

02: Application of MS Excel Functions for business use

Overview

Function is a predefined calculation in the spreadsheet application. Worksheet functions are categorized by their functionality. For example MS excel has more than [500 functions](#) and it has arranged under 15 categories. Further spreadsheet application facilitates for create functions which is refers as [user defined functions / custom functions](#).



[List of Excel Functions – alphabetical order](#) – support.microsoft.com

[List of Excel functions \(by category\)](#) - support.microsoft.com

The following activities will help students to identify the available functions in spreadsheet applications and use the functions.



Activity 02.1: what is the difference between function and formula in Excel?



Activity 02.2

Following is the salary card for the month of February 2024. Use the “Activity 02.2” sheet available at “02 SS-Activities Data.xlsx” file, and perform the below actions to create a similar salary card.

	A	B	C	D	E	F	G	H	I	J	K	L
1												
2	Salary Card for the Month of February 2024											
3	No	Initials	Last Name	Full Name	Rank	Date Joined	Salary Code	Basic Salary	Service in Years	Bonus	Sports Club funds	Total Salary
4	1	SD	Sriwardena	SD SRIWARDENA	Executive	March 2, 2004	EXE2004	Rs. 150,000.00	20	Rs. 15,000.00	Rs. 300.00	Rs. 164,700.00
5	2	ER	Perera	ER PERERA	Trainee	June 12, 2006	TRA2006	Rs. 75,000.00	18	Rs. 7,500.00	Rs. -	Rs. 82,500.00
6	3	HH	Ajmal	HH AJMAL	Junior	March 4, 2016	JUN2016	Rs. 176,000.00	8	Rs. -	Rs. 176.00	Rs. 175,824.00
7	4	RNI	Naeen	RNI NAEEN	Executive	January 1, 2022	EXE2022	Rs. 40,000.00	2	Rs. -	Rs. 80.00	Rs. 39,920.00
8	5	TRV	Snadali	TRV SNADALI	Executive	August 23, 2010	EXE2010	Rs. 286,000.00	14	Rs. 28,600.00	Rs. 572.00	Rs. 314,028.00
9	6	AHG	Raj	AHG RAJ	Manager	September 7, 2011	MAN2011	Rs. 575,000.00	13	Rs. 57,500.00	Rs. 1,437.50	Rs. 631,062.50
10	Total							Rs. 1,302,000.00		Rs. 108,600.00	Rs. 2,565.50	Rs. 1,408,034.50
11	Average							Rs. 217,000.00		Rs. 18,100.00	Rs. 427.58	Rs. 234,672.42

1. Generate the full name using initials and last name. Full name should appear in capital letters.
2. Salary code consists of first three letters of rank and year of the date join to company. The three letters should appear in capital.
3. Calculate the service in years.
4. Company offers 10% bonus on basic salary who are having more than 10 years' service.
5. The company deducts salaries for sports club funds as follows

Manager	0.25%
Executive	0.2%
Junior	0.1%
Trainee	0%

6. Calculate the total salary for each employee.

7. Calculate the total and average for basic salary, bonus, Sports club funds and total salary.
8. Find the highest, lowest salary and Number of Employees.
9. Find the number of employees who earns less than 100000 total salaries.
10. Calculate the total salary for trainee staff.
11. Calculate the average salary for executive staff.



Self-Learning Activity

Activity 02.3

Following table consists of Semester I - Subject Marks for Student. Use the “Activity 02.3” sheet available at “02 SS-Activities Data.xlsx” file, perform the below actions to create a similar mark report.

	A	B	C	D	E	F	G	H	I	J	K
1	Semester I - Subject Marks										
2	Medium	Initials	Name	Full Name	Accounting	Business Studies	Economics	English	Total	Average	PASS/Fail
3	English	RNI	Kevin	RNI KEVIN	49	55	66	38	208	52	Pass
4	Sinhala	AHG	Nihal	AHG NIHAL	90	69	80	88	327	81.75	Pass
5	English	SD	Jeevani	SD JEEVANI	91	51	57	57	256	64	Pass
6	English	HA	Nimesha	HA NIMESHA	95	37	51	82	265	66.25	Pass
7	Sinhala	HH	Jevon	HH JEVON	55	58	50	35	198	49.5	Fail
8	Sinhala	ER	Maria	ER MARIA	90	58	74	44	266	66.5	Pass
9	English	JH	Josh	JH JOSH	84	92	91	75	342	85.5	Pass
10	English	PM	Haris	PM HARIS	56	34	43	37	170	42.5	Fail
11	Sinhala	TRV	Ayomi	TRV AYOMI	57	56	96	52	261	65.25	Pass

1. Generate the full name using initials and last name. The full name should appear in capital letters.
2. Calculate the total and average marks for each student.
3. The student is passed if they have obtained an average of 50 marks or above. You may indicate the passed students as “Pass” and failed students as “Fail”.
4. Find the total number of students.
5. Find the highest and lowest average marks.
6. Find the number of students who have obtained less than 45 average marks.
7. Find the average marks of English medium students for accounting subject.



