



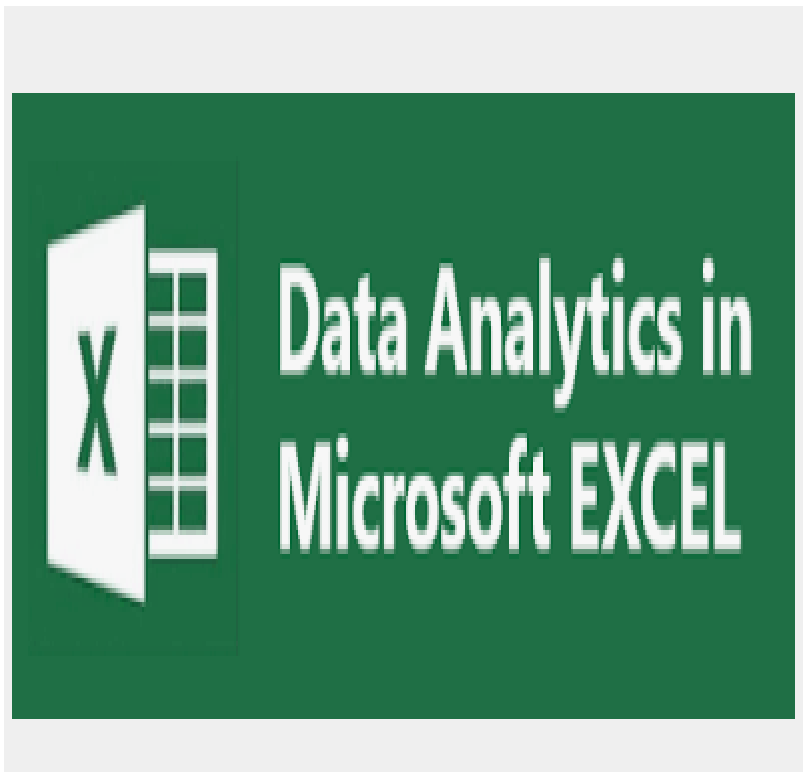
SREENIVASA INSTITUTE of TECHNOLOGY AND MANAGEMENT STUDIES

(Autonomous)

CHITTOOR-517 127

DEPARTMENT OF MANAGEMENT STUDIES

DATA ANALYTICS USING ADVANCED EXCEL LAB MANUAL



LAB MANUAL



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INSTITUTE VISION AND MISSION

VISION:

To emerge as a Center of Excellence for Learning and Research in the domains of engineering, computing and management.

MISSION:

IM1: Provide congenial academic ambience with state-of-art resources for learning and research.

IM2: Ignite the students to acquire self-reliance in the latest technologies.

IM3: Unleash and encourage the innate potential and creativity of students.

IM4: Inculcate confidence to face and experience new challenges.

IM5: Foster enterprising spirit among students.

IM6: Work collaboratively with Technical Institutes / Universities / Industries of National, International repute.

DEPARTMENT OF MANAGEMENT STUDIES VISION AND MISSION

VISION

Become Center of Excellence for Educating Management Students as Leaders of Tomorrow.

MISSION

- Provide congenial academic ambience with necessary infrastructure and learning resources.
- Inculcate confidence to face and experience new challenges from industry and society.
- Ignite the students to acquire self-reliance in State-of-the-Art Technologies.
- Foster Enterprising spirit among students.



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Program Educational Objectives (PEOs)

PEO1: Have in-depth knowledge through life-long learning to conceptualize, critically analyze and add value in the areas of business management.

PEO2: Have lateral thinking enabling simple solutions for complex managerial problems.

PEO3: Ignite the passion for entrepreneurship.

PEO4: Inculcate a spirit of ethical and social commitment in the personal and professional life and to add value to the society.

PROGRAM OUTCOMES

PO1: Apply Knowledge of management theories and practices to solve business problems.

PO2: Foster analytical and critical thinking abilities for data - based decision making.

PO3: Ability to develop value based leadership ability.

PO4: Ability to understand, analyze and communicate global, economic, legal and ethical aspects of business.

PO5: Ability to lead themselves and others in the achievement of organizational goals, contributing effectively to a team environment.

PO6: Apply specialized tools and techniques of human resource management in real life business practices.

PO7: Apply the ever evolving marketing techniques to encounter the challenges and leverage opportunities.

PO8: . Apply sophisticated financial tools and techniques for smooth management of organization.

PROGRAM SPECIFIC OUTCOMES (PSOs):

On successful completion of the program, the post graduates will be able to

PSO1: Apply core and functionary management skills for professional growth and business evaluation.

PSO2: Adapt to dynamic changes in an environment relevant to professional managerial practice and entrepreneurship as emerging leaders.



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I MBA – Semester - I					
Course Code	DATA ANALYTICS USING ADVANCED EXCEL	L	T	P	C
22MBA118			-	0	2
Course Educational Objectives (CEO):					
<p>CEO1: To enable students understands the basics of spread sheet.</p> <p>CEO2: To enhance the knowledge in usage of Excel</p> <p>CEO3: To provide knowledge in advanced excel</p> <p>CEO4: To enable students to apply excel in different management areas</p> <p>CEO5: To make students use excel for research purpose.</p>					
UNIT - I	INTRODUCTION TO EXCEL	Lecture Hrs: 10			
Cells – name range – references – Creating and editing worksheets-Cell Formatting-Creating and using formulas and functions-Use of Macros –Sorting and querying data- usage of Paste special					
UNIT - II	APPLICATIONS OF EXCEL IN DIFFERENT AREAS	Lecture Hrs: 6			
Preparation of a table Using EXCEL e.g. Employees payroll, Sales data, Students marks and perform the functions (Total, Average, Percentage, conditional sum and show the results in chart)- Creating formulas for financial solutions.					
UNIT - III	ADVANCED EXCEL	Lecture Hrs::12			
Cell Referencing - Data Validation- Naming a Cell or Range of Cells (Name Manager).- Basic formulas (SUM, COUNTA, AVERAGE, MAX, MIN). Text Functions (RIGHT, LEFT, MID, SUBSTITUTE, FIND, LEN). Date Functions (TODAY, NOW, DAY, MONTH, YEAR, EDATE, EOMONTH, TEXT).					
UNIT - IV	ADVANCED EXCEL II	Lecture Hrs::12			
Lookup Functions (VLOOKUP, HLOOKUP, MATCH, INDEX). - Logical Functions (IF, AND, OR). -Data Analysis Functions (SUMIF, SUMIFS, COUNTIF, COUNTIFS) - Conditional Formatting, Filtering and Sorting. - Graphs, Charts and Pivot Tables remove duplicates					
UNIT - V	CONDUCTING ONLINE SURVEYS	Lecture Hrs:10			
Usage of Google drive – micro soft online surveys – sharing with the help of social media/					



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internet- getting responses from online survey- sorting and filter online survey

Course Outcomes:

On successful completion of the course the student will be able to,		POs & PSOs related to COs
CO1	Explain basic concepts of Excel and create/edit spreadsheet	PO2, PSO1
CO2	Apply basic excel formula in various functional areas of management.	PO1, PSO1
CO3	Demonstrate knowledge in using advanced excel functions	PO2, PSO1
CO4	Apply logical functions of Excel	PO2, PSO1
CO5	Use online methods to conduct surveys.	PO4, PSO2

Text Books:

1. Beskeen, D, Microsoft Office 2013: Illustrated introductory, first course. Stamford, CT: Cengage Learning, 2013.
2. Rinkoo Jainn, A to Z of MS EXCEL, A Book for Learners and Trainers, Amazon Digital Services LLC - KDP Print US. 2021.

Reference Books:

1. Introduction to Computers and Communications, Peter Norton-Sixth Edition-Tata McGraw Hill, 2009.
2. V.Rajaraman, Introduction to Information Technology, Prentice Hall India, 2008
3. Winston-Microsoft Office Excel Data Analysis and Business Modeling, First Edition, Prentice Hall India. 2007
4. David Whigham, Business Data Analysis Using Excel, Oxford University Press, first Indian Edition.

Online Learning Resources:

<https://support.microsoft.com/en-us/office/excel-video-training-9bc05390-e94c-46af-a5b3-d7c22f6990bb>
<https://trumpexcel.com/learn-excel/>
<https://digital.com/excel-tutorials/>



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COURSE OUTCOMES VS POs MAPPING (DETAILED; HIGH:3; MEDIUM:2; LOW:1):

Course	PO	PO	PO	PO	PO	PO	PO	PO	PO	PSO1	PSO2	
	CO	1	2	3	4	5	6	7	8			
C1108 : DATA ANALYTICS USING ADVANCED EXCEL	C1108.1	-	3	-		-	-	-	-	3		
	C1108.2	3	-	-	-	-	-	-	-	3	-	
	C1108.3	-	3	-	-	-	-	-	-	3	-	
	C1108.4	-	3	-	-	-	-	-	-	3	-	
	C1108.5	-	-	-	3	-	-	-	-	-	3	
	C1108	3	3	-	3	-	-	-	-	-	3	3



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TABLE 1: RUBRICS FOR DAET LAB

	Excellent(3)	Good(2)	Fair(1)
Assemble (CO1)	Student successfully completes the experiment, analyzes the experiment's main topics, and explains the experiment concisely and well.	Student successfully completes the experiment and analyzes the experiment's main topics.	Student successfully completes the experiment, and unable to analyze.
Exhibit (CO2)	Thorough analysis of excel models.	Reasonable analysis of models.	Improper analysis of models.
Apply (CO3)	Student understands excel models and formula, and apply it	Reasonable analysis of excel models and formula, and apply	Improper analysis of excel models and formula,
Develop (CO4)	Excellent knowledge in describing the data, and develop templates	Reasonable knowledge in describing the data, and develop templates.	Improper knowledge in describing the data, and develop templates
Derive (CO5)	Excellent knowledge in extending the data analytics techniques for business purpose	Reasonable knowledge in extending the data analytics techniques for business purpose	Minimal knowledge in extending the data analytics techniques for business purpose



