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ASSIGNMENT COVER PAGE

Enter the group members name list (must be 3 to 5 members only) here.

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Lecturer Name	:	Abhishek Paudel
Subject Code & Title	:	Data Analytics Visualization (DAV234)
Semester & Intake	:	2nd semester
Assignment Topic	:	EXCEL Visualization
Announcement Date	:	26 Dec,2023
Submission Date	:	**04 Jan,2024**

ATTENTION:

1) 1 day late from the date of submission - 25% will be deducted.
   2 days late from the date of submission - 50% will be deducted.
   More than 2 days late from the date of submission - "0"grade will be awarded

2) **Plagiarism -** The University will not tolerate cheating, or assisting others to cheat, and views cheating in coursework as serious academic offence. The work that a student submits for grading must be the student's own work, reflecting his or her learning. Where work from other sources is used, it must be properly acknowledged and referenced.

1. What is the significance of relative and absolute cell referencing in Microsoft Excel?

Relative Cell Referencing:

In a relative reference, when you copy a formula from one cell to another, the cell references within the formula change relative to their original position.

For example, if you have a formula in cell B2 as =A1+B1, and you copy it to cell C2, the formula in C2 will automatically adjust to =B1+C1.

This is useful when you want the formula to maintain the same relative position of cells when copied to different locations.

Absolute Cell Referencing:

In an absolute reference, a specific cell reference is locked, and it doesn't change when you copy the formula to another cell.

An absolute reference is denoted by using a dollar sign ($) before the column letter, row number, or both. For example, if you have a formula in cell B2 as =$A$1+B1, copying it to cell C2 will keep the absolute reference to cell A1, and only the relative reference to B1 will change to C1.

Absolute referencing is useful when you want to maintain a constant reference to a specific cell, such as when working with fixed values or constants.

sum1	sum2	RelativeTotal	AbsoluteTotal
1	5	6	6
2	10	12	11

=$E$3+F3

D	E	F	G	H
	sum1	sum2	RelativeTotal	AbsoluteTotal
	1	5	6	6
	2	10	12	11

2. How can you lock or freeze panes in Excel?

Freeze Top Row:

If you want to freeze the top row, select the row right below the one you want to freeze.

Go to the "View" tab on the Ribbon.

In the "Window" group, click on the "Freeze Panes" dropdown.

Choose "Freeze Top Row."

Freeze First Column:

If you want to freeze the first column, select the column immediately to the right of the one you want to freeze.

Go to the "View" tab on the Ribbon.

In the "Window" group, click on the "Freeze Panes" dropdown.

Choose "Freeze First Column."

Freeze Both Rows and Columns:

If you want to freeze both rows and columns, select the cell immediately below and to the right of the rows and columns you want to freeze.

Go to the "View" tab on the Ribbon.

In the "Window" group, click on the "Freeze Panes" dropdown.

3. **What distinguishes COUNT, COUNTA, COUNTBLANK, COUNTIF, and COUNTIFS functions in Excel?**

COUNT and COUNTA count cells based on their content (numbers for COUNT and non-empty cells for COUNTA).

COUNTBLANK counts empty cells specifically.

COUNTIF counts cells based on a single specified condition.

COUNTIFS extends the functionality to count cells based on multiple conditions across multiple ranges.

4. **How do you generate hyperlinks within an Excel spreadsheet?**

Select the Cell:

