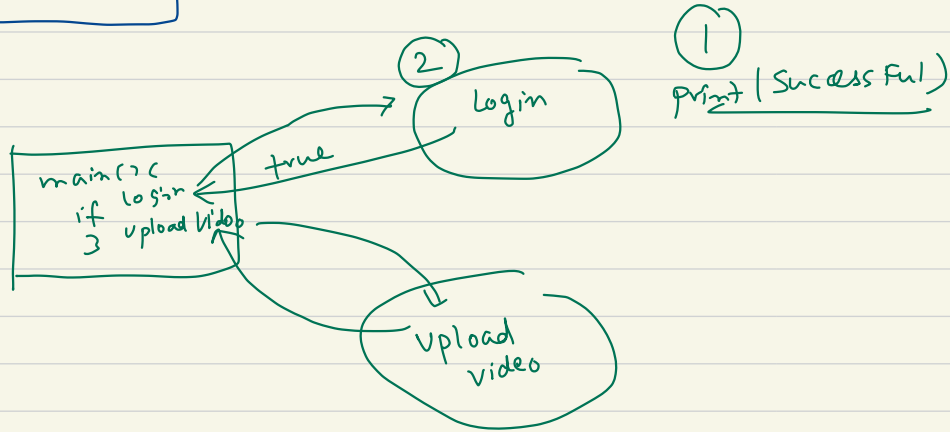
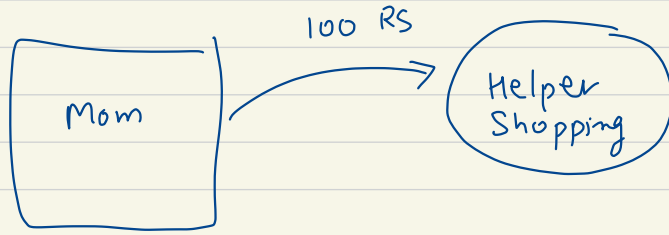
main()





Code → based upon what the user wants to do  
to Run it





Function can accept some data (through parameters)  
 And they can return some data (through return values)