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22MBA118 DATA ANALYTICS USING ADVANCED EXCEL

LIST OF EXPERIMENTS

S.No	Experiment Name
1	Create and Editing Worksheets by using Excel
2	Creating Excel Sheets with Formula and Functions
3	Create and Save Macros
4	Sorting and Querying Data
5	Calculation of Ratios using Excel
6	Preparation of Sales Transaction Report Using Excel
7	Monthly Expenses Report using Excel
8	Calculation of Ratios using Excel -2
9	Using basic functions in Excel – Average, Count, Minimum , Maximum
10	Application of Date Function in Ms Excel
11	Use of Sum, Sumif, Count and Count if functions
12	Extracting Data using combined Vlookup and H lookup
13	Consumer Satisfaction Survey Using Google Forms



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Activity 1

Creating, Editing worksheet using Excel

Aim To create and edit worksheets and perform self formatting

Procedure

Step 1 open Ms Excel 2007

Step 2: Select the file tab and press new option to create anew book

Step 3 Right click the sheet name and select insert option, click to add new hsheet

Step 4: Create more blank sheets using Shit + F11 Key in the key board

Step 5 : Create the following rows and columns in the work sheet

XYZ Ltd.,

Customer data base

s.no	Name	city	DOB	Mobile No	E-mail id
1	John	Newyork	12/12/2000		
2	Smith	Losangeles	27/01/1991		
3	Jones	Tokyo	31/03/1995		
4	David	Moscow	15/04//1980		
5	Stephen	Newyork	20/08/1990		

Step 6 Use different Font Types, Font Size from font group. Merge the cells to create heading

Step 7 Format the cells as tet, umber and data

Step 8 : Use bold, italic, , colors commands for the heading. Use underline for third customer (text editing)

Step 9 : Click the first colum, press the right button to insert a new column to the right. Add new heading customer and enter the values

Step 10 Add two more rows to insert new customers

Step 11 Use borders for the talbe



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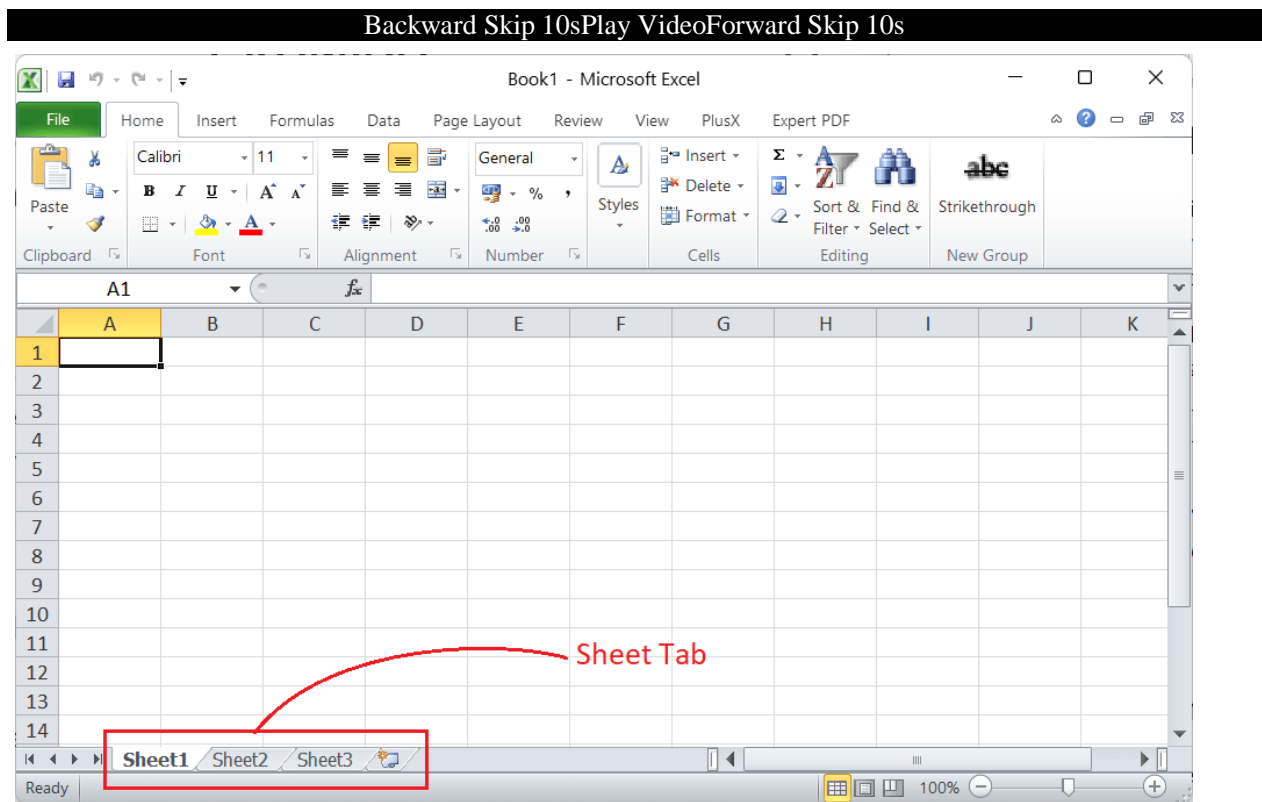
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Step 12 Save the work book by using Ctrl +S and save as dialog box open. Save the file as Customer Data Base . press Ok

What is a Worksheet in Excel?

An Excel worksheet is the single sheet used in Excel documents, which contains groups of cells organized in rows and columns. Each worksheet allows users to record or write data within the cells as well as perform various operations with the recorded data.

The worksheets are located in the bottom area of the Excel window, which is known as the Sheet tab. The new workbook has the following sheets by default:



We have three worksheets in the Sheet tab in the above image, such as Shhet1, Sheet2, and Sheet3. To view any of the desired worksheets, we need to click on the name of that particular sheet from the Sheet tab.

How to create/ insert a worksheet in Excel?



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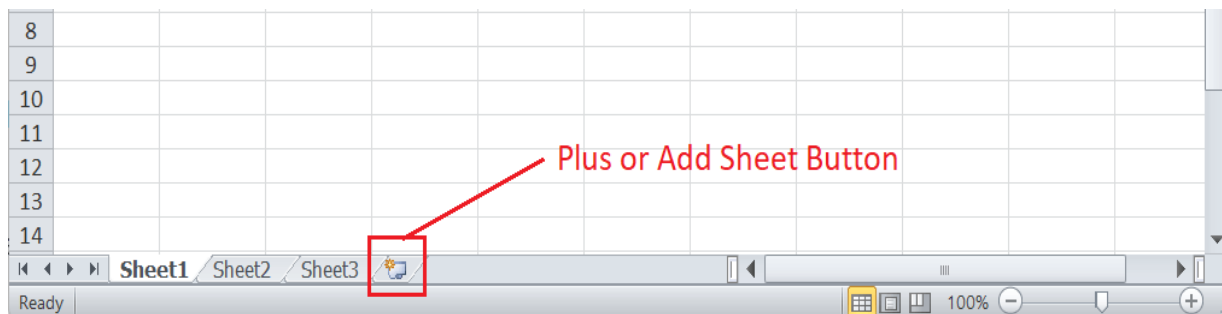
In Excel, we have multiple ways to perform the most common tasks. Likewise, when it comes to creating a worksheet, we can use different methods, such as:

- Creating a worksheet using the Sheet tab
- Creating a worksheet using the Contextual Menu
- Creating a worksheet using the Ribbon
- Creating a worksheet using the Keyboard Shortcuts
- Creating a worksheet using VBA

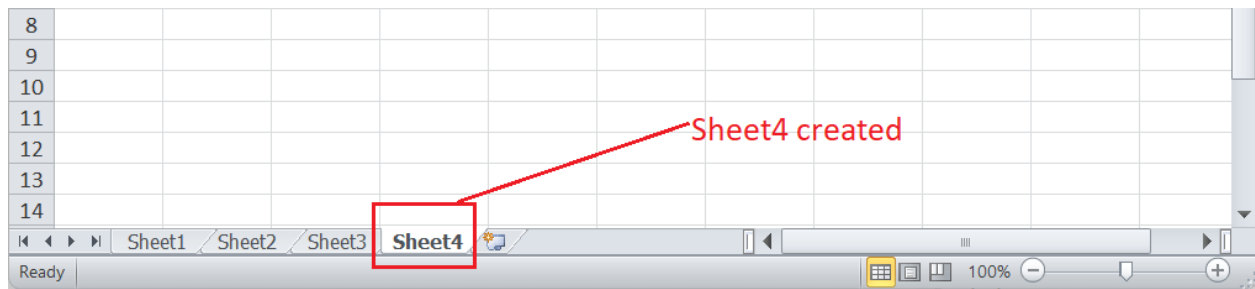
Let us discuss each method in detail:

Creating a worksheet using the Sheet tab

The easiest method to create a worksheet within the workbook is to use the Sheet tab. Excel displays an additional **Plus icon** in the Sheet tab, called the 'Add/Insert Worksheet button' in general. We can instantly create a worksheet in our Excel workbook using this plus icon or button. Also, clicking this icon multiple times allows us to create multiple worksheets accordingly.