Activity 02.4

The following table illustrates the sales and profit report for the last four months in 2023. Use the “Activity 02.4” sheet available at “02 SS-Activities Data.xlsx” file, perform the below actions to create a similar sale report.

	A	B	C	D	E	F	G	H	I
1	Sales and Profit Report - September to December 2023								
2	District	City	Outlet Code	Sep	Oct	Nov	Dec	Average	Minimum
3	Colombo	Nugegoda	COL-Nu	Rs. 250,000.00	Rs. 220,000.00	Rs. 290,000.00	Rs. 190,000.00	Rs. 237,500.00	Rs. 190,000.00
4	Colombo	Kottawa	COL-Ko	Rs. 480,000.00	Rs. 420,000.00	Rs. 390,000.00	Rs. 430,000.00	Rs. 430,000.00	Rs. 390,000.00
5	Kandy	Kadugannawa	KAN-Ka	Rs. 130,000.00	Rs. 180,000.00	Rs. 200,000.00	Rs. 220,000.00	Rs. 182,500.00	Rs. 130,000.00
6	Kandy	Gampola	KAN-Ga	Rs. 320,000.00		Rs. 260,000.00	Rs. 310,000.00	Rs. 296,666.67	Rs. 260,000.00
7	Kandy	Nawalapitiya	KAN-Na	Rs. 980,000.00	Rs. 150,000.00	Rs. 780,000.00	Rs. 850,000.00	Rs. 690,000.00	Rs. 150,000.00
8	Gampaha	Kelaniya	GAM-Ke	Rs. 125,000.00	Rs. 32,000.00		Rs. 23,000.00	Rs. 60,000.00	Rs. 23,000.00
9	Gampaha	Ja-Ela	GAM-Ja	-	Rs. 420,000.00	Rs. 250,000.00	Rs. 320,000.00	Rs. 330,000.00	Rs. 250,000.00
10	Gampaha	Kandana	GAM-Ka	Rs. 430,000.00	Rs. 200,000.00	Rs. 680,000.00	Rs. 125,000.00	Rs. 358,750.00	Rs. 125,000.00
11	Matara	Matara	MAT-Ma	Rs. 320,000.00	Rs. 850,000.00	Rs. 980,000.00	Rs. 850,000.00	Rs. 750,000.00	Rs. 320,000.00
12	Matara	Weligama	MAT-We	Rs. 780,000.00	Rs. 520,000.00	Rs. 32,000.00	Rs. 925,400.00	Rs. 564,350.00	Rs. 32,000.00
13	Kalutara	Matugama	KAL-Ma	-	Rs. 62,000.00	Rs. 742,000.00	Rs. 36,000.00	Rs. 280,000.00	Rs. 36,000.00
14	Kalutara	Beruwala	KAL-Be	Rs. 180,000.00	Rs. 120,000.00	Rs. 150,000.00	Rs. 130,000.00	Rs. 145,000.00	Rs. 120,000.00
15		Total Sales		Rs. 3,995,000.00	Rs. 3,174,000.00	Rs. 4,754,000.00	Rs. 4,409,400.00		
16		Cost		Rs. 1,500,000.00	Rs. 1,000,000.00	Rs. 2,500,000.00	Rs. 1,500,000.00		
17		Profit		Rs. 2,495,000.00	Rs. 2,174,000.00	Rs. 2,254,000.00	Rs. 2,909,400.00		
18		Tax (10%)		Rs. 249,500.00	Rs. 217,400.00	Rs. 225,400.00	Rs. 290,940.00		

- Outlet code consists of first three capital letters of district and first two letter of city. Connector is the “-”.e.g. COL-Nu
- Calculate the total of the sales values greater than Rs.300,000 for the month of October.
- Count the number of sales totals less than Rs.300,000 for the month of December.
- Calculate the average of the sales values less than or equal to Rs.200,000 in the month of November.
- Calculate the total of the sales values greater than Rs.150,000 where the city name starts with letter “K” for the month of October.
- Count the number of cities which have covered a sales value of Rs.150,000 for last 3 months.
- Calculate the average of the sales where sales value is between Rs.200,000 and Rs.300,000 for the month of December.
- Count the number of cities with a sales income in the month of October.
- Count the number of cities with a sales income in the month of September.
- Count the number of cities with no income in the last 3 months.



