Lab Index Advanced Excel

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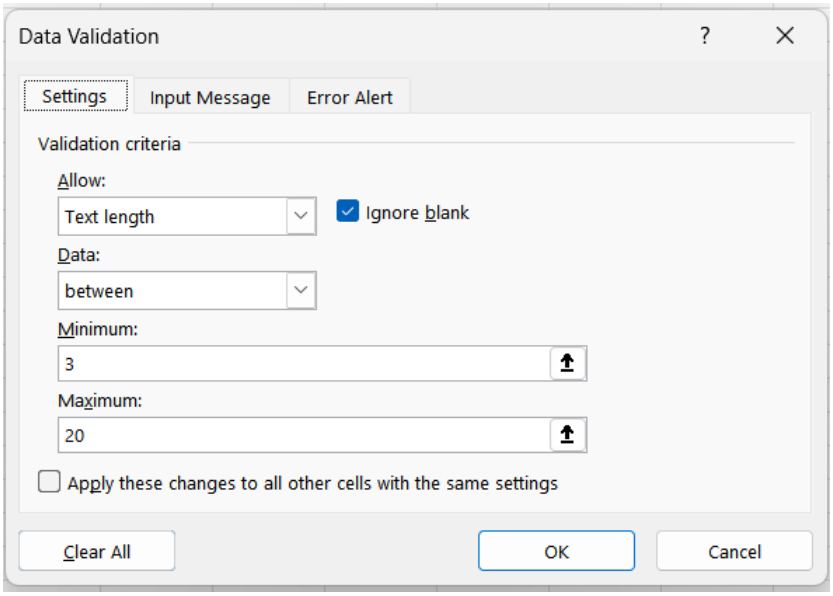
PRACTICAL 1

Create a data for a class with 5 Students with Roll No, Name, Mobile Number and DoB applying Data Validation on each field accordingly

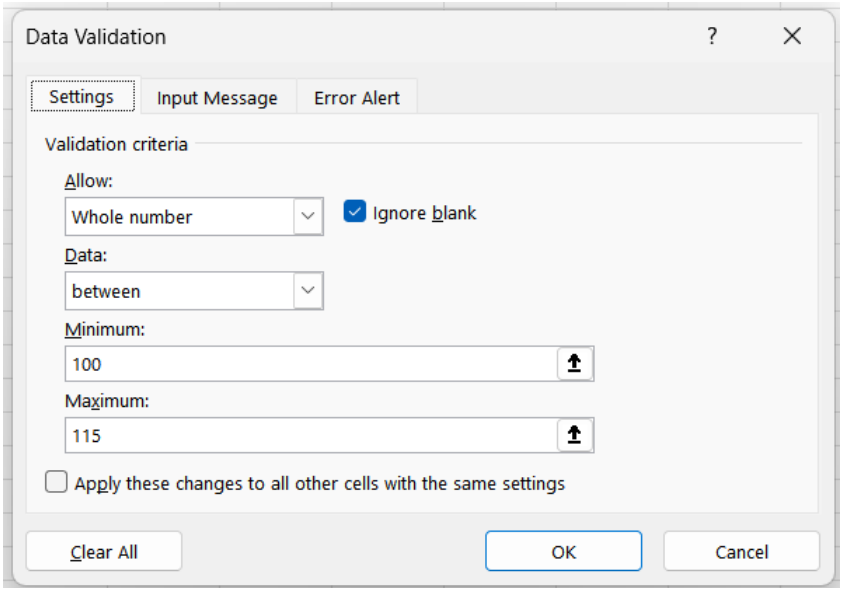
1. **Select the cell(s)** where you want to create a validation rule.
2. Go to the **Data** tab and click on **Data Validation**.
3. On the **Settings** tab, choose an option under **Allow**:
    - **Whole Number**: Restricts the cell to accept only whole numbers.
    - **Decimal**: Restricts the cell to accept only decimal numbers.
    - **List**: Allows you to create a dropdown list of predefined values.
    - **Date**: Restricts the cell to accept only dates.
    - **Time**: Restricts the cell to accept only time values.
    - **Text Length**: Limits the length of the text.
    - **Custom**: For creating a custom formula.
4. Under **Data**, set the condition based on your chosen **Allow** option.
5. Customize an **Input Message** that users will see when entering data.
6. Optionally, display an **Error Alert** with a customized message if an invalid value is entered.
7. Click **OK** to apply the data validation rule.

S.NO	NAME	ROLL NO	DOB	PHONE NO
1	ADI	101	01-01-2004	1234567890
2	MOHAN	102	05-09-2002	1987654321
3	KIRAN	103	01-12-2005	8805656122
4	RAJU	104	02-04-2001	8899776632
5	LEO	104	17-07-2004	9999888652

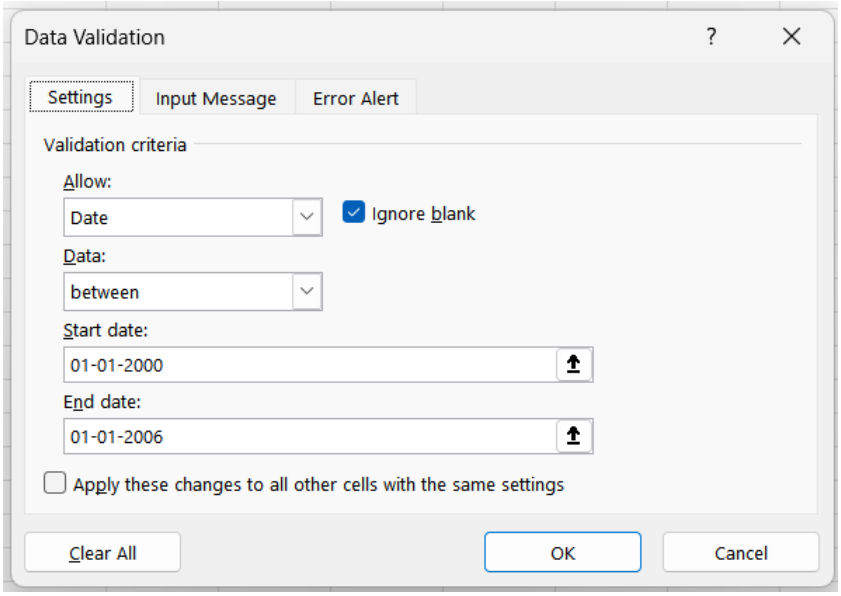
FOR NAME



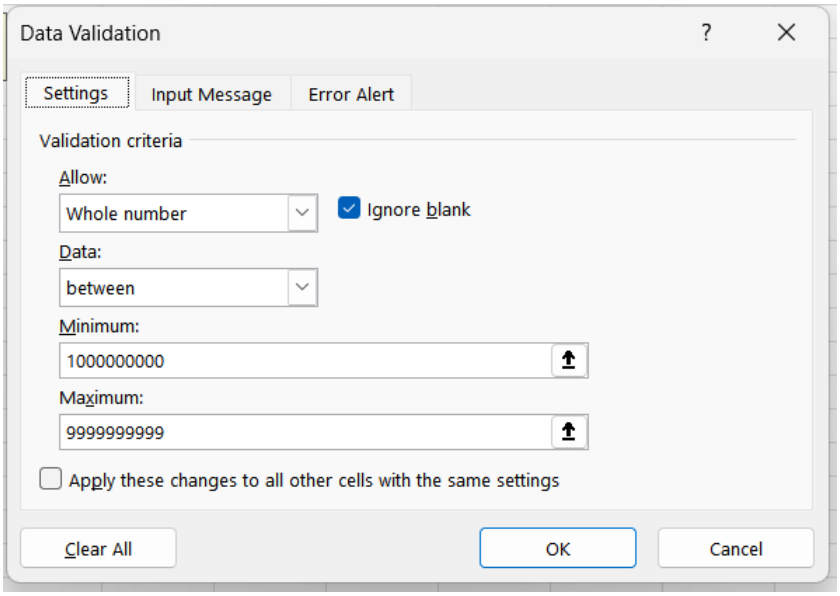
FOR ROLL NO



FOR DATE OF BIRTH



FOR PHONE NO



PRACTICAL 2

Create a data for a grocery shop analysing the sales for a week by adding product id, product name, product price, Number of items sold in the current week, total sales in previous week, Demand, Supply. Apply countif and conditional formulas to make decision to order the item from the vendor or not.

1. Set up your columns as follows: A (Product ID), B (Product Name), C (Product Price), D (Items Sold This Week), E (Current week sales), F (Total Sales Previous Week), G (Demand), H (Supply).
2. In column E, you can calculate the total sales of the current week using the formula =C*D for each row.
3. For the Demand column (G), you can use a formula that reflects your business rules. For example, if demand is high when sales in the current week are more than the sales of the previous week, you could use =IF(E2>F2, "High", "Low").
4. For Supply (H), you might have a fixed amount for each product. If not, you can leave it blank for manual input.
5. To decide whether to order more of a product, you could use a formula like =IF(E2<F2, "Buy", "Not Buy") in a new column G. This formula suggests ordering more if the current week's sales are less than the previous week's sales.