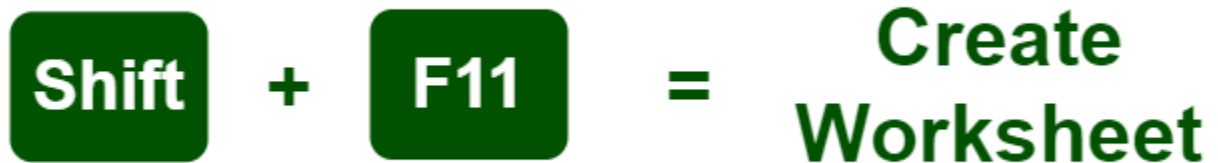


As soon as we click the plus icon in the Sheet tab, a new worksheet is created to the right-most side of the last worksheet name. By default, the worksheet names are created in sequential order. For example, if we have three worksheets, such as Sheet1, Sheet2, and Sheet3, in our workbook and click the plus icon, the newly created worksheet will be named Sheet4.



Creating a worksheet using the Keyboard Shortcuts

Excel has many built-in or predefined keyboard shortcuts that help quickly perform most tasks. We can also create a new worksheet within our Excel workbook using the keyboard shortcut. Excel has two different keyboard shortcuts to create a worksheet quickly without using the mouse. We can either use **Shift + F11** or **Alt + Shift + F1**. However, we may need to use the Fn function key for some keyboards to activate function keys, such as F1, F2, ... so on.



To use the keyboard shortcut for creating a worksheet, we can perform the following steps:

- First, we need to select any sheet from the Sheet tab.
- Next, we need to press and hold the **Shift** key on the keyboard.
- While holding the Shift key, we must press and release the **F11** Lastly, we must release the Shift key. The new worksheet will be created quickly.



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Activity 2

Formulas and Functions in Excel

Aim : To create an excel worksheet for student result analysis

Procedure:

Step 1: Open Ms office, Ms Excel – find new

Step 2 : Select new columns and few rows at the centre of the worksheet – click format cells – select the element tab and click merge cell option – type heading

Step 3 Enter the column heading – Enter the data in the following column like S.No, Reg.No., Name ,MOB, ME etc.,

Step 4 : Enter the following formula to calculate

Total = Sum (D5: G5)

Percentage = (H5/6)

Result – if(and (D5>35,E5>=35,F5>=35,G5>=35,H5>=35.I5=35),”Pass”, ”Fail”)

Class = if (J5=”Pass”, if(I5>=75. ”Distinction”, if(I5>=60,”I class”, if(I5>=50,”Second Class”, if (J5>=35,”Pass”))),”Fail”)

Step 5; After writing each formula select the cel and drag to the entire column to apply the formula

Step 6 Save the work sheet by pressing Ctrl+S

Step 7: Close Ms office by Alt +F4



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IF

In Excel, the IF formula is denoted as =IF(logical test, value if true, value if false). This lets you enter a text value into a cell “if” something else in your spreadsheet is true or false.

Example: You may need to know which values in column A are greater than three. Using the =IF formula, you can quickly have Excel auto-populate a “yes” for each cell with a value greater than 3 and a “no” for each cell with a value less than 3.

	A	B	C	D	E	F
1	Values		Answer			
2			=IF(A3>3,\"YES\",\"NO\")			
3	3		NO			
4	2		YES			
5	4		NO			
6	1		YES			
7	5		NO			
8						
9						
10						

Excel nested IF statement

Here's the classic Excel nested IF formula in a generic form:

```
IF(condition1, result1, IF(condition2, result2,  
IF(condition3, result3, result4)))
```

You can see that each subsequent IF function is embedded into the *value_if_false* argument of the previous function. Each IF function is enclosed in its own set of parentheses, but all the closing parentheses are at the end of the formula.

Our generic nested IF formula evaluates 3 conditions, and returns 4 different results (result 4 is returned if none of the conditions is TRUE). Translated into a human language, this nested IF statement tells Excel to do the following:



