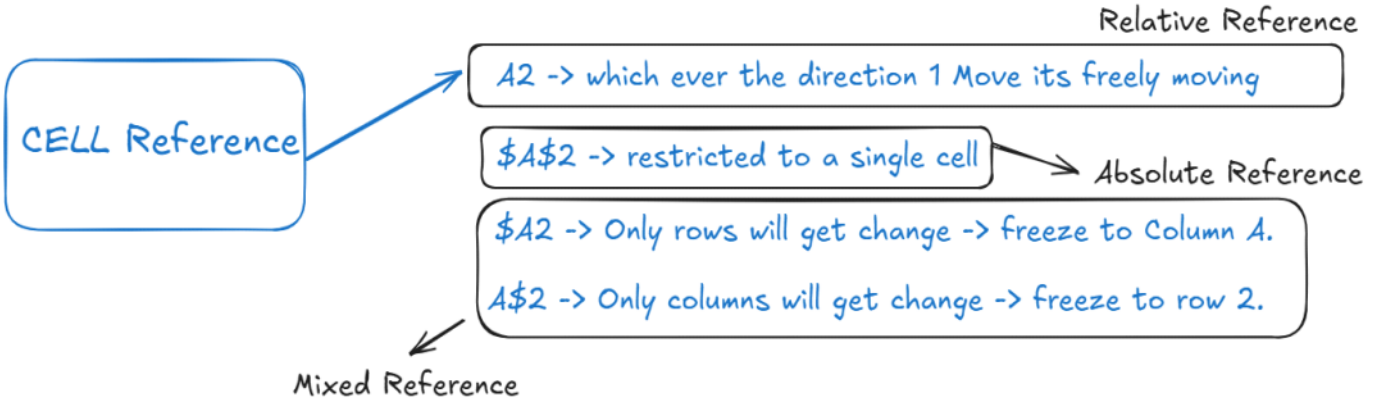
Introduction to MS Excel(Part-III)



Math & Statistical Functions

1. Count All records present in Exam Score Sheet.

COUNT() -> Select the Numerical Column to get the answer : 99

```
=COUNT(F2:F100)
```

2. Count the Total Gender Exist in the exam score sheet.

Categorical Column -> String [Text] data type

COUNTA -> "It counts the records from a categorical data"

```
=COUNTA(A2:A100)
```

1. Count All records present in Exam Score Sheet.	99
2. Count the Total Gender Exist in the exam score sheet.	99

3. If any column exist with empty cell & we need to identify the number of cell empty in a particular column.

COUNTBLANK()

=COUNTBLANK(D1:D9)

A	B	C	D	E
10	20	30	40	50
20	400	600		1000
30	600	900		1500
40	800	1200		2000
50	1000	1500		2500
60	1200	1800		3000
70	1400	2100	2800	3500
80	1600	2400	3200	4000
90	1800	2700	3600	4500
			5	

3. Find the Total Sum of Score for Math, Reading & Writing

=SUM(F2:F100)	=SUM(G2:G100)	=SUM(H2:H100)

3. Find the Total Sum of Score for Math, Reading & Writing	6903	7133	6993

4. Find the Max/Min score in All Subjects.

4. Find the Max score in All Subjects	100	97	97
4. Find the Min score in All Subjects	23	33	33

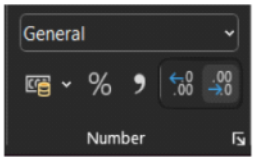
=MAX(F2:F100)	=MAX(G2:G100)	=MAX(H2:H100)
=MIN(F2:F100)	=MIN(G2:G100)	=MIN(H2:H100)

5. Find the Average score in All Subjects.

5. Find the Average score in All Subjects.	70	72	71

AVG = SUM(all records) / Number of Recrods

=AVERAGE(F2:F100)	=AVERAGE(G2:G100)	=AVERAGE(H2:H100)