S.NO	Product ID	Product Name	Product Price	Item sold	Current week	Pervious week	Demand	Supply
1	101	Apples	56	23	1288	2345	LOW	NOT BUY
2	102	Grapes	34	34	1156	4561	LOW	NOT BUY
3	103	Banana	45	34	1530	999	HIGH	BUY
4	104	Oranges	61	65	3965	4666	LOW	NOT BUY
5	105	Water melon	64	78	4992	866	HIGH	BUY

PRACTICAL 3

Create a table with data as Roll No,First Name,Last Name,Course,Phone Number and apply LOOKUP, VLOOKUP and HLOOKUP on the data

Setup the data

Roll No	First Name	Last Name	Course	Phone Number
101	Nilesh	Patil	B.Sc	+91 9876543210
102	Pranav	Kadam	B.Tech	+91 8765432109
103	Suhas	Choudhari	MCA	+91 7654321098
104	Aarav	Deshmukh	MBA	+91 9876543211
105	Riya	Sharma	B.Com	+91 8765432101

The LOOKUP function in Excel is used to find a value in a row or column. There are two ways to use the LOOKUP function: Vector form and Array form.

Vector Form The vector form of LOOKUP searches in a one-row or one-column range (known as a vector) for a value and returns a value from the same position in a second one-row or one-column range1. The syntax is as follows:

LOOKUP(lookup_value, lookup_vector, [result_vector])

lookup_value: A value that LOOKUP searches for in the first vector. It can be a number, text, a logical value, or a name or reference that refers to a value.

lookup_vector: A range that contains only one row or one column. The values in lookup_vector must be placed in ascending order.

result_vector: A range that contains only one row or one column. The result_vector argument must be the same size as lookup_vector.

=LOOKUP($A$9,$A$1:$A$6,B1:B6)

Roll No	First Name	Last Name	Course	Phone Number
102	Pranav	Kadam	B.Tech	+91 8765432109

Array Form The array form of LOOKUP can search for a value in multiple rows and columns2. It first locates the specified value in the first row or column of the selection and then returns the value of the same position in the last row or column2. The syntax is as follows:

LOOKUP(lookup_value, array)

lookup_value: The value the function should look for within the array. It can be a number, text, logical value, name, or reference.

array: The range of cells that contain the value you're comparing with lookup_value.

=LOOKUP($H$9,$A$1:$E$6)

Roll No	Phone Number
101	+91 9876543210

VLOOKUP and **HLOOKUP** are formulas used to find data in a cell range. They have the following differences:

- **VLOOKUP** retrieves data vertically (by columns).
- **HLOOKUP** searches horizontally by rows.

VLOOKUP

Roll No	First Name	Last Name	Course	Phone Number
101	Nilesh	Patil	B.Sc	+91 9876543210
102	Pranav	Kadam	B.Tech	+91 8765432109
103	Suhas	Choudhari	MCA	+91 7654321098
104	Aarav	Deshmukh	MBA	+91 9876543211
105	Riya	Sharma	B.Com	+91 8765432101

The VLOOKUP function in Excel is used to find a value in a table or a range by row. Here's how you can use it:

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

lookup_value: The value you want to look up.

table_array: The range where the lookup value is located. The lookup value should always be in the first column in the range for VLOOKUP to work correctly.

col_index_num: The column number in the range that contains the return value.

range_lookup: Optionally, you can specify TRUE if you want an approximate match or FALSE if you want an exact match of the return value. If you don't specify anything, the default value will always be TRUE or approximate match.

=VLOOKUP(A10,A1:E6,4,FALSE)

Roll No	Course
101	B.Sc

HLOOKUP

Roll No	First Name	Last Name	Course	Phone Number
101	Nilesh	Patil	B.Sc	+91 9876543210
102	Pranav	Kadam	B.Tech	+91 8765432109
103	Suhas	Choudhari	MCA	+91 7654321098
104	Aarav	Deshmukh	MBA	+91 9876543211
105	Riya	Sharma	B.Com	+91 8765432101

The HLOOKUP function in Excel is used to find a value in a table or a range by row. Here's how you can use it:

=HLOOKUP(lookup_value, table_array, row_index, [range_lookup])

lookup_value: The value you want to look up.

table_array: The range where the lookup value is located. The lookup value should always be in the first row of the range for HLOOKUP to work correctly.

row_index: The row number in the range that contains the return value.

range_lookup: Optionally, you can specify TRUE if you want an approximate match or FALSE if you want an exact match of the return value. If you don't specify anything, the default value will always be TRUE or approximate match.

=HLOOKUP(A9,A1:E6,2,0)

Roll No	101

PRACTICAL 4

Show the Implementation of Macros

- Enter the data

	A	B	C	D	E
1	**Roll No**	**First Name**	**Last Name**	**Course**	**Phone Number**
2	101	Nilesh	Patil	B.Sc	+91 9876543210
3	102	Pranav	Kadam	B.Tech	+91 8765432109
4	103	Suhas	Choudhari	MCA	+91 7654321098
5	104	Aarav	Deshmukh	MBA	+91 9876543211
6	105	Riya	Sharma	B.Com	+91 8765432101

- Implementing macros in Excel is a great way to automate repetitive tasks and save time. Here's a step-by-step guide on how to create and use macros in Excel:

1. **Enable the Developer Tab**:
   - Go to **File** > **Options** > **Customize Ribbon**.
   - Check the box for **Developer** in the right pane and click **OK**.
2. **Record a Macro**:
   - Click on the **Developer** tab.
   - In the **Code** group, click **Record Macro**.
   - Enter a name for your macro in the dialog box that appears.
   - Choose where to store the macro (in the current workbook, a new workbook, or the Personal Macro Workbook).
   - If desired, assign a shortcut key to run the macro.
   - Click **OK** to start recording.
3. **Perform the Actions You Want to Automate**:
   - Carry out the steps you want the macro to replicate. Excel will record all your actions.
4. **Stop Recording**:
   - Once you've completed the actions, go back to the **Developer** tab.
   - Click **Stop Recording** in the **Code** group.
5. **Run the Macro**:
   - Access the macro by clicking **Macros** in the **Code** group on the **Developer** tab.
   - Select the macro you've recorded from the list.
   - Click **Run**.
6. **Edit the Macro (Optional)**:
   - If you need to make changes to the macro, you can edit the VBA code.
   - In the **Code** group on the **Developer** tab, click **Macros**.
   - Select the macro and click **Edit**. This will open the Visual Basic for Applications editor where you can modify the code.
7. **Save Your Workbook**:
   - Save your workbook as a **macro-enabled** file with the **.xlsm** extension to preserve the macro for future use.

Roll No	First Name	Last Name	Course	Phone Number
101	Nilesh	Patil	B.Sc	+91 9876543210
102	Pranav	Kadam	B.Tech	+91 8765432109
103	Suhas	Choudhari	MCA	+91 7654321098
104	Aarav	Deshmukh	MBA	+91 9876543211
105	Riya	Sharma	B.Com	+91 8765432101

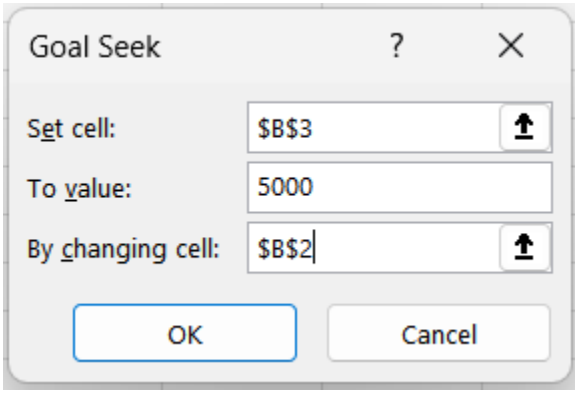
Green

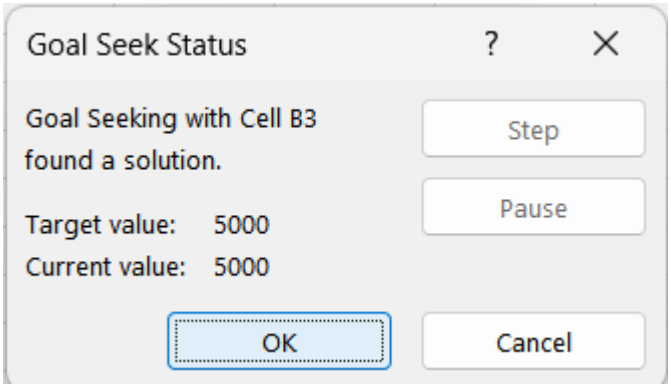
PRACTICAL 5

Create a sales data to show the implementation of Goal Seek

Price	10
Quantity sold	225
Revenue	2250

1. **Using Goal Seek**: Follow these steps:
    - Go to the **Data** tab.
    - In the **Forecast** group, click **What-If Analysis** and select **Goal Seek**.
    - In the Goal Seek dialog box:
        - Select cell **B3**.
        - Set the **To value** to **5000** (the desired final grade).
        - In the **By changing cell** box, select **B2**.
        - Click **OK**.