Click on the cell where you want to insert the hyperlink.
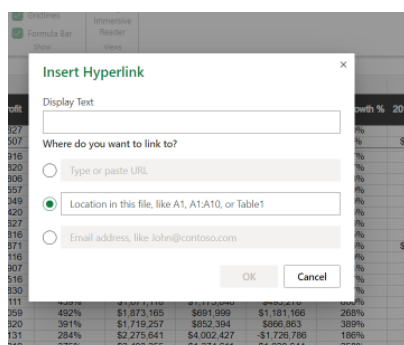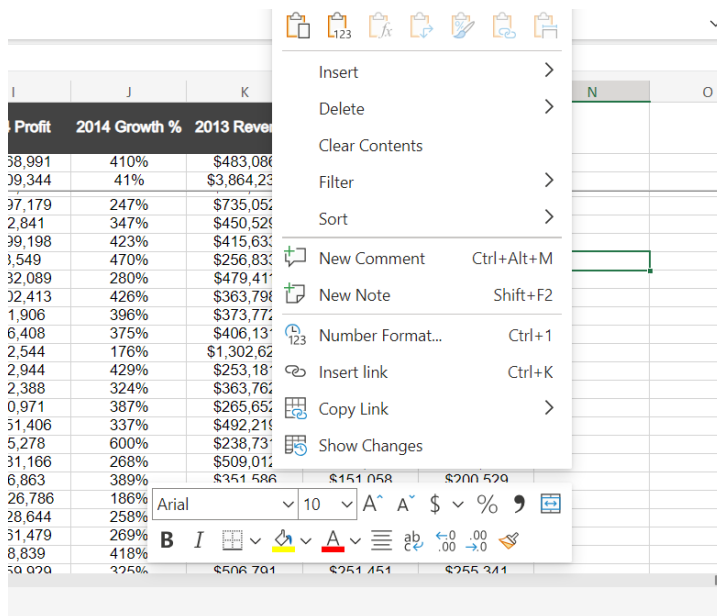
Insert Hyperlink:

Right-click on the selected cell and choose "Insert Link" from the context menu

Choose the Location:

In the "Insert Hyperlink" dialog box, you can choose the type of link. To link to a cell or range within the same workbook

Select the Destination:

and click "OK."

5. **What is the utility of VLOOKUP in Excel, and how is it employed?**

VLOOKUP (Vertical Lookup) is a powerful and widely used function in Microsoft Excel that helps you search for a value in a table based on a matching value in the leftmost column of that table. It is commonly used to retrieve information from a large data set or table.

The syntax for the VLOOKUP function is as follows:

=VLOOKUP (lookup_value, table_array, col_index_num, [range_lookup])

lookup_value: The value to search for in the leftmost column of the table.

table_array: The table or range of cells containing the data you want to search.

col_index_num: The column number in the table from which to retrieve the value.

range_lookup: This optional parameter is either TRUE (approximate match) or FALSE (exact match). If omitted, VLOOKUP defaults to an approximate match.

6. **Could you explain how the IF() function operates in Microsoft Excel?**

IF() Function in Excel:

The IF function in Excel is a logical function that allows you to perform different actions based on a specified condition. Its basic syntax is:

=IF(logical_test, value_if_true, value_if_false)

logical_test: The condition you want to evaluate.

value_if_true: The value or expression to return if the condition is true.

value_if_false: The value or expression to return if the condition is false.

7. **Is it possible to append comments to a cell? If yes, how? If not, why not?**

Yes, you can add comments to a cell in Excel to provide additional information or context. Right-click on the cell, choose "Insert Comment" from the context menu, and then type your comment in the comment box that appears.

8. **What are macros? How are they useful?**

Macros in Excel are sequences of instructions or commands that automate repetitive tasks. They are written in VBA (Visual Basic for Applications) and allow you to perform complex operations with just a click of a button. Macros are useful for automating tasks, increasing efficiency, and reducing the likelihood of errors.

9. How can one generate Pivot Tables in Excel?

To create a Pivot Table in Excel:

Select the range of cells that contains your data.

Go to the "Insert" tab on the Ribbon.

Click on "PivotTable" and choose the location where you want the Pivot Table (e.g., a new worksheet).

Drag and drop fields from your data into the Rows and Columns areas and specify the values you want to summarize.

	A	B	C	D	E	
1	ID	Name	2015 Revenue	2015 Expenses	2015 Profit	2015
2	1	Over-Hex	$10,684,527	$1,130,700	$9,553,827	3
3	2	Unimattax	$9,016,543	$804,035	$8,212,507	6
23	22	Stripfind	$10,329,371	$2,916,455	$7,412,916	3
24	23	Canecorporation	$10,597,009	$5,591,189	$5,005,820	4
25	24	Cankix	$8,719,723	$2,513,917	$6,205,806	3
26	25	Mattouch	$9,026,934	$7,429,377	$1,597,557	5
27	26	Physgreen	$10,376,897	$2,724,847	$7,652,049	4
28	27	Cantonlux	$9,922,155	$1,888,735	$8,033,420	4

10. In Microsoft Excel, what do Pivot Charts refer to?

Pivot Charts in Excel are graphical representations of Pivot Tables. They allow you to visualize and analyze data dynamically. Pivot Charts are linked to Pivot Tables, and any changes made in the Pivot Table will be reflected in the Pivot Chart.