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```
Test condition1, if TRUE - return result1, if FALSE -  
test condition2, if TRUE - return result2, if FALSE -  
test condition3, if TRUE - return result3, if FALSE -  
return result4
```



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Activity 3

Create Save and use Macros

Aim: To create , save and use macros in business application

Procedure:

Step 1: Open Ms Excel 2007

Step 2: Select the File tab and press new option to create a new book

Step 3: Click on the ribbon choose customize option and add developers tab to the quick access menu

Step 4: Create the following table

Step 5: Start record macros from the developer tab

Step 6 : Use formula to calculate basic salary, DA, HRA, Gross salary PDF, Professional tax, TDS, Total Deductions and net salary

Step 7: Stop record macros from the developer tab

Step 8: Save macros as Payroll

Step 9 : Go to sheet 2 and type the salary statement table for the month of February . Enter names, CTC and ensure the table is in the same position as sheet 1

Step 10: Run Macros Payroll and the salary calculation will be done automatically

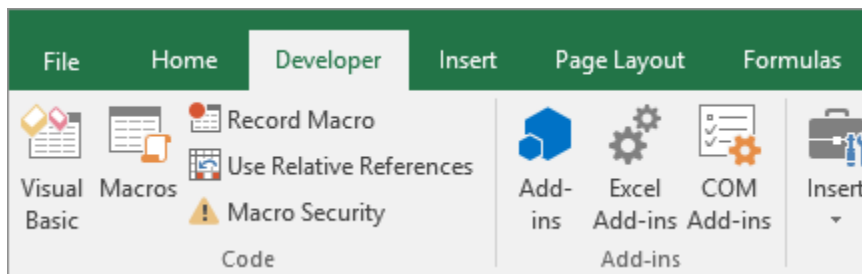
Step 11: Save the workbook as employee payroll by pressing Ctrl +S



1

Before you record a macro

Macros and VBA tools can be found on the **Developer** tab, which is hidden by default, so the first step is to enable it. For more information, see Show the Developer tab.



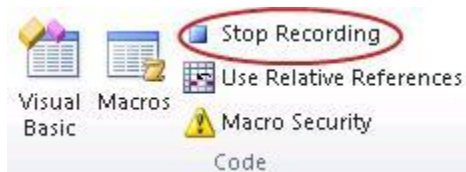
2

Record a macro

1. In the **Code** group on the **Developer** tab, click **Record Macro**.
2. Optionally, enter a name for the macro in the **Macro name** box, enter a shortcut key in the **Shortcut key** box, and a description in the **Description** box, and then click **OK** to start recording.



3. Perform the actions you want to automate, such as entering boilerplate text or filling down a column of data.
4. On the **Developer** tab, click **Stop Recording**.





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Activity 4:

Sorting and Querying Data By using Auto filter in Ms Excel

Aim : To create a report of employee salary details containing the pair details of employee, that should be sorted and arranged according to the chronological order by using auto filter and sort.

Procedure

Step 1: Open Ms Office – Ms Excel _File – New worksheet

Step 2: Select few columns and few rows at the center, Right click, format cell- Click alignment tab – Click merge cell options – ok – type the heading

Step 3: Enter the column headings, Enter the data like serial number, name of employee, Employee Id, Basic Salary, DA, HRA, CCA, Gross, Net salary

Step 4: Enter the following formula to calculate respective value

DA 50% of Basics

HRA 60%

CCA 100 %

DA is $D5 * .5$ Gross salary = $\text{Sum} (D5+E5+F5)$

Net Salary = $\text{Sum} (D5+E5+F5+G5)$

Step 5: After finalizing the formula for every column, select the cell and drag the entire column to apply

Step 6: Use auto filter for employee name in order to sort and query the data

Step 7: After solving the summary of employee salary details will be finalized

Step 8 : Save the worksheet by Ctrl +S. Close the worksheet by Alt+F4



How to sort in Excel?

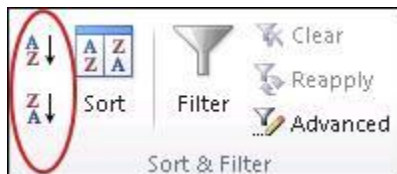
1 Select the data to sort


Select a range of tabular data, such as A1:L5 (multiple rows and columns) or C1:C80 (a single column). The range can include the first row of headings that identify each column.

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
40	38	44	46	51	56	67	72	70	59	45	41
34	33	38	41	45	48	51	55	54	45	41	38
61	69	79	83	95	97	100	101	94	87	72	66
0	2	9	24	28	32	36	39	35	21	12	4

2 Sort quickly and easily

1. Select a single cell in the column you want to sort.
2. On the **Data** tab, in the **Sort & Filter** group, click  to perform an ascending sort (from A to Z, or smallest number to largest).



3. Click  to perform a descending sort (from Z to A, or largest number to smallest).

3 Sort by specifying criteria

Use this technique to choose the column you want to sort, together with other criteria such as font or cell colors.



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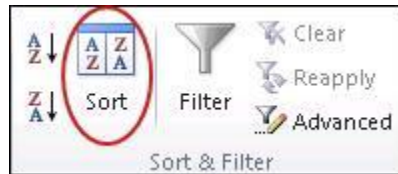
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1. Select a single cell anywhere in the range that you want to sort.
2. On the **Data** tab, in the **Sort & Filter** group, click **Sort** to display the Sort popup window.



3. In the **Sort by** dropdown list, select the first column on which you want to sort.
 4. In the **Sort On** list, choose **Values**, **Cell Color**, **Font Color**, or **Cell Icon**.
 5. In the **Order** list, choose the order that you want to apply to the sort operation—alphabetically or numerically, ascending or descending (that is, from A to Z (or Z to A) for text, or lower to higher, or higher to lower for numbers).
-



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Activity 5:

Calculation of Ratios using Excel

Aim: To calculate ratios by preparing profit and loss account and Balance sheet in Excel

Procedure :

Step 1: Open Ms Office- Ms Excel

Step 2: Select the file tab and click new options to a new book

Step 3: Create the tile profit and loss, trading a/c and balance sheet

Step 4: Prepare profit and loss a/c, trading a/c and balance sheet

Step 5: Calculate current ratio by using the formula

Current Ratio = $\frac{\text{Current asstes}}{\text{Current liabilities}}$

Step 6: Calculate the net profit ratio bby

Net profit ratio = $\frac{\text{Net profit}}{\text{Sale}} * 100$

Step 7 : Calculate working capital turnover ratio b y using the formula

Working capital turnover ratio = $\frac{\text{Sales}}{\text{Working capital}}$

Working capital = Current assets – Current liabilities

Step 8: Save the document by using Ctrl +S by giving the name ratio



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Using Excel to Calculate Financial Ratios - A Step-by-Step Guide

Excel is one of the most commonly used financial analysis tools, and it's relatively easy to use even for those who aren't experts in finance. Here's a step-by-step guide to help you calculate financial ratios in Excel:

- 1. First, input the financial data into the Excel sheet, for example, financial statements like a balance sheet, income statement, or cash flow statement.**
- 2. Identify the different ratios you'd like to calculate based on the financial data you've inputted.**
- 3. Create a separate table where you can input the formulas to calculate ratios. You should have one table for each category of ratios, e.g., profit margins, liquidity ratios, etc.**
- 4. Input the formula into each cell of the ratio table, referencing the data you inputted in the financial statement table.**
- 5. Once you've inputted the formulas, Excel will calculate the ratios for you, and you can interpret the ratios to make informed decisions about the organization.**

It's important to note that financial ratios should not be analyzed in isolation. Instead, they should be compared to industry benchmarks or historical trends to provide context and meaning. Additionally, it's crucial to understand the limitations of financial ratios and to use them in conjunction with other financial analysis tools to gain a comprehensive understanding of an organization's financial health.

Common Accounting Terms Used in Financial Ratio Calculation

Before diving into calculating financial ratios, it's essential to understand some common accounting terms that you'll come across in financial statements. These include revenue, cost of goods sold, gross profit, operating expenses, net profit, assets, liabilities, and equity, to name a few. Understanding what these terms mean is the foundation for calculating financial ratios accurately.

One important term to understand is depreciation. Depreciation is the decrease in value of an asset over time due to wear and tear, obsolescence, or other factors. It is important to consider depreciation when calculating financial ratios, as it can impact the value of assets and the overall financial health of a company. Another term to be aware of is accruals, which are expenses that have been incurred but not yet paid. Accruals can affect financial ratios, such as the current ratio, which measures a company's ability to pay its short-term debts.



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DEPARTMENT OF MANAGEMENT STUDIES

DATA ANALYTICS USING ADVANCED EXCEL LAB MANUAL

The Power of Ratio Analysis for Business Planning and Decision Making