2. **Result**:

Price	10
Quantity sold	500
Revenue	5000

PRACTICAL 6

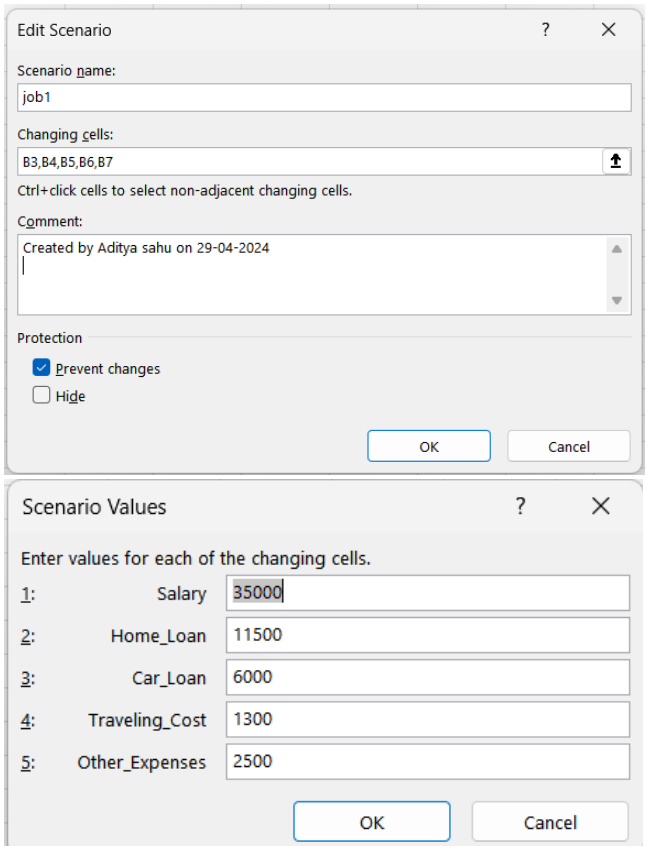
Create a data with employees salary and his/her monthly expenditures, and implement scenario manager to create three different scenarios if the salary increases.

1. Enter 1st scenario of job1

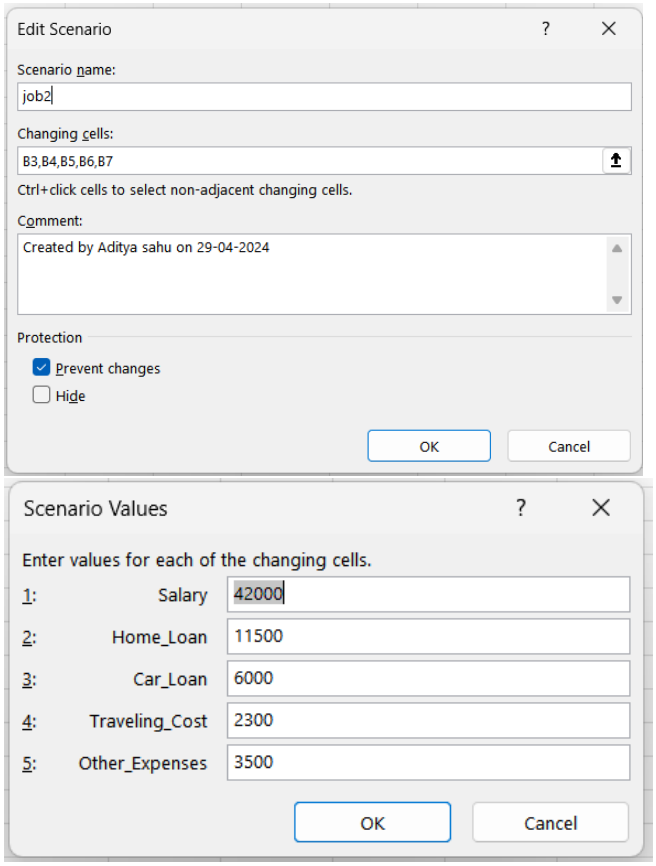
Description	Amount
Salary	35000
Home Loan	11500
Car Loan	6000
Traveling Cost	1300
Other Expenses	2500
Total Expenses	21300
Total Saving	13700

2. **Using Scenario Manager in Excel**: Follow these steps to set up the scenarios:
    a. Go to the **Data** tab.
    b. Click the **What-If Analysis** drop-down arrow.
    c. Select **Scenario Manager**.
    d. Add each scenario, specifying the changing cells (salary, loan amounts, and expenses).
    e. Enter the corresponding values for each scenario.

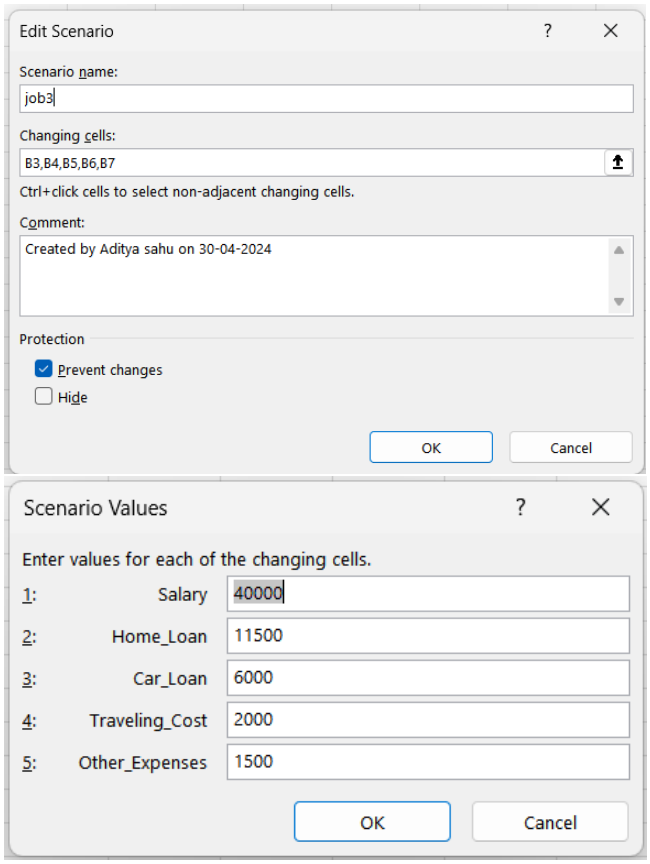
Job1


Edit Scenario
Scenario name:
job1
Changing cells:
B3,B4,B5,B6,B7
Ctrl+click cells to select non-adjacent changing cells.
Comment:
Created by Aditya sahu on 29-04-2024
Protection
Prevent changes
Hide
OK
Cancel
Scenario Values
Enter values for each of the changing cells.
1: Salary 35000
2: Home_Loan 11500
3: Car_Loan 6000
4: Traveling_Cost 1300
5: Other_Expenses 2500
OK
Cancel

Job2


Edit Scenario
Scenario name:
job2
Changing cells:
B3,B4,B5,B6,B7
Ctrl+click cells to select non-adjacent changing cells.
Comment:
Created by Aditya sahu on 29-04-2024
Protection
Prevent changes
Hide
OK
Cancel
Scenario Values
Enter values for each of the changing cells.
1: Salary 42000
2: Home_Loan 11500
3: Car_Loan 6000
4: Traveling_Cost 2300
5: Other_Expenses 3500
OK
Cancel

Job3



3. **Scenario Summary**: The Scenario Manager will create a summary of all scenarios, allowing you to compare the impact on savings. You can then make informed decisions based on the results.

Scenario Summary	Current Values:	job1	job2	job3
Changing Cells:				
Salary	42000	35000	42000	40000
Home_Loan	11500	11500	11500	11500
Car_Loan	6000	6000	6000	6000
Traveling_Cost	2300	1300	2300	2000
Other_Expenses	3500	2500	3500	1500
Result Cells:				
Total_Expenses	23300	21300	23300	21000
Total_Saving	18700	13700	18700	19000