Logical Functions

```
= IF(Condition , True , False)

If([Math] > 90 , "Topper", "Average");
```

cell address

Comparison Operator -> True/False

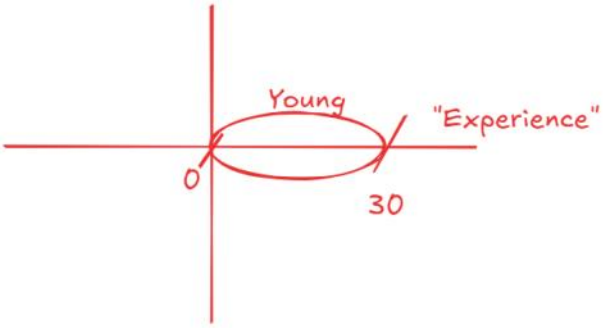
```
=IF(F2>90,"Topper","Average"
```

IF(logical_test, [value_if_true], **[value_if_false]**)

math scor	reading scor	writing scor	Maths Performance
100	97	91	Topper
99	85	88	Topper
98	79	85	Topper
96	93	87	Topper
96	82	90	Topper
91	93	95	Topper
91	96	97	Topper
90	93	84	Average
90	87	86	Average
89	85	78	Average
89	88	86	Average

Label Employee as "Young" if there age < 30
Else -> Experience

H	P	
Age in Yrs.	Age Codition	Age Codition
39.67	=IF(H2<30,"Young","Experience")	Experience
36.36	=IF(H3<30,"Young","Experience")	Experience
45.45	=IF(H4<30,"Young","Experience")	Experience
58.18	=IF(H5<30,"Young","Experience")	Experience
42.5	=IF(H6<30,"Young","Experience")	Experience
40.31	=IF(H7<30,"Young","Experience")	Experience
22.14	=IF(H8<30,"Young","Experience")	Young
22.21	=IF(H9<30,"Young","Experience")	Young
34.86	=IF(H10<30,"Young","Experience")	Experience
59.12	=IF(H11<30,"Young","Experience")	Experience
47.02	=IF(H12<30,"Young","Experience")	Experience
54.15	=IF(H13<30,"Young","Experience")	Experience
29.73	=IF(H14<30,"Young","Experience")	Young



IFS() → Multiple condition to apply in defining a filter

<=35 fail
36-60 Below Average
61-80 Average
81-90 Good
>90 Excellent

→

<=35 fail
<=60 Below Average
<=80 Average
<=90 Good
>90 Excellent

91	Topper	=IFS(,,,,

IFS(logical_test1, value_if_true1, [logical_test2, value_if_true2], **[logical_test3**, value_if_true3], ...)

Report Card
=IFS(F2<=35,"Fail",F2<=60,"Below Average",F2<=80,"Average",F2<=90,"Good",F2>90,"Excellent")
=IFS(F3<=35,"Fail",F3<=60,"Below Average",F3<=80,"Average",F3<=90,"Good",F3>90,"Excellent")
=IFS(F4<=35,"Fail",F4<=60,"Below Average",F4<=80,"Average",F4<=90,"Good",F4>90,"Excellent")
=IFS(F5<=35,"Fail",F5<=60,"Below Average",F5<=80,"Average",F5<=90,"Good",F5>90,"Excellent")
=IFS(F6<=35,"Fail",F6<=60,"Below Average",F6<=80,"Average",F6<=90,"Good",F6>90,"Excellent")
=IFS(F7<=35,"Fail",F7<=60,"Below Average",F7<=80,"Average",F7<=90,"Good",F7>90,"Excellent")
=IFS(F8<=35,"Fail",F8<=60,"Below Average",F8<=80,"Average",F8<=90,"Good",F8>90,"Excellent")
=IFS(F9<=35,"Fail",F9<=60,"Below Average",F9<=80,"Average",F9<=90,"Good",F9>90,"Excellent")
=IFS(F10<=35,"Fail",F10<=60,"Below Average",F10<=80,"Average",F10<=90,"Good",F10>90,"Excellent")

math scc	reading scc	writing scc	Maths Performance	Report Card
100	97	91	Topper	Excellent
99	85	88	Topper	Excellent
98	79	85	Topper	Excellent
96	93	87	Topper	Excellent
96	82	90	Topper	Excellent
91	93	95	Topper	Excellent
91	96	97	Topper	Excellent
90	93	84	Average	Good
90	87	86	Average	Good
89	85	78	Average	Good
89	88	86	Average	Good
89	93	93	Average	Good
88	80	81	Average	Good
87	92	81	Average	Good
86	82	72	Average	Good
85	75	74	Average	Good
84	91	89	Average	Good
83	81	78	Average	Good
83	85	86	Average	Good
82	74	75	Average	Good
82	83	80	Average	Good
82	82	82	Average	Good
80	76	68	Average	Average
80	79	71	Average	Average
80	75	73	Average	Average
80	70	73	Average	Average