Ratio analysis is a powerful tool that allows businesses to make more informed decisions, whether it is to increase revenue, reduce costs, or analyze investments. Ratio analysis provides valuable insights into the organization's performance and can be used to develop business strategies and goals. Businesses can also use ratio analysis to compare their performance to similar companies in the industry and benchmark themselves against the competition.

One of the key benefits of ratio analysis is that it can help businesses identify areas where they need to improve. For example, if a company's current ratio is lower than the industry average, it may indicate that the company is struggling to meet its short-term obligations. By identifying this issue, the company can take steps to improve its liquidity and financial health.

Another advantage of ratio analysis is that it can help businesses identify trends over time. By comparing ratios from different periods, businesses can see how their performance has changed and identify areas where they have made progress or need to improve. This information can be used to make more informed decisions about future investments and business strategies.



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Activity 6 :

Sales Transaction using Ms Excel

Aim: To prepare sales transaction report by using Ms Excel

Procedure:

Step 1: Open Ms Office – Ms Excel in a new tab

Step 2: Prepare sales transaction report of a company (Amazon, Netflix)

Step 3: Prepare a sales transaction of the company for the year ended December 2022

Step 4: The transaction of the company begins from January to December 2022

Step 5: Develop a report that includes Date, Client, Item No, Item Code, Item name Quantity cost, Tax rate , Taxes total

Step 6 : Prepare raph for the below items that is date, client , item name, total cost.

Step 7 : Use the formula for tax rate that is

$H7*15100$

Step 8 : Calculate tax by using the formula

$H7/I7$

Step 9 : Calculate total cost by the formula

Total cost = Quantity * Cost

Step 10 : Propose a graph by choosing the graph and chart option in home menu

Step 11: Seelct pie chart Bar chart Column chart as per the requirement

Step 12: Copy the chart in the Ms excel in window

Step 13: Save the worksheet Ctrl +S

Step 14: Close the document b Alt + F4



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Sales Report.

	A	B	C	D	E	F	G	H	I
1	Make Sales Report								
2									
3									
4	Sales Transaction								
5									
6	Date	Customer	P. Code	P. Name	Unit Qty	Unit Price	Total		
7	1/1/2022	Anthony	I1	I-Phone	3	\$ 1,800	\$ 5,400		
8	1/2/2022	Matthew	I1	I-Phone	4	\$ 1,800	\$ 7,200		
9	1/3/2022	Daniel	V1	Vivo	1	\$ 900	\$ 900		
10	1/4/2022	Christopher	S1	Samsung	3	\$ 1,200	\$ 3,600		
11	1/5/2022	Charles	V1	Vivo	2	\$ 900	\$ 1,800		
12	1/6/2022	Thomas	N1	Nokia	2	\$ 1,100	\$ 2,200		
13	1/7/2022	Richard	I1	I-Phone	2	\$ 1,800	\$ 3,600		
14	1/8/2022	David	S1	Samsung	3	\$ 1,200	\$ 3,600		
15	1/9/2022	Michael	V1	Vivo	3	\$ 900	\$ 2,700		
16	1/10/2022	Robert	S1	Samsung	1	\$ 1,200	\$ 1,200		
17									
18	Product List				Monthly sales				
19									
20	Code	Mobile	Unit price						
21	S1	Samsung	\$ 1,200						
22	V1	Vivo	\$ 900						
23	I1	I-Phone	\$ 1,800						
24	N1	Nokia	\$ 1,100						
	Code	Mobile	Unit Qty	Total					
	S1	Samsung	7	\$ 8,400.00					
	V1	Vivo	6	\$ 7,000.00					
	I1	I-Phone	7	\$ 7,200.00					
	N1	Nokia	3	\$ 2,700.00					

Get Product Name from Product List

- In order to make a sales report let's take some data like a list of products containing product **Code**, **Product Name**, and **Unit Price**.



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17				
18	Product List			
19				
20	Code	Mobile	Unit price	
21	S1	Samsung	\$	1,200
22	V1	Vivo	\$	900
23	I1	I-Phone	\$	1,800
24	N1	Nokia	\$	1,100

- Now we will calculate daily sales. For that, we took a dataset like the following from which we will calculate product **Name**, **Unit Price**, and **Total Sales** of the day.

4	Sales Transaction						
5							
6	Date	Customer	P. Code	P. Name	Unit Qty	Unit Price	Total
7	1/1/2022	Anthony	I1		3		
8	1/2/2022	Matthew	I1		4		
9	1/3/2022	Daniel	V1		1		
10	1/4/2022	Christopher	S1		3		
11	1/5/2022	Charles	V1		2		
12	1/6/2022	Thomas	N1		2		
13	1/7/2022	Richard	I1		2		
14	1/8/2022	David	S1		3		
15	1/9/2022	Michael	V1		3		
16	1/10/2022	Robert	S1		1		



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Activity 7:

Monthly expenses report by Using Ms. Excel

Aim : To prepare monthly expenses report by using Ms Excel

Procedure:

Step 1: Open Ms Excel blank worksheet

Step 2: Setup monthly income expenses by merging two or three cells

Step 3: Consider the column as below

Step 4: Category due date, Actual income, Planned, Actual differences total

Step 5: The category include monthly expenses due date which includes the payment need to be paid

Step 6 : Calculate the difference column by using formula

G7-H7

Planned-Actual

Total = Actual salary – Differences

Step 7 : Use the charts from the home menu and include category total

Step 8 : Save the document by using Ctrl +S



STEP 1: Prepare Excel Workbook

- First, open a blank **Excel** workbook.
- Then, give a clear heading of what this file is about.
- After that, type the **Month** names.
- See the below image for a better understanding.
- Save the file.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1															
2	Making Monthly Expenses Sheet														
3															
4		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year	

STEP 2: Set up Income Section

- Now, input the income sources.
- Here, we will place the **Salary** We'll consider a fixed monthly salary in this example.
- You can input any other sources of income.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1															
2	Making Monthly Expenses Sheet														
3															
4		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year	
5	Income														
6	Salary	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500		

STEP 3: Insert Excel SUM Function to Compute Annual Income

- Next, we'll insert the **SUM function** to total the **Salary**.



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- For that purpose, select cell **O6**.
- Type the formula:
$$=SUM(C6:N6)$$
- Subsequently, press **Enter**.
- It'll return the sum of the **12 months' income**.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Income													
Salary	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$18,000

SPONSORED CONTENT

STEP 4: Make Monthly Expenses Segment

This step is the most important for us. So, pay attention.

- Firstly, create a header for different types of **Expenses**.
- The following picture will make it clear.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Income													
Salary	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$18,000
Expenses													
Rent													
Phone Bill													
Electricity Bill													
Gas Bill													
Car Fuel													
Food													
Health Insurance													
Others													

- Consequently, input the precise **Expense** amounts.



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- You need to type the amounts in the proper categories and months.
- Otherwise, it will result in errors.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1		Making Monthly Expenses Sheet													
2															
3															
4			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
5		Income													
6		Salary	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$18,000
7															
8		Expenses													
9		Rent	\$350	\$350	\$350	\$350	\$350	\$350	\$350	\$350	\$350	\$350	\$350	\$350	
10		Phone Bill	\$25	\$30	\$37	\$19	\$27	\$29	\$32	\$21	\$33	\$29	\$22	\$31	
11		Electricity Bill	\$65	\$69	\$73	\$71	\$66	\$75	\$68	\$76	\$78	\$70	\$67	\$72	
12		Gas Bill	\$50	\$50	\$50	\$50	\$50	\$50	\$50	\$50	\$50	\$50	\$50	\$50	
13		Car Fuel	\$80	\$83	\$93	\$77	\$84	\$91	\$76	\$87	\$78	\$89	\$90	\$81	
14		Food	\$340	\$290	\$333	\$365	\$395	\$375	\$400	\$384	\$315	\$326	\$346	\$375	
15		Health Insurance	\$175	\$175	\$175	\$175	\$175	\$175	\$175	\$175	\$175	\$175	\$175	\$175	
16		Others	\$150	\$169	\$200	\$175	\$183	\$195	\$170	\$165	\$173	\$187	\$193	\$205	

STEP 5: Create Excel Formula to Automate Expenses Sheet

Moreover, we wish to make our **Expenses Sheet** a dynamic one.

Dynamic means, it'll update automatically once a change happens in any of the expense values. Hence, follow the below process.

- First of all, choose cell **O9**.
- Then, type the below formula:

`=SUM(C9:N9)`

- Press **Enter**.
- Thus, you'll get the annual **Rent** fee.



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- Now, we'll figure out the month-wise expenses total.