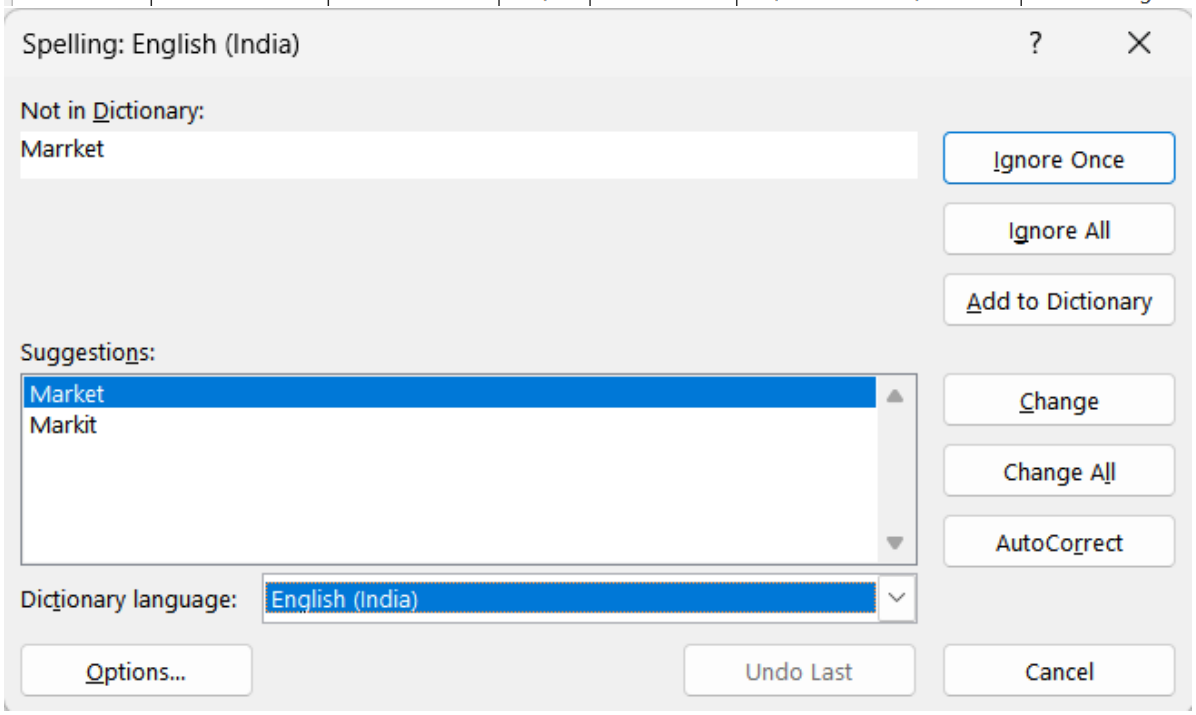
PRACTICAL 7

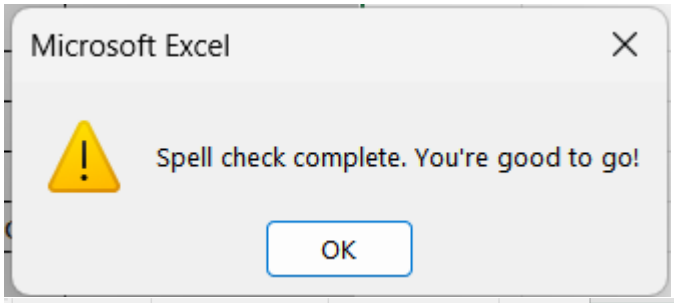
Create a data for employee details for ten employees as employee id ,employee name, contact details, salary, Pan no and address …apply four methods for data cleaning

Method 1-Spelling checking

- Go to the Spelling option from the Review tab.
- A wizard named Spelling: English (United States) will appear with necessary suggestions of the misspelt words.
- Pick the correct spelling from the available spelling suggestions and click on Change All to make corrections in the entire worksheet.

Employee Data						
Employee ID	**Employee Name**	**Contact Details**	**Salary**	**PAN No**	**Address**	**Working as**
1001	Rajesh Kumar	+91 9876543210	₹ 50,000	ABCDE1234F	123, Main St, Delhi	Marrket research
1002	Priya Sharma	+91 9876543211	₹ 45,000	FGHIJ5678G	456, Park Ave, Mumbai	Software engineer
1003	Sanjay Patel	+91 9876543212	₹ 55,000	KLMNO9012H	789, MG Road, Bangalore	Data analyst
1004	Anjali Gupta	+91 9876543213	₹ 48,000	PQRST2345I	101, Lake View, Chennai	Data analyst
1005	Sameer Khan	+91 9876543214	₹ 52,000	UVWXY3456J	222, Beach Rd, Goa	Data analyst
1006	Meera Reddy	+91 9876543215	₹ 60,000	ZABCD6789K	333, Hilltop, Hyderabad	Data analyst
1007	Arjun Singh	+91 9876543216	₹ 42,000	EFGHI7890L	444, River View, Kolkata	Data analyst
1008	Nisha Verma	+91 9876543217	₹ 58,000	JKLMN1234M	555, Skyline, Pune	Data analyst
1009	Vivek Sharma	+91 9876543218	₹ 47,000	OPQRS5678N	666, Garden Rd, Jaipur	Data analyst
1010	Aarti Yadav	+91 9876543219	₹ 53,000	TUVWX9012O	777, Sunshine Ave, Lucknow	Software engineer





Employee Data						
Employee ID	**Employee Name**	**Contact Details**	**Salary**	**PAN No**	**Address**	**Working as**
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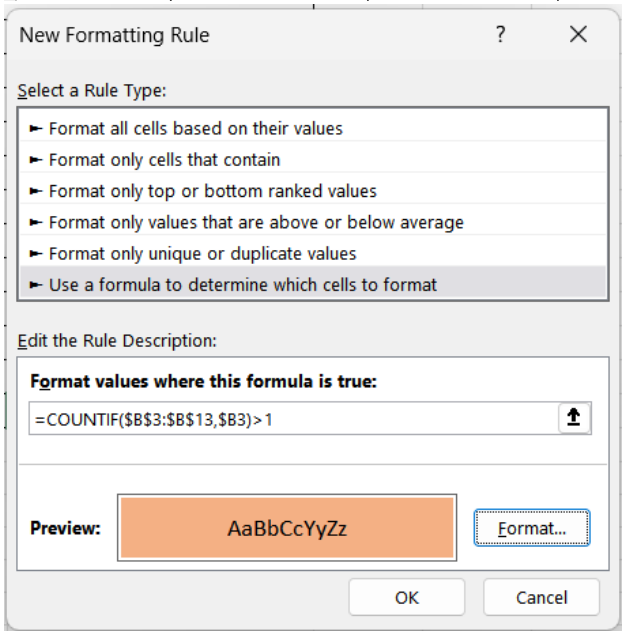
1002	Priya Sharma	+91 9876543211	₹ 45,000	FGHIJ5678G	456, Park Ave, Mumbai	Software engineer
1003	Sanjay Patel	+91 9876543212	₹ 55,000	KLMNO9012H	789, MG Road, Bangalore	Data analyst
1004	Anjali Gupta	+91 9876543213	₹ 48,000	PQRST2345I	101, Lake View, Chennai	Data analyst
1005	Sameer Khan	+91 9876543214	₹ 52,000	UVWXY3456J	222, Beach Rd, Goa	Data analyst
1006	Meera Reddy	+91 9876543215	₹ 60,000	ZABCD6789K	333, Hilltop, Hyderabad	Data analyst
1007	Arjun Singh	+91 9876543216	₹ 42,000	EFGHI7890L	444, River View, Kolkata	Data analyst
1008	Nisha Verma	+91 9876543217	₹ 58,000	JKLMN1234M	555, Skyline, Pune	Data analyst
1009	Vivek Sharma	+91 9876543218	₹ 47,000	OPQRS5678N	666, Garden Rd, Jaipur	Data analyst
1010	Aarti Yadav	+91 9876543219	₹ 53,000	TUVWX9012O	777, Sunshine Ave, Lucknow	Software engineer

Method 2 – Highlighting Duplicates

- Go to Conditional Formatting from the Home tab.
- Select the New Rule… option.
- Pick the Use a formula to determine which cells to format option from the New Formatting Rule wizard.
- Insert the following formula in the Format values where this formula is true section: =COUNTIF($B$3:$B$13,$B3)>1
- Click on the Format option to define the matched values format.
- You can customize the font style of the matched values. We have set the font color white and style italic for the matched cells.
- Click OK to finish the formatting.
- We have the duplicate values highlighted according to the defined formatting.

Employee Data					
Employee ID	**Employee Name**	**Contact Details**	**Salary**	**PAN No**	**Address**
1001	Rajesh Kumar	+91 9876543210	₹ 50,000	ABCDE1234F	123, Main St, Delhi
1002	Priya Sharma	+91 9876543211	₹ 45,000	FGHIJ5678G	456, Park Ave, Mumbai
1003	Sanjay Patel	+91 9876543212	₹ 55,000	KLMNO9012H	789, MG Road, Bangalore
1004	Anjali Gupta	+91 9876543213	₹ 48,000	PQRST2345I	101, Lake View, Chennai
1005	Sameer Khan	+91 9876543214	₹ 52,000	UVWXY3456J	222, Beach Rd, Goa
1006	Meera Reddy	+91 9876543215	₹ 60,000	ZABCD6789K	333, Hilltop, Hyderabad
1007	Arjun Singh	+91 9876543216	₹ 42,000	EFGHI7890L	444, River View, Kolkata
1008	Nisha Verma	+91 9876543217	₹ 58,000	JKLMN1234M	555, Skyline, Pune
1009	Vivek Sharma	+91 9876543218	₹ 47,000	OPQRS5678N	666, Garden Rd, Jaipur
1010	Aarti Yadav	+91 9876543219	₹ 53,000	TUVWX9012O	777, Sunshine Ave, Lucknow
1001	Rajesh Kumar	+91 9876543210	₹ 50,000	ABCDE1234F	123, Main St, Delhi