AND Logic

Cond1	Cond2	Result
T	T	T
T	F	F
F	T	F
F	F	F

OR Logic

Cond1	Cond2	Result
T	T	T
T	F	T
F	T	T
F	F	F

NOT Logic

cond1	Result
T	F
F	T

AND Logic AND(Cond1 , Cond2,....)

Find the count of Students who have math & reading Score > 80.

math sco	reading sco	AND Logic
100	97	TRUE
99	85	TRUE
98	79	FALSE
96	93	TRUE
96	82	TRUE
91	93	TRUE
91	96	TRUE
90	93	TRUE
90	87	TRUE
89	85	TRUE
89	88	TRUE
89	93	TRUE
88	80	FALSE
87	92	TRUE
86	82	TRUE
85	75	FALSE
84	91	TRUE
83	81	TRUE
83	85	TRUE
82	74	FALSE
82	83	TRUE

```
=AND(F2>80,G2>80)
```

```
=COUNTIF(K2:K100,"True")
```

OR Logic OR(Cond1 , Cond2,....)

Find the count of Students who have scored 80 and above in either Math or Reading Or Writing Score.

F	G	H	K	L
math sco	reading sco	writing score	AND Logic	OR Logic
100	97	91	TRUE	TRUE
99	85	88	TRUE	TRUE
98	79	85	FALSE	TRUE
96	93	87	TRUE	TRUE
96	82	90	TRUE	TRUE
91	93	95	TRUE	TRUE
91	96	97	TRUE	TRUE
90	93	84	TRUE	TRUE
90	87	86	TRUE	TRUE
89	85	78	TRUE	TRUE
89	88	86	TRUE	TRUE
89	93	93	TRUE	TRUE
88	80	81	FALSE	TRUE
87	92	81	TRUE	TRUE
86	82	72	TRUE	TRUE
85	75	74	FALSE	TRUE
84	91	89	TRUE	TRUE
83	81	78	TRUE	TRUE
83	85	86	TRUE	TRUE
82	74	75	FALSE	TRUE
82	83	80	TRUE	TRUE
82	82	82	TRUE	TRUE
80	76	68	FALSE	TRUE

```
=OR(F2>=80,G2>=80,H2>=80)
```

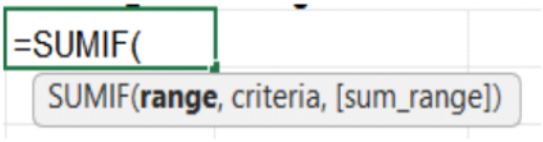
```
=COUNTIF(L2:L100,"True")
```

```
= COUNTIF(Range,condition)
```

Find the Total Math Score of a Female Student.

= SUMIF(Range, Condition, Sum Range)

A	B	C	D	E	F
gend	race/ethnici	parental level of educatio	lunch	test preparation cours	math sco
male	group D	master's degree	standard	none	100
male	group D	associate's degree	standard	completed	99
male	group E	some college	standard	none	98
male	group D	associate's degree	standard	none	96
male	group A	associate's degree	standard	completed	96
male	group D	master's degree	free/reduced	completed	91
female	group C	associate's degree	standard	completed	91




```
=SUMIF(A2:A100,"Female",F2:F100)
```

Calculate the Total Math Score for a Student in "Group C".

```
=SUMIF(B2:B100,"Group C",F2:F100)
```

Find the Total Math Score of a Female Student. **2951**

Calculate the Total Math Score for a Student in "Group C". **2039**

A	B	C	D	E	F
gend	race/ethnici	parental level of educatio	lunch	test preparation cours	math sco
male	group D	master's degree	standard	none	100
male	group D	associate's degree	standard	completed	99
male	group E	some college	standard	none	98
male	group D	associate's degree	standard	none	96
male	group A	associate's degree	standard	completed	96
male	group D	master's degree	free/reduced	completed	91
female	group C	associate's degree	standard	completed	91

Count the students Who scored > 90 in all 3 subjects

CountIFS()

=COUNTIFS(,,,

COUNTIFS(criteria_range1, criteria1, [criteria_range2, **criteria2**], [criteria_range3, ...])