- For this reason, in cell **C17**, type the formula:
`=SUM(C9:C16)`

- Return the result by pressing **Enter**.

Making Monthly Expenses Sheet													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Income													
Salary	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$18,000
Expenses													
Rent	\$350	\$350	\$350	\$350	\$350	\$350	\$350	\$350	\$350	\$350	\$350	\$350	\$4,200
Phone Bill	\$25	\$30	\$37	\$19	\$27	\$29	\$32	\$21	\$33	\$29	\$22	\$31	\$335
Electricity Bill	\$65	\$69	\$73	\$71	\$66	\$75	\$68	\$76	\$78	\$70	\$67	\$72	\$850
Gas Bill	\$50	\$50	\$50	\$50	\$50	\$50	\$50	\$50	\$50	\$50	\$50	\$50	\$600
Car Fuel	\$80	\$83	\$93	\$77	\$84	\$91	\$76	\$87	\$78	\$89	\$90	\$81	\$1,009
Food	\$340	\$290	\$333	\$365	\$395	\$375	\$400	\$384	\$315	\$326	\$346	\$375	\$4,244
Health Insurance	\$175	\$175	\$175	\$175	\$175	\$175	\$175	\$175	\$175	\$175	\$175	\$175	\$2,100
Others	\$150	\$169	\$200	\$175	\$183	\$195	\$170	\$165	\$173	\$187	\$193	\$205	\$2,165
Total	\$1,235												

- Next, apply **AutoFill** to complete the series.

Making Monthly Expenses Sheet													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Income													
Salary	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$18,000
Expenses													
Rent	\$350	\$350	\$350	\$350	\$350	\$350	\$350	\$350	\$350	\$350	\$350	\$350	\$4,200
Phone Bill	\$25	\$30	\$37	\$19	\$27	\$29	\$32	\$21	\$33	\$29	\$22	\$31	\$335
Electricity Bill	\$65	\$69	\$73	\$71	\$66	\$75	\$68	\$76	\$78	\$70	\$67	\$72	\$850
Gas Bill	\$50	\$50	\$50	\$50	\$50	\$50	\$50	\$50	\$50	\$50	\$50	\$50	\$600
Car Fuel	\$80	\$83	\$93	\$77	\$84	\$91	\$76	\$87	\$78	\$89	\$90	\$81	\$1,009
Food	\$340	\$290	\$333	\$365	\$395	\$375	\$400	\$384	\$315	\$326	\$346	\$375	\$4,244
Health Insurance	\$175	\$175	\$175	\$175	\$175	\$175	\$175	\$175	\$175	\$175	\$175	\$175	\$2,100
Others	\$150	\$169	\$200	\$175	\$183	\$195	\$170	\$165	\$173	\$187	\$193	\$205	\$2,165
Total	\$1,235	\$1,216	\$1,311	\$1,282	\$1,330	\$1,340	\$1,321	\$1,308	\$1,252	\$1,276	\$1,293	\$1,339	

- At last, we'll calculate the yearly total expenses.



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- So, select cell **O17**.
- Type the formula:

`=SUM(C17:N17)`

- Accordingly, press **Enter**.
- Thus, you'll get the sum of all the expenses in a year.

The screenshot shows an Excel spreadsheet with the following data:

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Income													
Salary	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$18,000
Expenses													
Rent	\$350	\$350	\$350	\$350	\$350	\$350	\$350	\$350	\$350	\$350	\$350	\$350	\$4,200
Phone Bill	\$25	\$30	\$37	\$19	\$27	\$29	\$32	\$21	\$33	\$29	\$22	\$31	\$335
Electricity Bill	\$65	\$69	\$73	\$71	\$66	\$75	\$68	\$76	\$78	\$70	\$67	\$72	\$850
Gas Bill	\$50	\$50	\$50	\$50	\$50	\$50	\$50	\$50	\$50	\$50	\$50	\$50	\$600
Car Fuel	\$80	\$83	\$93	\$77	\$84	\$91	\$76	\$87	\$78	\$89	\$90	\$81	\$1,009
Food	\$340	\$290	\$333	\$365	\$395	\$375	\$400	\$384	\$315	\$326	\$346	\$375	\$4,244
Health Insurance	\$175	\$175	\$175	\$175	\$175	\$175	\$175	\$175	\$175	\$175	\$175	\$175	\$2,100
Others	\$150	\$169	\$200	\$175	\$183	\$195	\$170	\$165	\$173	\$187	\$193	\$205	\$2,165
Total	\$1,235	\$1,216	\$1,311	\$1,282	\$1,330	\$1,340	\$1,321	\$1,308	\$1,252	\$1,276	\$1,293	\$1,339	\$15,503

STEP 6: Calculate Net Balance

In our final step, we will determine the net balance. You just need to subtract the annual total expenses from the annual income.

- Select cell **I19** at first.
- Then, type the following formula:

`=O6-O17`



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- Subsequently, press **Enter**.
- In this way, you can get a surplus amount.
- You can also see if there's any due left to pay.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Income													
Salary	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$18,000
Expenses													
Rent	\$350	\$350	\$350	\$350	\$350	\$350	\$350	\$350	\$350	\$350	\$350	\$350	\$4,200
Phone Bill	\$25	\$30	\$37	\$19	\$27	\$29	\$32	\$21	\$33	\$29	\$22	\$31	\$335
Electricity Bill	\$65	\$69	\$73	\$71	\$66	\$75	\$68	\$76	\$78	\$70	\$67	\$72	\$850
Gas Bill	\$50	\$50	\$50	\$50	\$50	\$50	\$50	\$50	\$50	\$50	\$50	\$50	\$600
Car Fuel	\$80	\$83	\$93	\$77	\$84	\$91	\$76	\$87	\$78	\$89	\$90	\$81	\$1,009
Food	\$340	\$290	\$333	\$365	\$395	\$375	\$400	\$384	\$315	\$326	\$346	\$375	\$4,244
Health Insurance	\$175	\$175	\$175	\$175	\$175	\$175	\$175	\$175	\$175	\$175	\$175	\$175	\$2,100
Others	\$150	\$169	\$200	\$175	\$183	\$195	\$170	\$165	\$173	\$187	\$193	\$205	\$2,165
Total	\$1,235	\$1,216	\$1,311	\$1,282	\$1,330	\$1,340	\$1,321	\$1,308	\$1,252	\$1,276	\$1,293	\$1,339	\$15,503
Net Balance													\$2,497

Final Output of Monthly Expenses Sheet

Finally, our **Monthly Expenses Sheet** is complete. You can modify any headers you want. You can type your own expense values there. It'll automatically update and give you the correct results. The following picture demonstrates our designed expense tracker.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Income													
Salary	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$18,000
Expenses													
Rent	\$350	\$350	\$350	\$350	\$350	\$350	\$350	\$350	\$350	\$350	\$350	\$350	\$4,200
Phone Bill	\$25	\$30	\$37	\$19	\$27	\$29	\$32	\$21	\$33	\$29	\$22	\$31	\$335
Electricity Bill	\$65	\$69	\$73	\$71	\$66	\$75	\$68	\$76	\$78	\$70	\$67	\$72	\$850
Gas Bill	\$50	\$50	\$50	\$50	\$50	\$50	\$50	\$50	\$50	\$50	\$50	\$50	\$600
Car Fuel	\$80	\$83	\$93	\$77	\$84	\$91	\$76	\$87	\$78	\$89	\$90	\$81	\$1,009
Food	\$340	\$290	\$333	\$365	\$395	\$375	\$400	\$384	\$315	\$326	\$346	\$375	\$4,244
Health Insurance	\$175	\$175	\$175	\$175	\$175	\$175	\$175	\$175	\$175	\$175	\$175	\$175	\$2,100
Others	\$150	\$169	\$200	\$175	\$183	\$195	\$170	\$165	\$173	\$187	\$193	\$205	\$2,165
Total	\$1,235	\$1,216	\$1,311	\$1,282	\$1,330	\$1,340	\$1,321	\$1,308	\$1,252	\$1,276	\$1,293	\$1,339	\$15,503
Net Balance													\$2,497



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Activity 8 :

Calculation of Ratios by Using Excel

Aim: To create formula for financial solutions and calculate current ratios

Procedure;

Step 1: Open Ms office – Ms Excel

Step 2: Select the file tab and press new option to open a book

Step 3: Create a table for current ratio with title

Table showing current ratio

Year	Current Assets	Current Liability	Current Ratio
2017-2018	200000	100000	
2018-2019	250000	150000	
2019-2020	275000	180000	
2021-2022	260000	190000	
2022-2023	300000	200000	

Step 4: Create a bar chart with years on x-axis and ratio on y-axis and give the title of chart as Chart showing current ratio

Step 5: Type the interpretation below the chart and mention the decision taken by company regarding ratio

Step 6 : Save the document by using Ctrl +S as ratio

Step 7: Close the document by using Alt+F4



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TIPS TO PICK RIGHT FINANCIAL CHARTS

1 Tip #1: Always pick the right chart type

2 Tip #2: Remove unnecessary axes

3 Tip #3: Distribute bars evenly

4 Tip #4: Remove background lines

5 Tip #5: Remove unnecessary styling

6 Tip #6: Never use 3D effects

7 Tip #7: Clean your financial chart

8 Tip #8: Always remain consistent



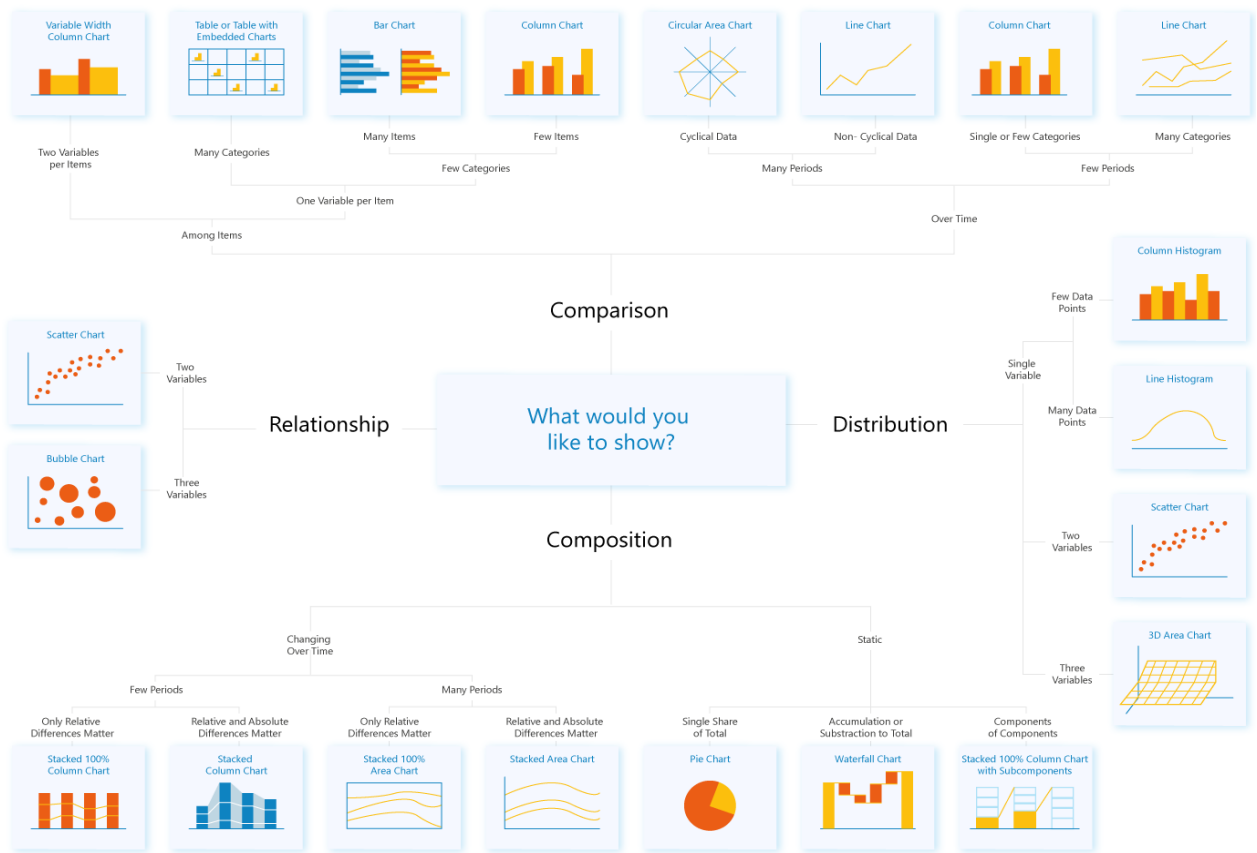
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Activity 9 :

Calculation of Sum, Average, count, Count A, Minimum, Maximum

Aim : To do the calculation of Sum, Average, Count, Count A, maximum, minimum of Shipping Ltd ABC

Procedure ;

Step 1; Open Ms office- Ms Excel – New worksheet

Step 2: Keep the heading as Shipping Limited ABC and merge the cell. Drag the data number of passenger in various port from the month January to June

Step 3: Add the relevant data of number of passenger from the month January to June, Calculate Sum from the month January to June with help of formula

= Sum (D2:D12)

Step 4: To calculate average, select the appropriate cells from January to June by using the formula

- Average (D2: D12)

Step 5: Calculate count, drag the number of cells from January to June

= Count (D2:D12)

Step 6 : Calculate Count A, drag the cells and rows , columns to get the number of cells that has values that is by using the formula

= Count A (D2:D12)

Step 7: Calculate maximum go for the function bar, a dialogue box will appear and set the option as maximum and insert the formula from January to June that is D2: D12. Hence the maximum can be obtain from selection provided

Step 8 : Calculate minimum Go for the function option, a dialogue box will appear and select the option as minimum and click okay. Then insert the following formula by dragging by January to June that D2: D12. The minimum value will be provided