Employee Data					
Employee ID	**Employee Name**	**Contact Details**	**Salary**	**PAN No**	**Address**
1001	Rajesh Kumar	+91 9876543210	₹ 50,000	ABCDE1234F	123, Main St, Delhi
1002	Priya Sharma	+91 9876543211	₹ 45,000	FGHIJ5678G	456, Park Ave, Mumbai
1003	Sanjay Patel	+91 9876543212	₹ 55,000	KLMNO9012H	789, MG Road, Bangalore
1004	Anjali Gupta	+91 9876543213	₹ 48,000	PQRST2345I	101, Lake View, Chennai
1005	Sameer Khan	+91 9876543214	₹ 52,000	UVWXY3456J	222, Beach Rd, Goa
1006	Meera Reddy	+91 9876543215	₹ 60,000	ZABCD6789K	333, Hilltop, Hyderabad
1007	Arjun Singh	+91 9876543216	₹ 42,000	EFGHI7890L	444, River View, Kolkata
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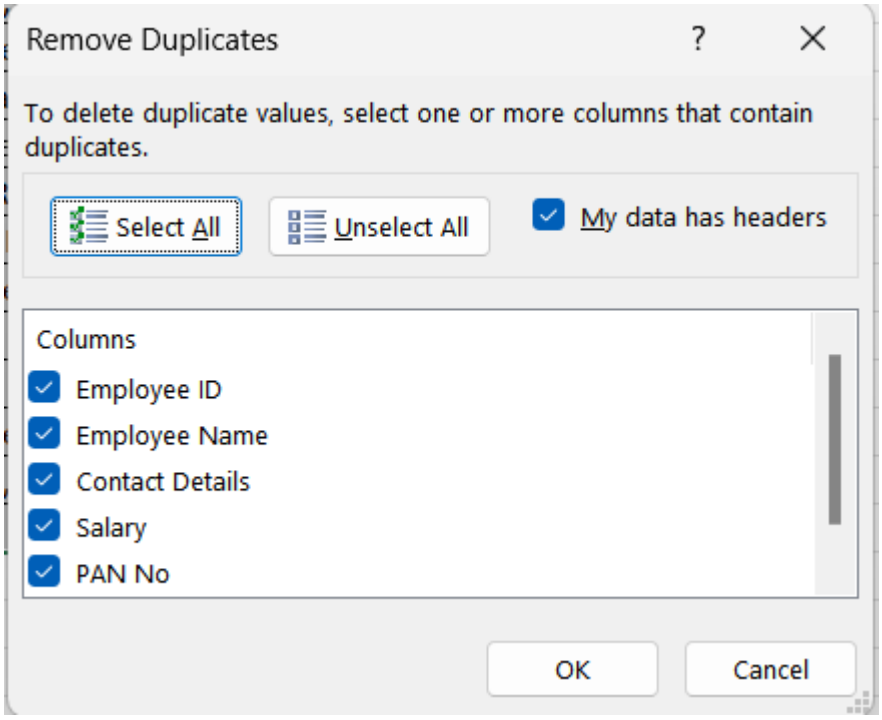
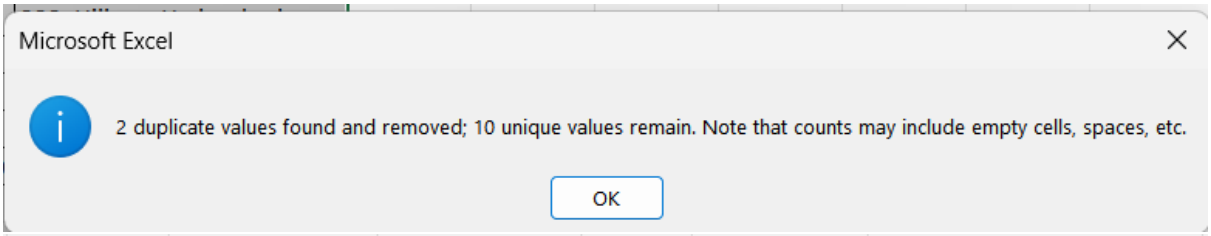
1010	Aarti Yadav	+91 9876543219	₹ 53,000	TUVWX9012O	777, Sunshine Ave, Lucknow
1001	Rajesh Kumar	+91 9876543210	₹ 50,000	ABCDE1234F	123, Main St, Delhi

Method 3 – Removing Duplicates

- Select the entire data and go to the Data tab.
- Click on Remove Duplicates.
- Pick a column and click on OK to find the duplicates and delete the entire row.
- We'll get a dataset with no duplicates along the defined column.

Employee Data					
Employee ID	**Employee Name**	**Contact Details**	**Salary**	**PAN No**	**Address**
1001	Rajesh Kumar	+91 9876543210	₹ 50,000	ABCDE1234F	123, Main St, Delhi
1002	Priya Sharma	+91 9876543211	₹ 45,000	FGHIJ5678G	456, Park Ave, Mumbai
1003	Sanjay Patel	+91 9876543212	₹ 55,000	KLMNO9012H	789, MG Road, Bangalore
1004	Anjali Gupta	+91 9876543213	₹ 48,000	PQRST2345I	101, Lake View, Chennai
1005	Sameer Khan	+91 9876543214	₹ 52,000	UVWXY3456J	222, Beach Rd, Goa
1006	Meera Reddy	+91 9876543215	₹ 60,000	ZABCD6789K	333, Hilltop, Hyderabad
1007	Arjun Singh	+91 9876543216	₹ 42,000	EFGHI7890L	444, River View, Kolkata
1008	Nisha Verma	+91 9876543217	₹ 58,000	JKLMN1234M	555, Skyline, Pune
1009	Vivek Sharma	+91 9876543218	₹ 47,000	OPQRS5678N	666, Garden Rd, Jaipur
1010	Aarti Yadav	+91 9876543219	₹ 53,000	TUVWX9012O	777, Sunshine Ave, Lucknow
1001	Rajesh Kumar	+91 9876543210	₹ 50,000	ABCDE1234F	123, Main St, Delhi
1008	Nisha Verma	+91 9876543217	₹ 58,000	JKLMN1234M	555, Skyline, Pune





Employee Data					
Employee ID	**Employee Name**	**Contact Details**	**Salary**	**PAN No**	**Address**
1001	Rajesh Kumar	+91 9876543210	₹ 50,000	ABCDE1234F	123, Main St, Delhi
1002	Priya Sharma	+91 9876543211	₹ 45,000	FGHIJ5678G	456, Park Ave, Mumbai
1003	Sanjay Patel	+91 9876543212	₹ 55,000	KLMNO9012H	789, MG Road, Bangalore
1004	Anjali Gupta	+91 9876543213	₹ 48,000	PQRST2345I	101, Lake View, Chennai
1005	Sameer Khan	+91 9876543214	₹ 52,000	UVWXY3456J	222, Beach Rd, Goa
1006	Meera Reddy	+91 9876543215	₹ 60,000	ZABCD6789K	333, Hilltop, Hyderabad
1007	Arjun Singh	+91 9876543216	₹ 42,000	EFGHI7890L	444, River View, Kolkata
1008	Nisha Verma	+91 9876543217	₹ 58,000	JKLMN1234M	555, Skyline, Pune
1009	Vivek Sharma	+91 9876543218	₹ 47,000	OPQRS5678N	666, Garden Rd, Jaipur
1010	Aarti Yadav	+91 9876543219	₹ 53,000	TUVWX9012O	777, Sunshine Ave, Lucknow

Method 4 – Replacing Text

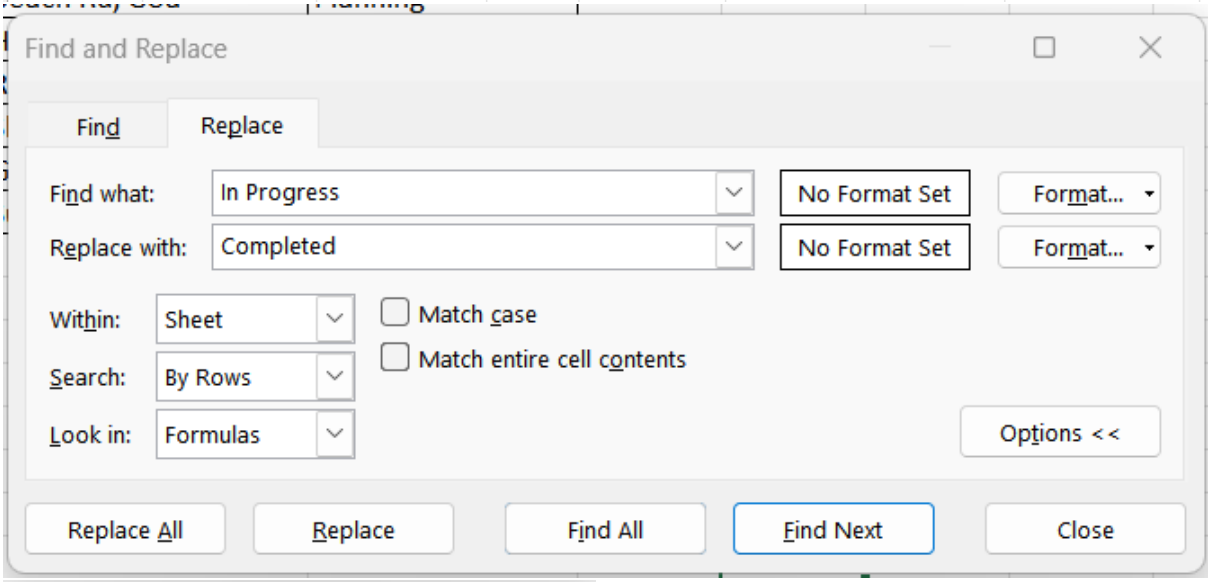
Go to the Find & Select command from the Home tab.