">90"

```
=COUNTIFS(F2:F100,">90",G2:G100,">90",H2:H100,">90")
```

Count the students Who scored > 90 in all 3 subjects **3**

F	G	H
math sco	reading sco	writing score
100	97	91
99	85	88
98	79	85
96	93	87
96	82	90
91	93	95
91	96	97
90	93	84
90	87	86
89	85	78
89	88	86
89	93	93

How many Male Students who scored > 80 in reading.

A	B	C	D	E	F	G	H
gend	race/ethnici	parental level of educatio	lunch	test preparation cours	math sco	reading sco	writing score
male	group D	master's degree	standard	none	100	97	91
male	group D	associate's degree	standard	completed	99	85	88
male	group E	some college	standard	none	98	79	85
male	group D	associate's degree	standard	none	96	93	87
male	group A	associate's degree	standard	completed	96	82	90
male	group D	master's degree	free/reduced	completed	91	93	95
female	group C	associate's degree	standard	completed	91	96	97

```
=COUNTIFS(A2:A100,"Male",G2:G100,">80")
```

How many Male Students who scored > 80 in reading. **16**

COUNTIF(range, criteria)

Why not CountIF?, As it can take a limited expression.

TEXT FUNCTIONS

1. Concatenate Function = CONCATENATE(col1,col2)

Place Name	Department	Age Codition	Concatenate Function	
Hydetown	Marketing	Experience	Hydetown - Marketing	=CONCATENATE(N2," - ", O2)
Denver	Marketing	Experience	Denver - Marketing	=CONCATENATE(N3," - ", O3)
New Matamoras	Asst. Manager	Experience	New Matamoras - Asst. Manager	=CONCATENATE(N4," - ", O4)
Delmita	Developer	Experience	Delmita - Developer	=CONCATENATE(N5," - ", O5)
Sabetha	Manager	Experience	Sabetha - Manager	=CONCATENATE(N6," - ", O6)
Fremont	HR	Experience	Fremont - HR	=CONCATENATE(N7," - ", O7)
Atlanta	Marketing	Young	Atlanta - Marketing	=CONCATENATE(N8," - ", O8)
Las Vegas	Developer	Young	Las Vegas - Developer	=CONCATENATE(N9," - ", O9)
Macksburg	Marketing	Experience	Macksburg - Marketing	=CONCATENATE(N10," - ", O10)
Blanchester	HR	Experience	Blanchester - HR	=CONCATENATE(N11," - ", O11)
Stonewall	HR	Experience	Stonewall - HR	=CONCATENATE(N12," - ", O12)
Michigantown	Developer	Experience	Michigantown - Developer	=CONCATENATE(N13," - ", O13)
Eureka Springs	HR	Young	Eureka Springs - HR	=CONCATENATE(N14," - ", O14)

B	C	D	E
Name Prefix	Name	First Name	Last Name
Drs.		Diane	Evans
Drs.		Lois	Walker
Mrs.		Melissa	King
Hon.		Frances	Young
Mr.		Ralph	Flores
Mr.		Benjamin	Russell
Ms.		Nancy	Baker
Prof.		Jack	Alexander
Mr.		Patrick	Bailey
Mrs.		Carol	Murphy
Ms.		Brenda	Robinson
Dr.		Joe	Robinson
Hon.		Diana	Peterson

Drs. Diane Evans [&]

Concatenate

=CONCAT(B2," ",D2," ",E2)

