

## Special Functions - 1

01 April 2024 23:14

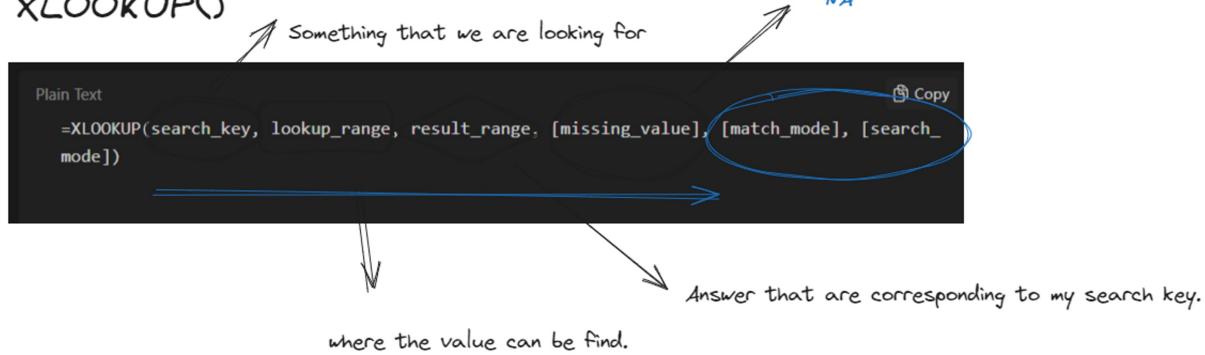
### Special Functions

→ **IFERROR(value , error message)**

▼ | fx =IFERROR(DIVIDE(B2,C2),"Denominator can't be 0")

A	B	C	D
Item	price	sale quantity	cost per kg
apple	1050	15	70
mango	1800	10	180
banana	500	22	23
orange	2000	0	Denominator can't be 0
litchi	1270	30	42
guava	750	0	Denominator can't be 0

→ **XLOOKUP()**



vertical xlookup

2nd	3rd
Samsung	3970
Nokia	3646
Moto	3741
Oppo	3270
Vivo	1025

1st Moto ?

If it is empty : "Empty cell"  
"No Data Found"

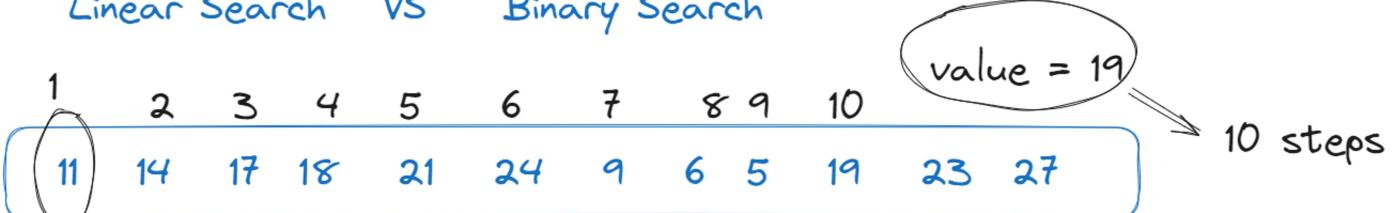
1st Moto ?

- **match\_mode (Optional):**
  - 0 : Finds an exact match for the `search_key`.
  - 1 : Finds an exact match or the next value that is bigger than the `search_key`.
  - -1 : Finds an exact match or the next value that is lower than the `search_key`.
  - 2 : Performs a wildcard match.

- -1 : Finds an exact match or the next value that is lower than the `search_key`.
- 2 : Performs a wildcard match.
- `search_mode` (Optional):
  - 1 : Searches through the look-up range from the first entry to the last one. Downward
  - 1 : Searches through the look-up range from the last entry to the first. Upward
  - 2 : Searches through the range using binary search, assuming the range is sorted in ascending order.
  - 2 : Searches through the range using binary search, assuming the range is sorted in descending order. -2

Example Dataset:

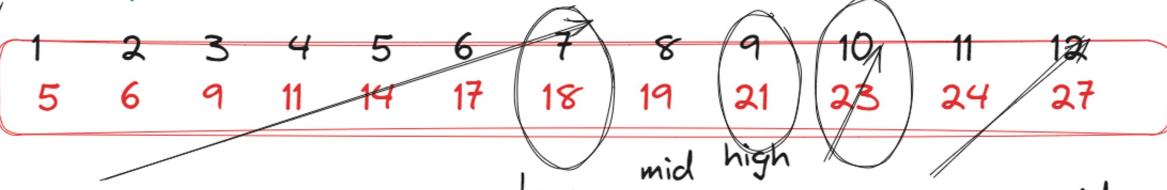
### Linear Search VS Binary Search



Linear Search : Looking up the value in linear order. Step by step starting from index 1 , and increasing the step + 1.

→ order : Ascending or Descending or mix.

Binary Search : [Sorted either in Ascending or Descending.]



$$= \text{mid} = (10 + 7)/2$$

$$= 8.5 \sim 9$$

$$\text{mid} = (\text{high} + \text{low}) / 2 = (12 + 7) = 19/2 = 9.5 \sim 10$$

19

$$= (12 + 1) / 2 = 6.5 \sim 7$$

$$= (9 + 7) / 2$$

4 step

$$= 16 / 2 = 8$$

→ mid <= 19 OR mid > 19

100% - 50% - 25% - 12.5% [limited step , I'll find my result]

<1 CLK

100% - 50% - 25% - 12.5% [limited step , I'll find my result]

SLACK