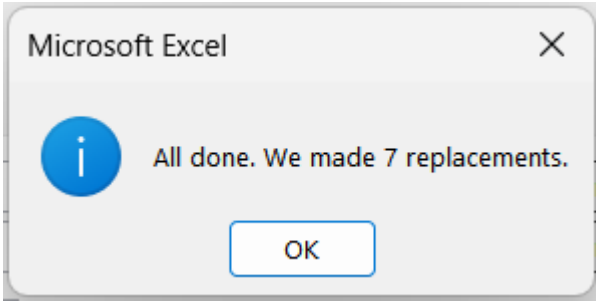
Pick Replace… from the available options.

Input the text to be replaced (i.e. In Progress) in the Find what section and the text that will be inserted (i.e. Completed) in the Replace with section.

Click on Replace All.

Employee Data						
Employee ID	**Employee Name**	**Contact Details**	**Salary**	**PAN No**	**Address**	**Work Status**
1001	Rajesh Kumar	+91 9876543210	₹ 50,000	ABCDE1234F	123, Main St, Delhi	In Progress
1002	Priya Sharma	+91 9876543211	₹ 45,000	FGHIJ5678G	456, Park Ave, Mumbai	Planning
1003	Sanjay Patel	+91 9876543212	₹ 55,000	KLMNO9012H	789, MG Road, Bangalore	In Progress
1004	Anjali Gupta	+91 9876543213	₹ 48,000	PQRST2345I	101, Lake View, Chennai	In Progress
1005	Sameer Khan	+91 9876543214	₹ 52,000	UVWXY3456J	222, Beach Rd, Goa	Planning
1006	Meera Reddy	+91 9876543215	₹ 60,000	ZABCD6789K	333, Hilltop, Hyderabad	In Progress
1007	Arjun Singh	+91 9876543216	₹ 42,000	EFGHI7890L	444, River View, Kolkata	Planning
1008	Nisha Verma	+91 9876543217	₹ 58,000	JKLMN1234M	555, Skyline, Pune	In Progress
1009	Vivek Sharma	+91 9876543218	₹ 47,000	OPQRS5678N	666, Garden Rd, Jaipur	In Progress
1010	Aarti Yadav	+91 9876543219	₹ 53,000	TUVWX9012O	777, Sunshine Ave, Lucknow	In Progress





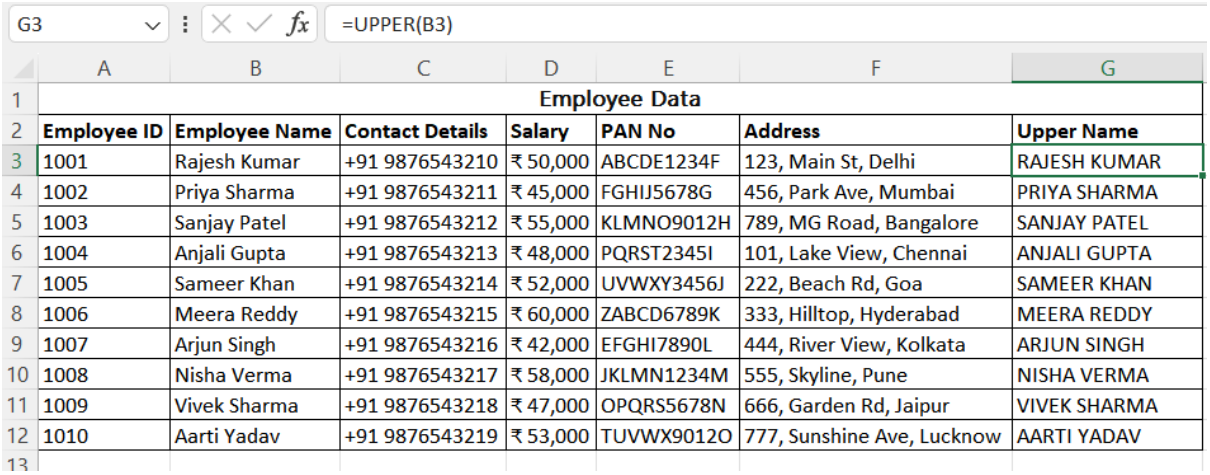
Employee Data						
Employee ID	**Employee Name**	**Contact Details**	**Salary**	**PAN No**	**Address**	**Work Status**
1001	Rajesh Kumar	+91 9876543210	₹ 50,000	ABCDE1234F	123, Main St, Delhi	Completed
1002	Priya Sharma	+91 9876543211	₹ 45,000	FGHIJ5678G	456, Park Ave, Mumbai	Planning
1003	Sanjay Patel	+91 9876543212	₹ 55,000	KLMNO9012H	789, MG Road, Bangalore	Completed
1004	Anjali Gupta	+91 9876543213	₹ 48,000	PQRST2345I	101, Lake View, Chennai	Completed
1005	Sameer Khan	+91 9876543214	₹ 52,000	UVWXY3456J	222, Beach Rd, Goa	Planning
1006	Meera Reddy	+91 9876543215	₹ 60,000	ZABCD6789K	333, Hilltop, Hyderabad	Completed
1007	Arjun Singh	+91 9876543216	₹ 42,000	EFGHI7890L	444, River View, Kolkata	Planning
1008	Nisha Verma	+91 9876543217	₹ 58,000	JKLMN1234M	555, Skyline, Pune	Completed
1009	Vivek Sharma	+91 9876543218	₹ 47,000	OPQRS5678N	666, Garden Rd, Jaipur	Completed
1010	Aarti Yadav	+91 9876543219	₹ 53,000	TUVWX9012O	777, Sunshine Ave, Lucknow	Completed

PRACTICAL 8

Create a data for employee details for ten employees as employee id ,employee name, contact details, salary, Pan no and address …apply four methods for data cleaning

Method 1 – Changing Text Cases

- Apply the following formula with the UPPER function in cell G3 to have the name of cell B3 in the proper case:
  =PROPER(B3)
- Use the Fill Handle to autofill the formula.

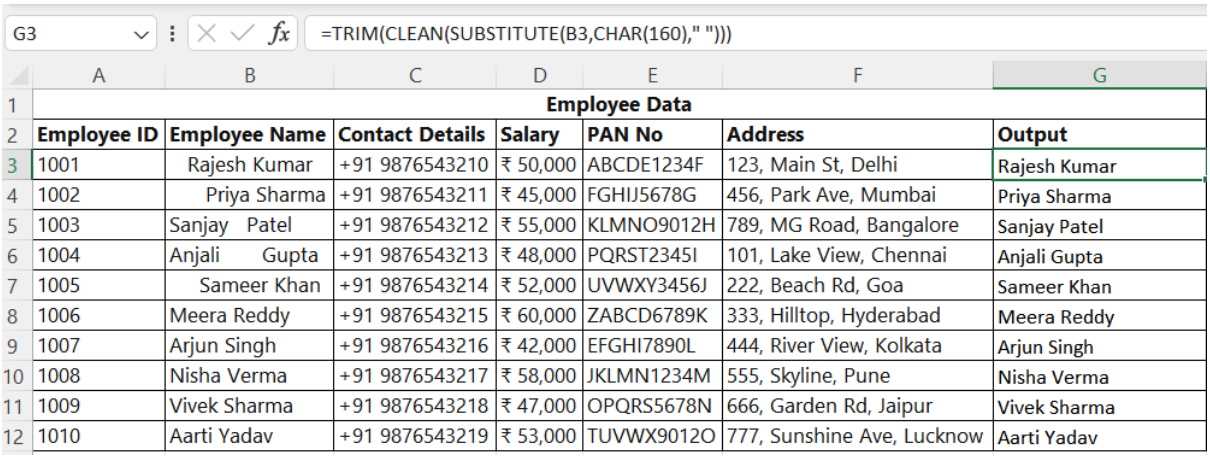


G3 | =UPPER(B3)

	A	B	C	D	E	F	G
1	Employee Data						
2	**Employee ID**	**Employee Name**	**Contact Details**	**Salary**	**PAN No**	**Address**	**Upper Name**
3	1001	Rajesh Kumar	+91 9876543210	₹ 50,000	ABCDE1234F	123, Main St, Delhi	RAJESH KUMAR
4	1002	Priya Sharma	+91 9876543211	₹ 45,000	FGHIJ5678G	456, Park Ave, Mumbai	PRIYA SHARMA
5	1003	Sanjay Patel	+91 9876543212	₹ 55,000	KLMNO9012H	789, MG Road, Bangalore	SANJAY PATEL
6	1004	Anjali Gupta	+91 9876543213	₹ 48,000	PQRST2345I	101, Lake View, Chennai	ANJALI GUPTA
7	1005	Sameer Khan	+91 9876543214	₹ 52,000	UVWXY3456J	222, Beach Rd, Goa	SAMEER KHAN
8	1006	Meera Reddy	+91 9876543215	₹ 60,000	ZABCD6789K	333, Hilltop, Hyderabad	MEERA REDDY
9	1007	Arjun Singh	+91 9876543216	₹ 42,000	EFGHI7890L	444, River View, Kolkata	ARJUN SINGH
10	1008	Nisha Verma	+91 9876543217	₹ 58,000	JKLMN1234M	555, Skyline, Pune	NISHA VERMA
11	1009	Vivek Sharma	+91 9876543218	₹ 47,000	OPQRS5678N	666, Garden Rd, Jaipur	VIVEK SHARMA
12	1010	Aarti Yadav	+91 9876543219	₹ 53,000	TUVWX9012O	777, Sunshine Ave, Lucknow	AARTI YADAV
13							