11. In Pivot charts, how can you modify the value field to display a result other than the sum?

- Click on the drop-down arrow next to the field in the Values area.
- Choose "Value Field Settings."
- Select the desired summary function (e.g., sum, average) or use a custom calculation.
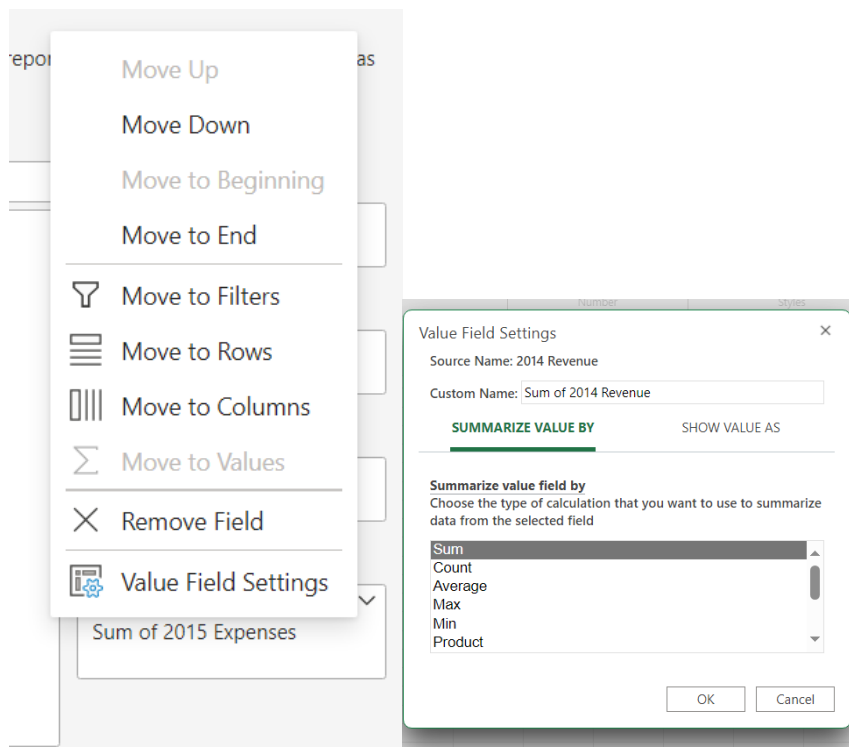
12. What is SUMIF Function in Excel?

The SUMIF function in Excel adds values based on a specified condition. Its syntax is:

=SUMIF(range, criteria, [sum_range])

range: The range of cells to be evaluated by the criteria.

criteria: The condition to be met.

sum_range: The range containing the values to be added (optional, and if omitted, the range is used).

13. What is the exact match and approx. match in VLOOKUP?

Exact Match (FALSE): Finds the exact match. If no exact match is found, it returns an error.

Approximate Match (TRUE): Finds the closest match less than or equal to the lookup value. Requires the data to be sorted in ascending order.

14. What are the shortcomings of VLOOKUP?

Limited to searching in the leftmost column of the table.

Cannot handle data from columns to the left of the lookup column.

Performs approximate matches by default.

15. How a combination of INDEX and MATCH functions solve the shortcomings of VLOOKUP?

It allows you to look up a value in any column and provides more flexibility.

16. What is the function to get current date?

To get the current date, you can use the TODAY() function.

17. How can wildcards be employed with VLOOKUP in Excel?

You can use wildcards like asterisk (*) and question mark (?) with VLOOKUP for partial matches. For example, =VLOOKUP("abc*", A1:B10, 2, FALSE).

fx =VLOOKUP("out*", A1:B10, 2, FALSE)

| Name	Sum of 2014 Revenue	Sum of 2015 Expenses		
Unimattax	$5,448,571	$804,035		
Myceliumamniote	$4,922,150	$1,829,190		
Dingalingflee	$4,791,541	$6,187,326		
Befriendogle	$4,567,864	$1,758,425		
Rubypituitary	$4,354,102	$3,401,640		
Outspruing	$4,351,916	$5,468,575		
Serpentineappeals	$4,305,580	$3,460,147		
Keytouch	$3,752,431	$5,649,633		
Haycorporation	$3,710,641	$394,323		
Glyderrhombus	$3,675,479	$4,217,203		
Unoline	$3,655,600	$5,624,600		
Dwindlecertain	$3,617,940	$7,289,795		
Laboredshocked	$3,607,377	$1,876,606		
Hatit	$3,605,650	$1,818,536		4351916
Ganzhouse	$3,595,257	$5,878,552		
Glycopexis	$3,575,386	$3,450,712		

18. What are the different wildcards available in excel? Explain in Detail.

Asterisk (*): Represents any sequence of characters.