B	C	D	E		
Name Prefix	Name	First Name	Last Name		
Drs.	Drs. Diane Evans	Diane	Evans	=CONCAT(B2," ",D2," ",E2)	=CONCATENATE(B2," ",D2," ",E2)
Drs.	Drs. Lois Walker	Lois	Walker	=CONCAT(B3," ",D3," ",E3)	=CONCATENATE(B3," ",D3," ",E3)
Mrs.	Mrs. Melissa King	Melissa	King	=CONCAT(B4," ",D4," ",E4)	=CONCATENATE(B4," ",D4," ",E4)
Hon.	Hon. Frances Young	Frances	Young	=CONCAT(B5," ",D5," ",E5)	=CONCATENATE(B5," ",D5," ",E5)
Mr.	Mr. Ralph Flores	Ralph	Flores	=CONCAT(B6," ",D6," ",E6)	=CONCATENATE(B6," ",D6," ",E6)
Mr.	Mr. Benjamin Russell	Benjamin	Russell	=CONCAT(B7," ",D7," ",E7)	=CONCATENATE(B7," ",D7," ",E7)
Ms.	Ms. Nancy Baker	Nancy	Baker	=CONCAT(B8," ",D8," ",E8)	=CONCATENATE(B8," ",D8," ",E8)
Prof.	Prof. Jack Alexander	Jack	Alexander	=CONCAT(B9," ",D9," ",E9)	=CONCATENATE(B9," ",D9," ",E9)
Mr.	Mr. Patrick Bailey	Patrick	Bailey	=CONCAT(B10," ",D10," ",E10)	=CONCATENATE(B10," ",D10," ",E10)
Mrs.	Mrs. Carol Murphy	Carol	Murphy	=CONCAT(B11," ",D11," ",E11)	=CONCATENATE(B11," ",D11," ",E11)
Ms.	Ms. Brenda Robinson	Brenda	Robinson	=CONCAT(B12," ",D12," ",E12)	=CONCATENATE(B12," ",D12," ",E12)
Dr.	Dr. Joe Robinson	Joe	Robinson	=CONCAT(B13," ",D13," ",E13)	=CONCATENATE(B13," ",D13," ",E13)
Hon.	Hon. Diana Peterson	Diana	Peterson	=CONCAT(B14," ",D14," ",E14)	=CONCATENATE(B14," ",D14," ",E14)

=B2&" "&D2&" "&E2

B	C	D	E	
Name Prefix	Name	First Name	Last Name	
Drs.	Drs. Diane Evans	Diane	Evans	=B2&" "&D2&" "&E2
Drs.	Drs. Lois Walker	Lois	Walker	=B3&" "&D3&" "&E3
Mrs.	Mrs. Melissa King	Melissa	King	=B4&" "&D4&" "&E4
Hon.	Hon. Frances Young	Frances	Young	=B5&" "&D5&" "&E5
Mr.	Mr. Ralph Flores	Ralph	Flores	=B6&" "&D6&" "&E6
Mr.	Mr. Benjamin Russell	Benjamin	Russell	=B7&" "&D7&" "&E7
Ms.	Ms. Nancy Baker	Nancy	Baker	=B8&" "&D8&" "&E8
Prof.	Prof. Jack Alexander	Jack	Alexander	=B9&" "&D9&" "&E9
Mr.	Mr. Patrick Bailey	Patrick	Bailey	=B10&" "&D10&" "&E10
Mrs.	Mrs. Carol Murphy	Carol	Murphy	=B11&" "&D11&" "&E11
Ms.	Ms. Brenda Robinson	Brenda	Robinson	=B12&" "&D12&" "&E12
Dr.	Dr. Joe Robinson	Joe	Robinson	=B13&" "&D13&" "&E13
Hon.	Hon. Diana Peterson	Diana	Peterson	=B14&" "&D14&" "&E14

TextJOIN → pass separator [" "] in the first argument.

=TEXTJOIN(

TEXTJOIN(**delimiter**, ignore_empty, text1, ...)