Self-Learning Activity

Activity 02.5

Following table consists of sales of Ice Cream Company for different customers in different regions. Use the “Activity 02.5” sheet available at “02 SS-Activities Data.xlsx” file, perform the below actions to create a similar sales report.

	A	B	C	D	E	F	G	H	I	J
1	Ice Cream Sales - June 2023									
2	Flavour	Date	Customer	Customer Type	Region	Units	Unit Price	Sales	Discount	Revenue
3	Vanilla	6/2/2023	Samsons (PVT) LTD	Retail	South	1500	Rs. 240.00	Rs. 360,000.00	Rs. 0.00	Rs. 360,000.00
4	Vanilla	6/8/2023	Jasons (PVT) LTD	Retail	North	150	Rs. 240.00	Rs. 36,000.00	Rs. 0.00	Rs. 36,000.00
5	Chocolate	6/4/2023	Samsons (PVT) LTD	WholeSale	South	2500	Rs. 290.00	Rs. 725,000.00	Rs. 7,250.00	Rs. 717,750.00
6	Faluda	6/4/2023	Samsons (PVT) LTD	WholeSale	South	2800	Rs. 320.00	Rs. 896,000.00	Rs. 8,960.00	Rs. 887,040.00
7	Honey	6/4/2023	Jasons (PVT) LTD	Retail	North	250	Rs. 380.00	Rs. 95,000.00	Rs. 0.00	Rs. 95,000.00
8	Strawberry	6/10/2023	Amal Stores	WholeSale	East	2400	Rs. 390.00	Rs. 936,000.00	Rs. 9,360.00	Rs. 926,640.00
9	Fruit and Nut	6/11/2023	Namal Retailers	Retail	West	360	Rs. 310.00	Rs. 111,600.00	Rs. 0.00	Rs. 111,600.00
10	Black Current	6/12/2023	Namal Retailers	Retail	West	420	Rs. 400.00	Rs. 168,000.00	Rs. 0.00	Rs. 168,000.00
11	Chocolate	6/14/2023	Suhada Stores	Retail	South	300	Rs. 290.00	Rs. 87,000.00	Rs. 0.00	Rs. 87,000.00
12	Faluda	6/16/2023	Jasons (PVT) LTD	Retail	North	180	Rs. 320.00	Rs. 57,600.00	Rs. 0.00	Rs. 57,600.00
13	Vanilla	6/18/2023	Amal Stores	WholeSale	East	4100	Rs. 240.00	Rs. 984,000.00	Rs. 9,840.00	Rs. 974,160.00
14	Fruit and Nut	6/20/2023	Namal Retailers	Retail	West	320	Rs. 310.00	Rs. 99,200.00	Rs. 0.00	Rs. 99,200.00
15	Vanilla	6/22/2023	Namal Retailers	Retail	West	350	Rs. 240.00	Rs. 84,000.00	Rs. 0.00	Rs. 84,000.00
16	Chocolate	6/23/2023	Jasons (PVT) LTD	Retail	North	200	Rs. 290.00	Rs. 58,000.00	Rs. 0.00	Rs. 58,000.00
17	Chocolate	6/27/2023	Suhada Stores	Retail	South	120	Rs. 290.00	Rs. 34,800.00	Rs. 0.00	Rs. 34,800.00
18	Fruit and Nut	6/29/2023	Samsons (PVT) LTD	WholeSale	South	1500	Rs. 310.00	Rs. 465,000.00	Rs. 4,650.00	Rs. 460,350.00

1. Calculate the sales amount using the appropriate function.
2. Ice Cream Company offers a 10% discount for WholeSale customers.
3. Calculate the Revenue for each Sale.
4. Calculate Total and average of the revenue for the period.
5. Calculate how many retail sales are recorded in the table.
6. Calculate how many wholesale sales are recorded in the table.
7. How many vanilla flavor ice creams are sold in the region east?
8. How many Chocolate flavor ice cream are sold in the region south?
9. Find out the minimum unit price of an ice cream.
10. Find out the maximum unit price of an ice cream.
11. Get the sum of the East region's revenues.
12. Get the sum of the retail sales which were recorded from the West region.
13. Calculate the average revenue of vanilla flavor ice creams.
14. Calculate the average revenue of Samsons (PVT) LTD WholeSale records.