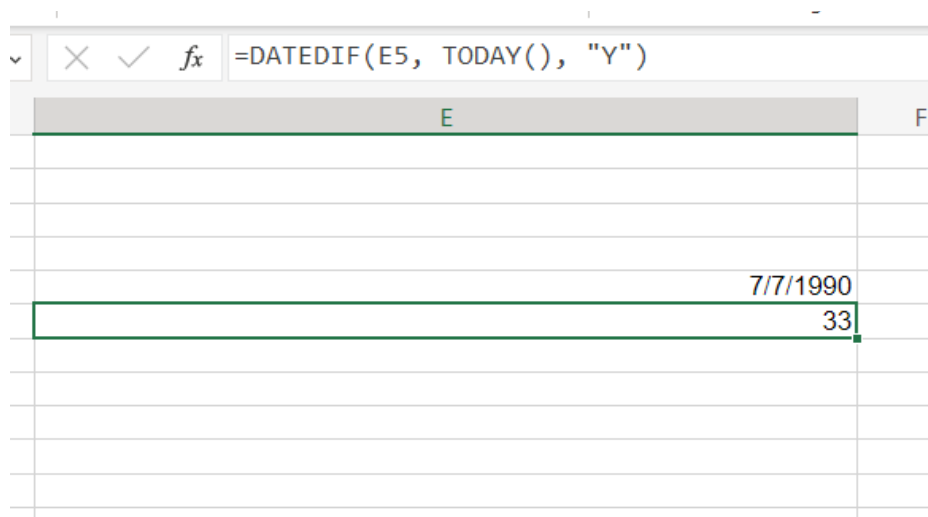Question Mark (?): Represents a single character.