Method 2 – Removing Spaces and Non-Printable Characters

- Apply the following formula with the TRIM, CLEAN, and SUBSTITUTE functions to remove spaces between texts as well as leading spaces at the beginning:
  =TRIM(CLEAN((SUBSTITUTE(B3,CHAR(160)," "))))



G3 | =TRIM(CLEAN(SUBSTITUTE(B3,CHAR(160)," ")))

	A	B	C	D	E	F	G
1	Employee Data						
2	**Employee ID**	**Employee Name**	**Contact Details**	**Salary**	**PAN No**	**Address**	**Output**
3	1001	Rajesh Kumar	+91 9876543210	₹ 50,000	ABCDE1234F	123, Main St, Delhi	Rajesh Kumar
4	1002	Priya Sharma	+91 9876543211	₹ 45,000	FGHIJ5678G	456, Park Ave, Mumbai	Priya Sharma
5	1003	Sanjay Patel	+91 9876543212	₹ 55,000	KLMNO9012H	789, MG Road, Bangalore	Sanjay Patel
6	1004	Anjali Gupta	+91 9876543213	₹ 48,000	PQRST2345I	101, Lake View, Chennai	Anjali Gupta
7	1005	Sameer Khan	+91 9876543214	₹ 52,000	UVWXY3456J	222, Beach Rd, Goa	Sameer Khan
8	1006	Meera Reddy	+91 9876543215	₹ 60,000	ZABCD6789K	333, Hilltop, Hyderabad	Meera Reddy
9	1007	Arjun Singh	+91 9876543216	₹ 42,000	EFGHI7890L	444, River View, Kolkata	Arjun Singh
10	1008	Nisha Verma	+91 9876543217	₹ 58,000	JKLMN1234M	555, Skyline, Pune	Nisha Verma
11	1009	Vivek Sharma	+91 9876543218	₹ 47,000	OPQRS5678N	666, Garden Rd, Jaipur	Vivek Sharma
12	1010	Aarti Yadav	+91 9876543219	₹ 53,000	TUVWX9012O	777, Sunshine Ave, Lucknow	Aarti Yadav

Method 3 – Merging Columns

Under the Address header in column I, we'll show the proper address format by merging the house no, area, and state name from the left 3 columns.

- Apply the following formula with the CONCATENATE function to merge the columns and separate the segments with dashes:
  =CONCATENATE(F3,",",G3,",",H3)

```
=CONCATENATE(F3,",",G3,",",H3)
```

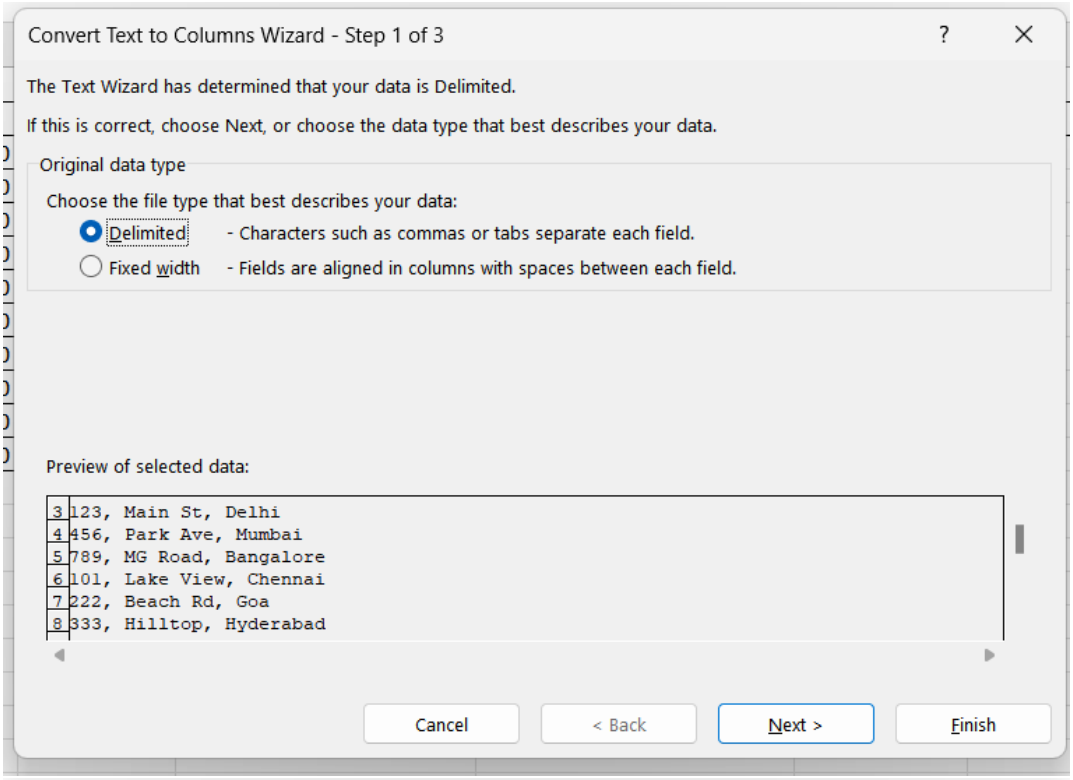
Employee Data								
Employee ID	**Employee Name**	**Contact Details**	**Salary**	**PAN No**	**House no**	**Area**	**State**	**Address**
1001	Rajesh Kumar	+91 9876543210	₹ 50,000	ABCDE1234F	123	Main St	Delhi	123, Main St, Delhi
1002	Priya Sharma	+91 9876543211	₹ 45,000	FGHIJ5678G	456	Park Ave	Mumbai	456, Park Ave, Mumbai
1003	Sanjay Patel	+91 9876543212	₹ 55,000	KLMNO9012H	789	MG Road	Bangalore	789, MG Road, Bangalore
1004	Anjali Gupta	+91 9876543213	₹ 48,000	PQRST2345I	101	Lake View	Chennai	101, Lake View, Chennai
1005	Sameer Khan	+91 9876543214	₹ 52,000	UVWXY3456J	222	Beach Rd	Goa	222, Beach Rd, Goa
1006	Meera Reddy	+91 9876543215	₹ 60,000	ZABCD6789K	333	Hilltop	Hyderabad	333, Hilltop, Hyderabad
1007	Arjun Singh	+91 9876543216	₹ 42,000	EFGHI7890L	444	River View	Kolkata	444, River View, Kolkata
1008	Nisha Verma	+91 9876543217	₹ 58,000	JKLMN1234M	555	Skyline	Pune	555, Skyline, Pune
1009	Vivek Sharma	+91 9876543218	₹ 47,000	OPQRS5678N	666	Garden Rd	Jaipur	666, Garden Rd, Jaipur
1010	Aarti Yadav	+91 9876543219	₹ 53,000	TUVWX9012O	777	Sunshine Ave	Lucknow	777, Sunshine Ave, Lucknow

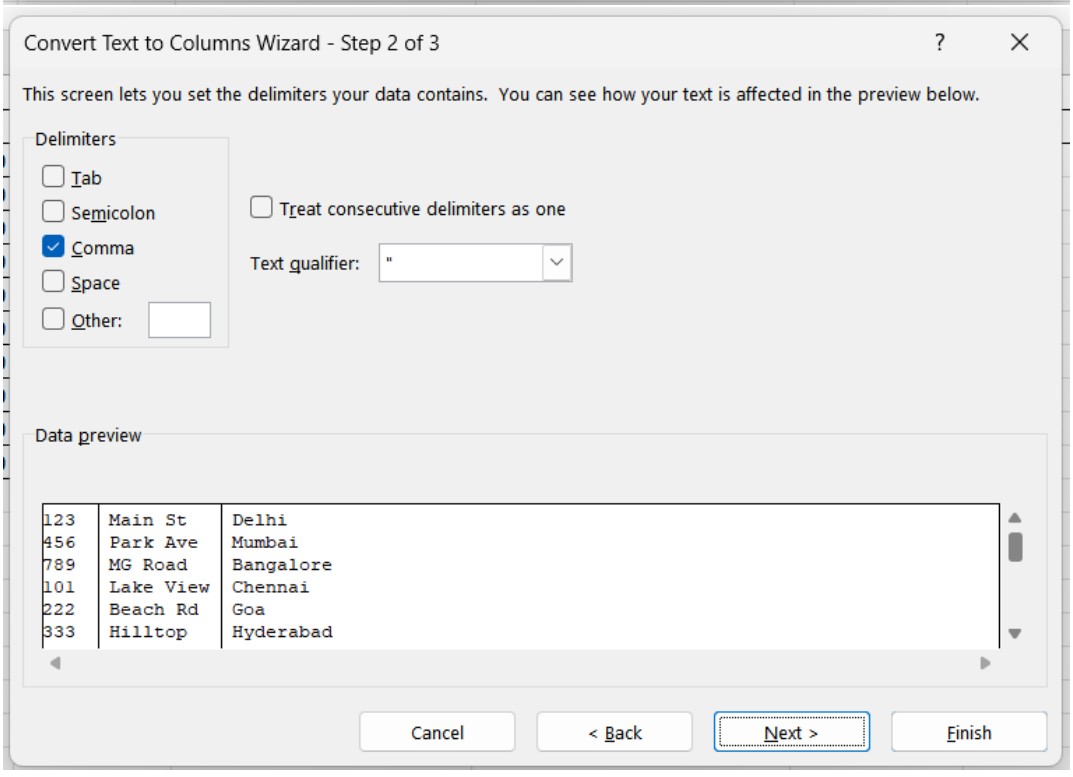
Method 4 – Distributing Cell Contents to Adjacent Columns