Step 9 : Select insert menu – choose graph option, draw that data range from sum to minimum from H2: H12



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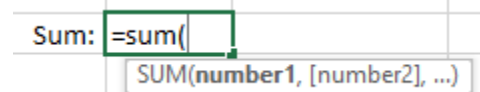
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Excel Basic Formulas: Sum

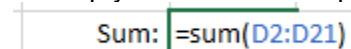
The Sum formula is a great one to start with. Excel formulas all start with an = sign, followed by the function name and a section in parentheses to provide ranges or arguments. Start out by typing =sum(



Sum requires a range of cells you want to add together. You can type your range in, or you can select it using your mouse or input device. In this case, we will select D2:D21.

	A	B	C	D	E	F	G
1	Order Number	Date	Customer	Amount	Country	City	Phone
2	1	5/1/2016	Customer1	\$ 125.00	Canada	Ottawa	(555) 555-0001
3	2	5/1/2016	Customer6	\$ 175.00	Canada	Halifax	(555) 555-0006
4	3	5/1/2016	Customer2	\$ 150.00	United States	Washington	(555) 555-0002
5	4	5/2/2016	Customer1	\$ 250.00	Canada	Ottawa	(555) 555-0001
6	5	5/2/2016	Customer1	\$ 215.00	Canada	Ottawa	(555) 555-0001
7	6	5/2/2016	Customer2	\$ 315.00	United States	Washington	(555) 555-0002
8	7	5/2/2016	Customer3	\$ 125.00	United Kingdom	London	(555) 555-0003
9	8	5/2/2016	Customer1	\$ 50.00	Canada	Ottawa	(555) 555-0001
10	9	5/2/2016	Customer7	\$ 750.00	United States	New York	(555) 555-0007
11	10	5/2/2016	Customer4	\$ 35.00	France	Paris	(555) 555-0004
12	11	5/3/2016	Customer5	\$ 250.00	China	Beijing	(555) 555-0005
13	12	5/3/2016	Customer5	\$ 115.00	China	Beijing	(555) 555-0005
14	13	5/4/2016	Customer4	\$ 175.00	France	Paris	(555) 555-0004
15	14	5/4/2016	Customer5	\$ 125.00	China	Beijing	(555) 555-0005
16	15	5/4/2016	Customer1	\$ 150.00	Canada	Ottawa	(555) 555-0001
17	16	5/4/2016	Customer7	\$ 150.00	United States	New York	(555) 555-0007
18	17	5/4/2016	Customer1	\$ 150.00	Canada	Ottawa	(555) 555-0001
19	18	5/4/2016	Customer1	\$ 250.00	Canada	Ottawa	(555) 555-0001
20	19	5/4/2016	Customer4	\$ 135.00	France	Paris	(555) 555-0004
21	20	5/4/2016	Customer2	\$ 400.00	United States	Washington	(555) 555-0002
22							
23			Sum:	=sum(D2:D21			
24				SUM(number1, [number2], ...)			

Next up you can close the parenthesis, although newer versions of Excel will auto close it for you.



Excel Basic Formulas: Sum, Average, Min, Max, and Count

Using the same method, you can calculate the average, minimum value, maximum value, and count:



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Sum:	=SUM(D2:D21)
Average:	=AVERAGE(D2:D21)
Max:	=MAX(D2:D21)
Min:	=MIN(D2:D21)
Count:	=COUNT(D2:D21)

Which if you were using the downloadable exercise workbook, will give you the following results:

Sum:	\$4,090.00
Average:	\$ 204.50
Max:	\$ 750.00
Min:	\$ 35.00
Count:	20

Here are some basic formulas, and what they do.

Sum	Adds all the cells together and gives you the total sum.
Average	Gives you the average of the selection you provide.
Min	Returns the smallest value from the selection you provide.
Max	Returns the largest value from the selection you provide.
Count	Counts how many cells have values in them.



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Activity 10:

Application of Date Function in Order Processing

Aim : To create tables containing dates and use date function in order processing

Procedure

Step 1: Open Ms. Office – Ms.Excel

Step 2: Select File Tab and press new option to open a new work book

Step 3: Create the table title “Purchase/Order Status” with the columns Item No, Date, Day, Month, Yer, e-day, e-month, text

Step 4: Use today function to return the date

=Today ()-/+ day

Step 5: Use Now function to return the time of recording the date

= Now(Cell No)

Step 6: Use day function to return the day

=day(Cell no)

Step 7: Use month function to return the month

= month (Cell no)

Step 8: Use the year function to return the year

= year(Cell no)

Step 9: Use E- month to return in Series

=E-month (Cell No)

Step 10 : Use E-date to return in data series

=E-date (Cell No)

Step 11: Save Text to return of month

=Text (Reference cell , “Open Code dd,mm,yy”)



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Step 12: Save the file “Order processing”

The order processing data of ABC Ltd., as on today is given below

Purchased item 01 before 20days for Rs.10000

Purchased item 02 before 14 daysfor Rs.5000

Purchased item 01 before 3 days

Purchased item 03 before 9 days

Order placed for item 02 will be received after 2 days

Order placed for item 03 will be received after 4 days

Use date function to perfectly present the date.



Date Functions

This table lists some of the date and time functions available in Excel.

Function Name	Function	What the Function Does
Date	=DATE(year, month, day)	Enters a date in the cell. Example: DATE(2019,5,1) equals May 1, 2019.
Today	=TODAY()	A special version of the DATE function. The DATE function returns the value of any date; the TODAY function returns the value of the current date.
Time	=TIME(hour, minute, second)	Enters a time in the cell. Uses a 24-hour (military) time system. Example: TIME(14,30,0) equals 2:30 PM.
Now	=NOW()	A special version of the TIME function. The TIME function returns the value of any time; the NOW function returns the value of the current time.
Year	=YEAR(serial_number, return_type)	Returns a value of the year for a specific date. The serial_number argument is a date value (or reference to one). Example: YEAR("3/15/2019") equals 2019.



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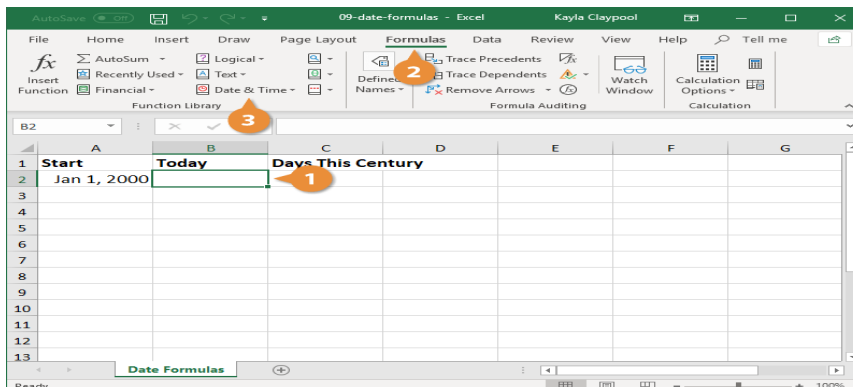
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Function Name	Function	What the Function Does
Month	=MONTH(serial_number, return_type)	Returns a value of the month for a specific date. The serial_number argument is a date value (or reference to one). Example: MONTH("3/15/2019") equals 3.
Day	=DAY(serial_number, return_type)	Returns a value of the day for a specific date. The serial_number argument is a date value (or reference to one). Example: DAY("3/15/2019") equals 15.

TODAY() Function

If you need to calculate values based on dates, a very helpful function is TODAY, which returns today's date.

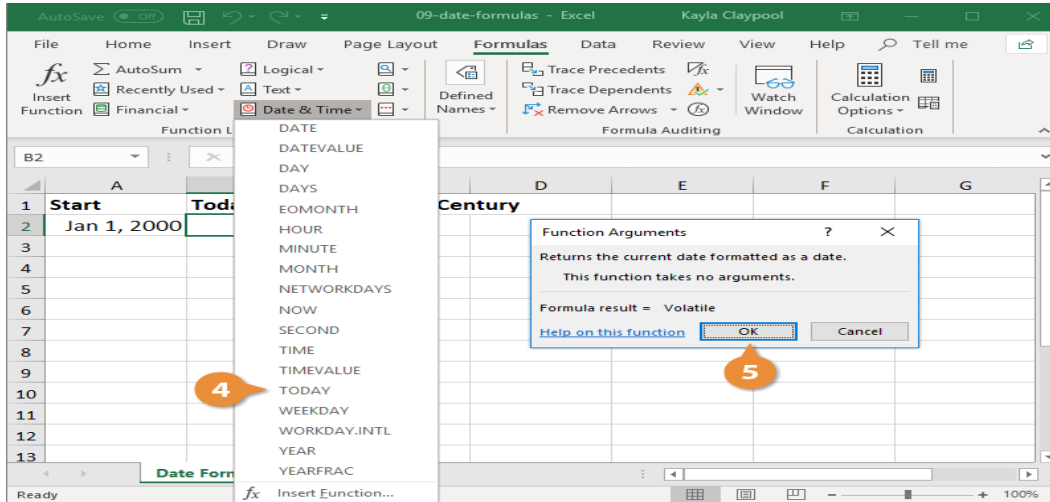
1. Select the cell where you want to add the TODAY() function.
2. Click the **Formulas** tab on the ribbon.
3. Click the **Date & Time** button.





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4. Select **Today**.
5. Click **OK**.



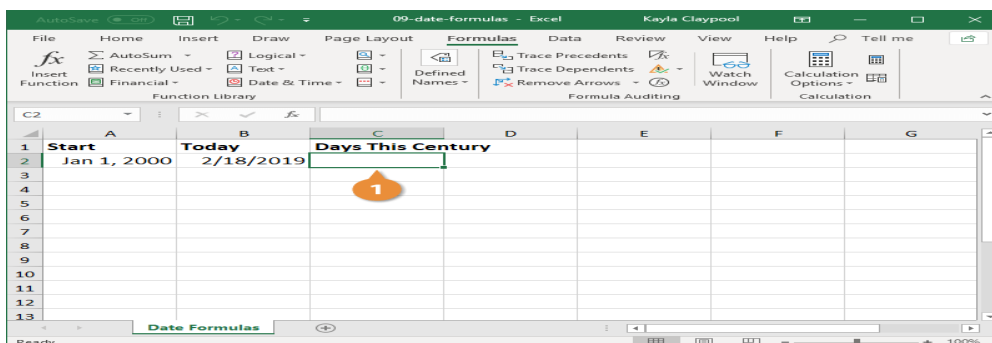
You can also insert the function by typing `=TODAY()` in the cell.

Excel adds today's date.

Date Calculations in Formulas

Referencing cells with a date calculation in a formula is often no different than referencing cells with numbers—you can include date values in basic formulas.

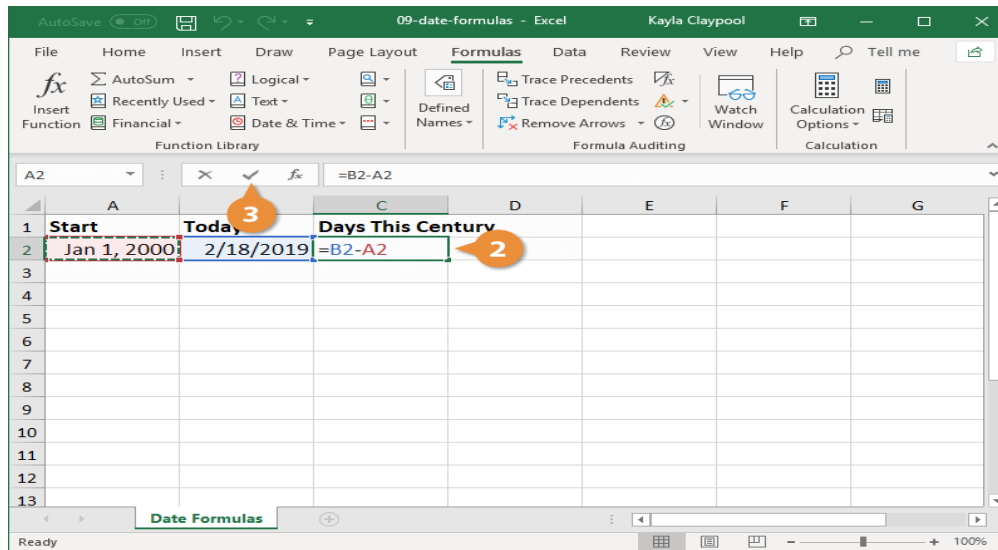
1. Select the cell where you want to calculate a date formula.





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2. Press = and enter the formula, referencing the cells that contain a date formula.
3. Click the **Enter** button.





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Activity 11:

Calculation of Sum, Sumif, Sumifs, Count, Countifs by Using Excel

Aim: To prepare a car showroom details by calculating Sum, Sumif, Sumifs, Count, Countifs by using Ms Excel

Procedure:

Step 1: Open Ms Office – Ms Excel

Step 2: Prepare car show room details wit car type, car color, Price

Step 3: Fill the details of different types of car colors, price of the car

Step 4: Calculate the total no.of cars by using Count option

=Count (B2:B32)

Total no.of cars is obtained

Count if:

Countif accepts one range and one criteria

=Countif (range,"Red")

=Countif (Cartype, "Blue")

i.e countif(B2:B32,"Blue")

Countifs:

It accepts multiple criteria

Countifs = Countif(range, Cartype",range", "Cacolor",range,"Car price")

=Countifs(range,"Kia",range,"Blue",range,">3L")

=countifs(B2:B32,"Kia",C2:C32,"Blue",D2:D32,">3L")

Sum :

Sum(D2:D32)



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Sumif:

Sumif accepts one criteria

=Sumif(range,"Criteria")

Sumif(D2:D32,">4L")

Sumifs:

It calculates more than one criteria

-Sumifs(range, "Red",range,"Type")

=Sumifs(Carprice,carcolors, "Red",Cartype,"Kia")

=Sumifs(D2:D32,C2:C32,"Red",B2:B32,"Kia")

Step 5 : Save the worksheet by pressing Ctrl+S

Step 6: Close the worksheet by Alt +F4



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The **SUMIF** and **COUNTIF** functions allow you to conditionally sum or count cells based on a **single condition**, and are compatible with almost all versions of Excel:

```
=SUMIF(criteria_range, criteria, sum_range)
```

```
=COUNTIF(criteria_range, criteria)
```

The **SUMIFS** and **COUNTIFS** functions allow you to use **multiple criteria**, but are only available beginning with Excel 2007:

```
=SUMIFS(sum_range, criteria_range1, criteria1, criteria_range2,  
criteria2, ...)
```

```
=COUNTIFS(criteria_range1, criteria1, criteria_range2,  
criteria2, ...)
```

AVERAGEIF and AVERAGEIFS are also part of this family of functions and have the same syntax as SUMIF and SUMIFS.



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Activity No: 12

Extracting data using combined V Lookup and H Look up

Aim: To identify a specific data in excel worksheet

Procedure:

Step 1: Opem Ms Excel 2007

Step 2: Select File Tab . Press new option to create a new book

Step 3: Type the following table

	GOLD	SILVER	COPPER
COLUMN	2	3	4
EUROPE	10	15	2
ASIA	6	17	5
AFRICA	18	3	30

Step 4: For identifying how many coppeter medal with the continent Asia obtained, extract the data using the formula

=VLookup(G3:b4:E6,Hlookup(H3B2:E3,2,False),False)

G2=Continent

He-=Medal

J2=No.of medals

Step 5: The output of extracted data will be shown

Step 6: Save the workbook by pressing Ctrl+S by name data Extraction



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VLOOKUP and HLOOKUP are functions in Excel that allow you to search a table of data and based on what the user has supplied and give appropriate information from that table.

If you have a table of Student ID numbers, Student Names and Grades, you can set up Excel so that if a Student ID number is supplied by the user, it will look through the table and output the student's name and grade.

Student ID Number	Student Name	Semester Grade
1234	John Smith	A/B
1689	Jane Jones	B/C
2495	Michelle Schreiner	B
3697	Jack Lepak	A
9228	Rod Ameson	B

<u>VLOOKUP</u>		
Student ID Number	1234	← User Supplied
Student Name	John Smith	← From Table
Semester Grade	A/B	← From Table

VLOOKUP allows you to search a table that is set up vertically. That is, all of the data is set up in columns and each column is responsible for one kind of data. In the Student Record example, there would be a separate column of data for Student Names, one for Student ID numbers, etc.

HLOOKUP is the exact same function, but looks up data that has been formatted by rows instead of columns.

Student ID Number	1234	1689	2495	3697	9228
Student Name	John Smith	Jane Jones	Michelle Schreiner	Jack Lepak	Rod Ameson
Semester Grade	A/B	B/C	B	A	B



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The format of the VLOOKUP function is:

VLOOKUP(lookup_value,table_array,col_index_num,range_lookup).

The **lookup_value** is the user input. This is the value that the function uses to search on. If you are searching a table by the Student ID number, then the lookup_value is the cell that contains the inputted Student ID number being looked up.

The **table_array** is the area of cells in which the table is located. This includes not only the column being searched on, but the data columns for which you are going to get the values that you need. Back to the example, the table_array would not only include the Student ID number column, but the columns for the Student Names and Grades as well.

The **col_index_num** is the column of data that contains the answer that you want. If your table is set up as: column 1 - Student ID Number, column 2 - Student Names, column 3 - Grades and you inputted a Student ID Number and you want to retrieve the grade that was received for that person, the col_index_num would be 3. 3 is the column number of the data column for the ANSWER that you are trying to look up.

Range_lookup is a TRUE or FALSE value. When set to TRUE, the lookup function gives the closest match to the lookup_value without going over the lookup_value. When set to FALSE, an exact match must be found to the lookup_value or the function will return #N/A. Note, this requires that the column containing the lookup_value be formatted in ascending order.

To use the Function Wizard to insert a VLOOKUP function:

1. Select the cell that will contain the answer to the VLOOKUP and access the Insert Function dialog, which depends upon the version of Excel that you are using:
 - For Excel 2007 and 2010: Go to the **Formula** tab on the ribbon, and choose **Insert Function**.
 - For Excel 2003 and earlier: Select **Insert -> Function...**
2. Under the **Function Category**, choose either **All** or **Lookup & Reference**.
3. Under the **Function Name**, select **VLOOKUP**, and hit **OK**.



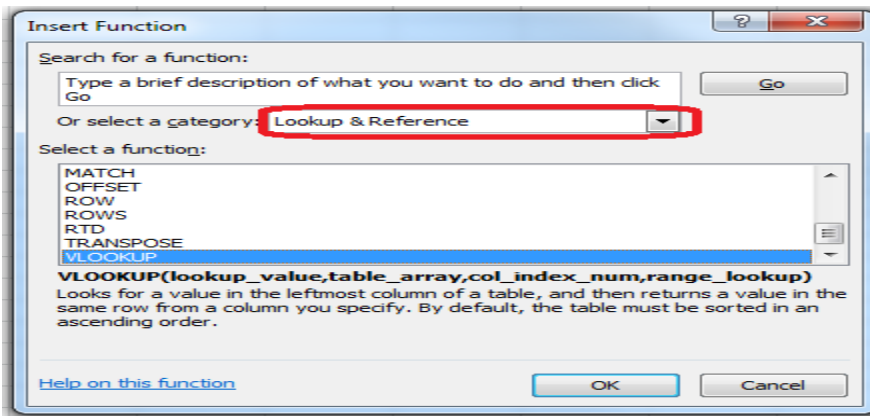
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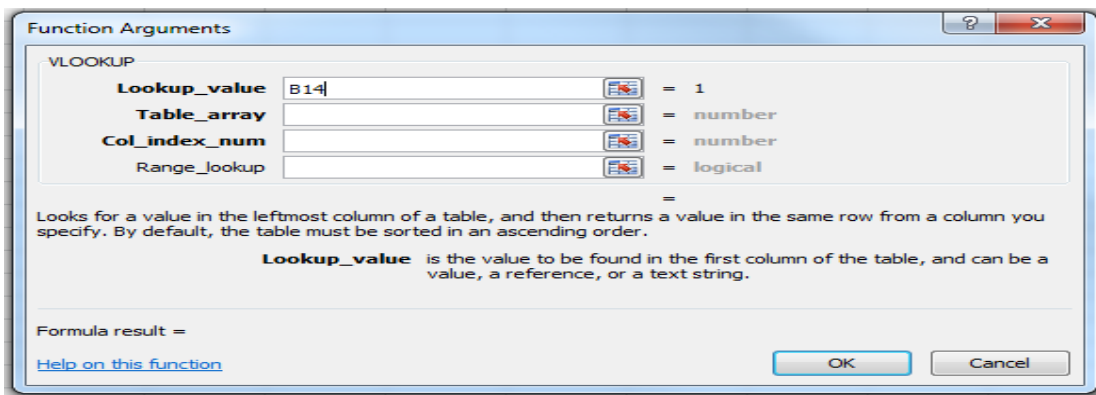
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4. The Function Wizard for VLOOKUP will then display. The 4 values talked about above (lookup_value, table_array, col_index_num, range_lookup) are required by the function. Each line for each value required. If you put the cursor into the first line for lookup_value, down below it explains what the lookup_value is for your reference. Similar information is displayed when the cursor is in any of the other fields.



5. Enter in the lookup_value either by typing in the number for the cell, or, by selecting the cell on the worksheet.
6. Enter in the table_array by typing in the numbers for the cells, or, by selecting the group of cells on the worksheet.
7. Enter in the number for column which contains the data that you wish to obtain in the col_index_num area.
8. Enter into the range_lookup field the value TRUE if the function should accept the closest value to your lookup_value without going over or FALSE if an exact match is required.
9. Hit **OK** when ready.



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Activity 13

Consumer Satisfaction survey by using google form

Aim: Creating a consumer satisfaction survey

Procedure

Step 1: Open G-mail account

Step 2: Click on google apps icon in the gamila page

Step 3: Click on google forms

Step 5: Give the title “Consumer Satisfaction Survey”

Step 6: Create the form that consist of following details

a)Name

b)Age

C)Gender

d) Educational qualification

e)Indicate your level of satisfaction towards the mobile phone that you are using

Highly satisfied

Satisfied

Neutral

Dissatisfied

Highly Dissatisfied

f)I have the best mobile phone

Strongly Agree

Agree

Neutral



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Disagree

Strongly Disagree

g) The price of the mobile that I own is

High

Medium

Low

h) Mobile Brand _____

Step 7: Choose the type of questions

Step 8: Save the form

Step 9: Send the form to respondents through a link

Step 10: Consolidate the survey results



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Create a survey

Creating a new survey is simple:

1. Visit <https://surveys.google.com/your-surveys>.
2. Click + **NEW SURVEY**.
3. In step 1 (**Write questions**), select the appropriate question type(s) and write your question(s). Click **CONFIRM**.
4. In step 2 (**Pick audience**), name your survey and select your target audience. Click **CONTINUE**.
5. In step 3 (**Confirm survey**), review your survey questions and purchase responses. You also have the option here to adjust the survey frequency. Click **BUY NOW** or **START TEST*** if your survey has screening questions.
6. Your survey is sent to our team for review and you receive a confirmation email once it has been started.
7. You receive another email with a link to your results once your survey is completed.