19. What does Data Validation entail? Provide an example to illustrate its application.

Data Validation is a feature in Microsoft Excel that allows you to control what type of data can be entered into a cell. It helps ensure data accuracy by restricting input based on specified criteria. This can include setting numeric ranges, date ranges, list values, and more.
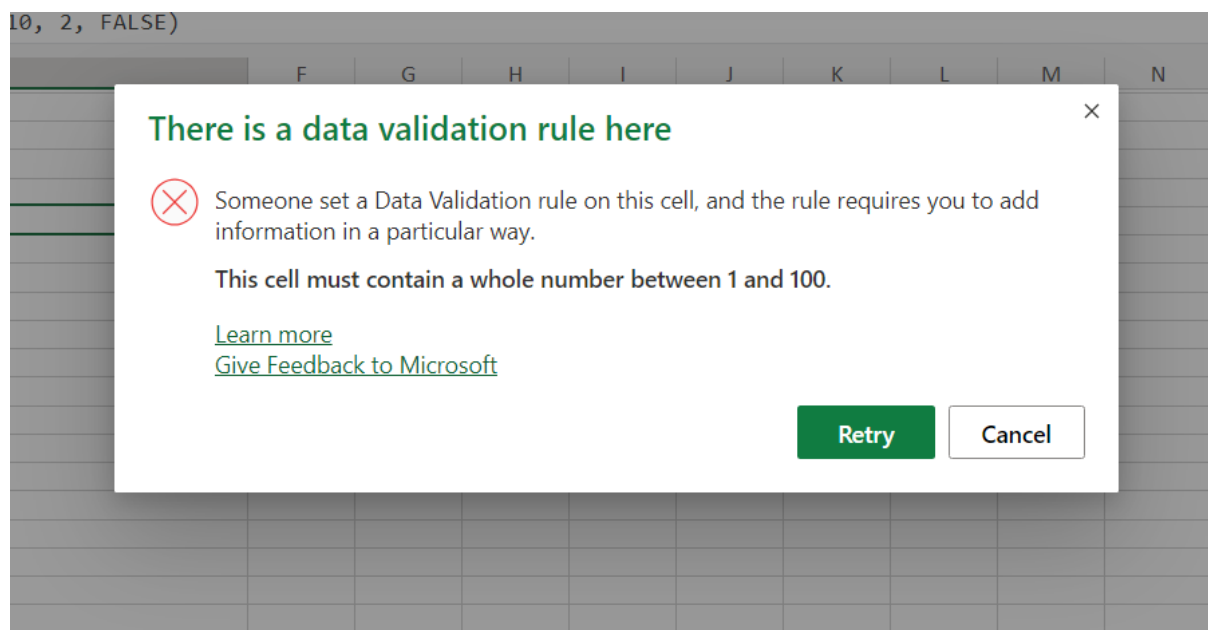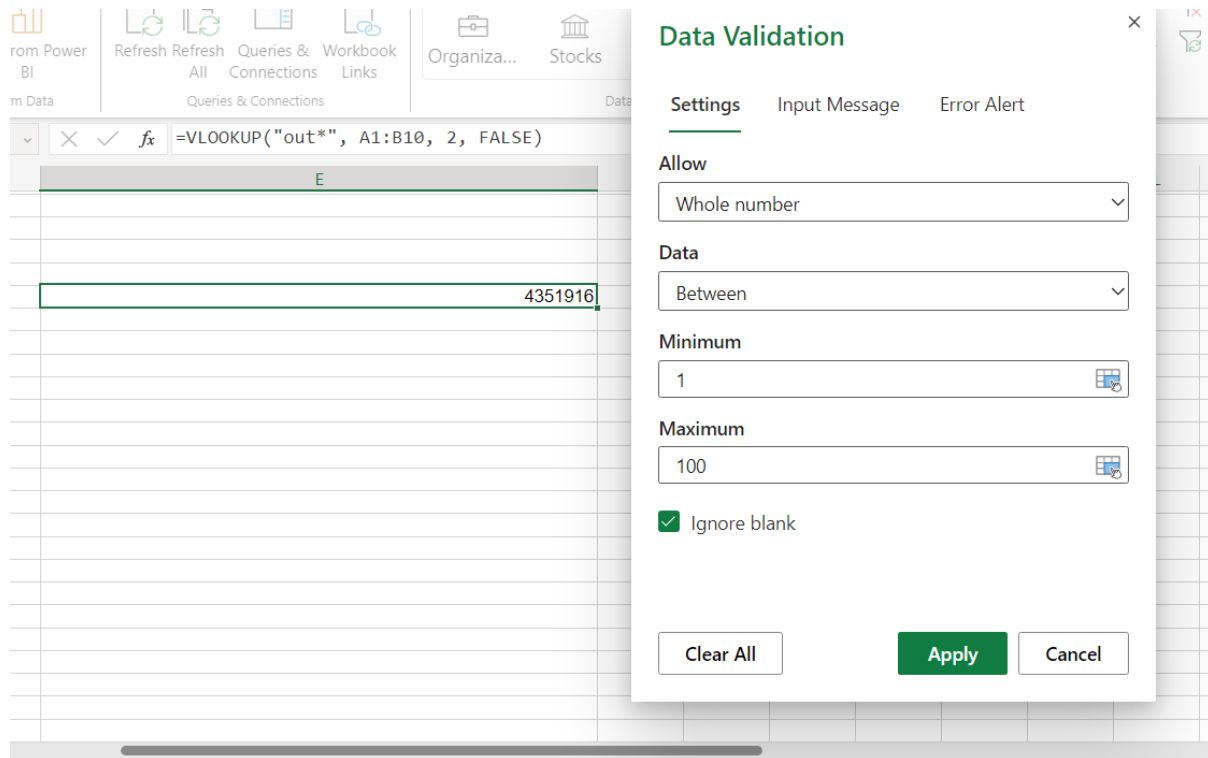
20. **What is your age? Calculate in excel.**

You can calculate age in Excel using a formula like =DATEDIF(B1, TODAY(), "Y"), assuming the birthdate is in cell B1.

	E	F
fx	=DATEDIF(E5, TODAY(), "Y")	

	E	F
	7/7/1990	
	33	

21. **What is the difference between a function and a subroutine in VBA?**

In VBA, a function returns a value, while a subroutine (or macro) performs actions without returning a value. Functions are used in expressions, while subroutines are executed as standalone procedures.