=TEXTJOIN(" - ",TRUE,B2,D2,E2

B	C	D	E
Name Prefix	Name	First Name	Last Name
Drs.	=TEXTJOIN(" - ",TRUE,B2,D2,E2	Diane	Evans
Drs.	TEXTJOIN(delimiter, ignore_empty, text1, [text2], **[text3]**, [text4], [text5], ...)		Walker
Mrs.		Melissa	King

=TEXTJOIN(" - ",TRUE,B2,D2,E2)

B	C	D	E
Name Prefix	Name	First Name	Last Name
Drs.	Drs. - Diane - Evans	Diane	Evans
Drs.	Drs. - Lois - Walker	Lois	Walker
Mrs.	Mrs. - Melissa - King	Melissa	King
Hon.	Hon. - Frances - Young	Frances	Young
Mr.	Mr. - Ralph - Flores	Ralph	Flores
Mr.	Mr. - Benjamin - Russell	Benjamin	Russell
Ms.	Ms. - Nancy - Baker	Nancy	Baker
Prof.	Prof. - Jack - Alexander	Jack	Alexander
Mr.	Mr. - Patrick - Bailey	Patrick	Bailey
Mrs.	Mrs. - Carol - Murphy	Carol	Murphy
Ms.	Ms. - Brenda - Robinson	Brenda	Robinson
Dr.	Dr. - Joe - Robinson	Joe	Robinson
Hon.	Hon. - Diana - Peterson	Diana	Peterson

LEFT / MID/ RIGHT

Name	LEFT	RIGHT	MID
Chandra Shekhar	Chand	ekhar	ndra
Ashwin Mokalkar	Ashwi	alkar	win M
Soumya Chander	Soumy	nder	mya C
Naveen Singh	Navee	Singh	een S
Akshay Malik	Aksha	Malik	hay M
Shreya Gupta	Shrey	Gupta	eya G
Harisha Modugula	Haris	ugula	isha

Name	LEFT	RIGHT	MID
Chandra Shekhar	=LEFT(F2,5)	=RIGHT(F2,5)	=MID(F2,4,5)
Ashwin Mokalkar	=LEFT(F3,5)	=RIGHT(F3,5)	=MID(F3,4,5)
Soumya Chander	=LEFT(F4,5)	=RIGHT(F4,5)	=MID(F4,4,5)
Naveen Singh	=LEFT(F5,5)	=RIGHT(F5,5)	=MID(F5,4,5)
Akshay Malik	=LEFT(F6,5)	=RIGHT(F6,5)	=MID(F6,4,5)
Shreya Gupta	=LEFT(F7,5)	=RIGHT(F7,5)	=MID(F7,4,5)
Harisha Modugula	=LEFT(F8,5)	=RIGHT(F8,5)	=MID(F8,4,5)

LEFT(text,[Number of Char])

RIGHT(text,[Number of Char])

MID(text, Start Of Position, Number of Char)

1 2 3 4 5 6 7 8 9 10 11 12

C O D I N G _ N I N J A

LEFT(text,6) -> Coding
RIGHT(text,5) -> Ninja
MID(text,3,7) -> DING_NI
LEN(Text) -> 12 [int]

Name	LEFT	RIGHT	MID	Length
Chandra Shekhar	Chand	ekhar	ndra	15
Ashwin Mokalkar	Ashwi	alkar	win M	15
Soumya Chander	Soumy	nder	mya C	15
Naveen Singh	Navee	Singh	een S	12
Akshay Malik	Aksha	Malik	hay M	12
Shreya Gupta	Shrey	Gupta	eya G	12
Harisha Modugula	Haris	ugula	isha	16

krishnamadan.2912@gmail.com

City,State,Country

Mumbai,MH,India
Pune,MH,India
Kolkata,WB,India
Hyderbad,TG,India

TEXT(value , Format)

```
= TEXT(TODAY(),"dd-mmm-yyyy")
```

=TEXT(TODAY(),"dd-mmm-yyyy")

01-Jun-2025

=TEXT(TODAY(),"dd-mm-yyyy")

01-06-2025

=TEXT(TODAY(),"dd-mmmm-yyyy")

01-June-2025

=TEXT(TODAY(),"dd-mmmm-yy")

01-June-25

=TEXT(TODAY(),"ddd-mmmm-yy")

Sun-June-25

=TEXT(TODAY(),"dddd-mmmm-yy")

Sunday-June-25