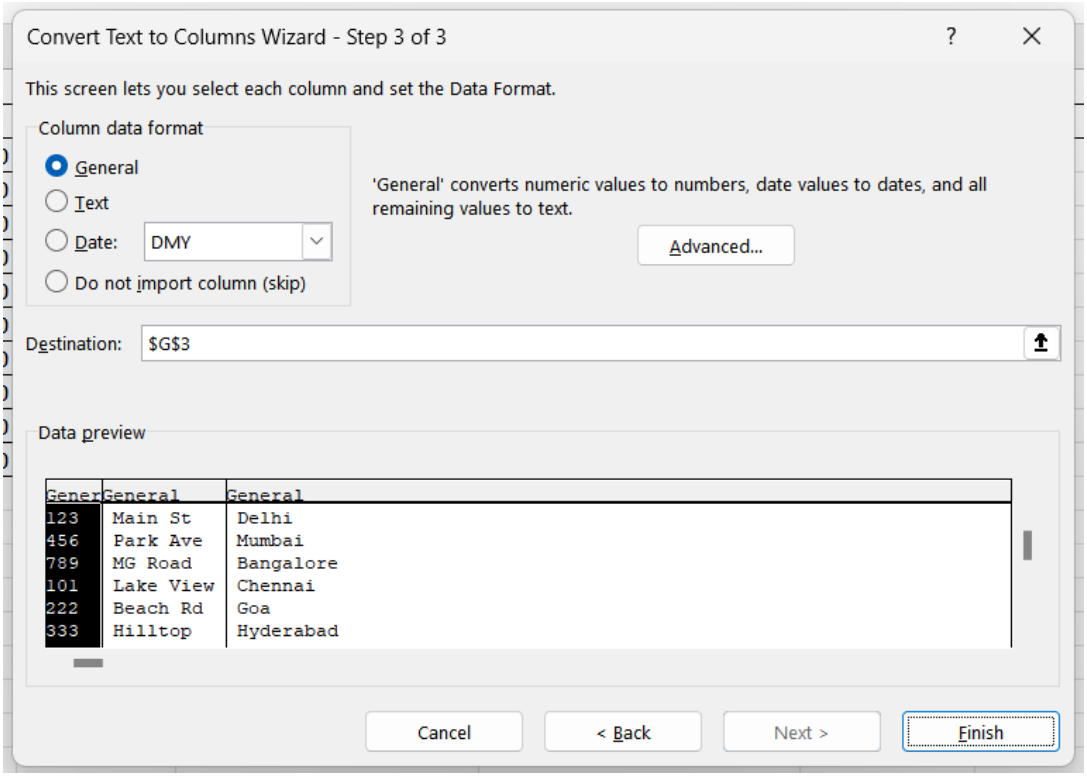
We have a dataset where the addresses are the combination of the house no, area, and state name. Those are separated with a comma (,) between them.

- Copy the entire column values to the Street Name column.
- Select all the values in the Street Name column and click on the Text to Columns option from the Data tab.
- From the Convert Text to Columns Wizard, choose the Delimited since the data is combined with the dash sign.
- Click on Next.
- Define the delimiter based on what the cell values are separated.
- Click on the Next button.
- Click on Finish to end the process.
- We have the distributed cell values in the adjacent cells.

Employee Data					
Employee ID	**Employee Name**	**Contact Details**	**Salary**	**PAN No**	**Address**
1001	Rajesh Kumar	+91 9876543210	₹ 50,000	ABCDE1234F	123, Main St, Delhi
1002	Priya Sharma	+91 9876543211	₹ 45,000	FGHIJ5678G	456, Park Ave, Mumbai
1003	Sanjay Patel	+91 9876543212	₹ 55,000	KLMNO9012H	789, MG Road, Bangalore
1004	Anjali Gupta	+91 9876543213	₹ 48,000	PQRST2345I	101, Lake View, Chennai
1005	Sameer Khan	+91 9876543214	₹ 52,000	UVWXY3456J	222, Beach Rd, Goa
1006	Meera Reddy	+91 9876543215	₹ 60,000	ZABCD6789K	333, Hilltop, Hyderabad
1007	Arjun Singh	+91 9876543216	₹ 42,000	EFGHI7890L	444, River View, Kolkata
1008	Nisha Verma	+91 9876543217	₹ 58,000	JKLMN1234M	555, Skyline, Pune
1009	Vivek Sharma	+91 9876543218	₹ 47,000	OPQRS5678N	666, Garden Rd, Jaipur
1010	Aarti Yadav	+91 9876543219	₹ 53,000	TUVWX9012O	777, Sunshine Ave, Lucknow


Convert Text to Columns Wizard - Step 1 of 3
The Text Wizard has determined that your data is Delimited.
If this is correct, choose Next, or choose the data type that best describes your data.
Original data type
Choose the file type that best describes your data:
Delimited - Characters such as commas or tabs separate each field.
Fixed width - Fields are aligned in columns with spaces between each field.
Preview of selected data:
3 123, Main St, Delhi
4 456, Park Ave, Mumbai
5 789, MG Road, Bangalore
6 101, Lake View, Chennai
7 222, Beach Rd, Goa
8 333, Hilltop, Hyderabad
Cancel
< Back
Next >
Finish


Convert Text to Columns Wizard - Step 2 of 3
This screen lets you set the delimiters your data contains. You can see how your text is affected in the preview below.
Delimiters
Tab
Semicolon
Comma
Space
Other:
Treat consecutive delimiters as one
Text qualifier: "
Data preview
123 Main St Delhi
456 Park Ave Mumbai
789 MG Road Bangalore
101 Lake View Chennai
222 Beach Rd Goa
333 Hilltop Hyderabad
Cancel
< Back
Next >
Finish



Employee Data

Employee ID	Employee Name	Contact Details	Salary	PAN No	Address	House no	Area	State
1001	Rajesh Kumar	+91 9876543210	₹ 50,000	ABCDE1234F	123, Main St, Delhi	123	Main St	Delhi
1002	Priya Sharma	+91 9876543211	₹ 45,000	FGHIJ5678G	456, Park Ave, Mumbai	456	Park Ave	Mumbai
1003	Sanjay Patel	+91 9876543212	₹ 55,000	KLMNO9012H	789, MG Road, Bangalore	789	MG Road	Bangalore
1004	Anjali Gupta	+91 9876543213	₹ 48,000	PQRST2345I	101, Lake View, Chennai	101	Lake View	Chennai
1005	Sameer Khan	+91 9876543214	₹ 52,000	UVWXY3456J	222, Beach Rd, Goa	222	Beach Rd	Goa
1006	Meera Reddy	+91 9876543215	₹ 60,000	ZABCD6789K	333, Hilltop, Hyderabad	333	Hilltop	Hyderabad
1007	Arjun Singh	+91 9876543216	₹ 42,000	EFGHI7890L	444, River View, Kolkata	444	River View	Kolkata
1008	Nisha Verma	+91 9876543217	₹ 58,000	JKLMN1234M	555, Skyline, Pune	555	Skyline	Pune
1009	Vivek Sharma	+91 9876543218	₹ 47,000	OPQRS5678N	666, Garden Rd, Jaipur	666	Garden Rd	Jaipur
1010	Aarti Yadav	+91 9876543219	₹ 53,000	TUVWX9012O	777, Sunshine Ave, Lucknow	777	Sunshine Ave	Lucknow

PRACTICAL 9

Create a data for employee details for ten employees as employee id ,employee name, contact details, salary, Pan no and address …apply four methods for data cleaning

Method 1 – Switching Rows and Columns

- Copy the entire range.
- Select a cell to paste the switched rows and columns.
- Go to Paste from the Home tab.
- Pick the Transpose (T) option to make the switch
- We'll get the switched rows and columns

Employee Data					
Employee ID	**Employee Name**	**Contact Details**	**Salary**	**PAN No**	**Address**
1001	Rajesh Kumar	+91 9876543210	₹ 50,000	ABCDE1234F	123, Main St, Delhi
1002	Priya Sharma	+91 9876543211	₹ 45,000	FGHIJ5678G	456, Park Ave, Mumbai
1003	Sanjay Patel	+91 9876543212	₹ 55,000	KLMNO9012H	789, MG Road, Bangalore
1004	Anjali Gupta	+91 9876543213	₹ 48,000	PQRST2345I	101, Lake View, Chennai
1005	Sameer Khan	+91 9876543214	₹ 52,000	UVWXY3456J	222, Beach Rd, Goa
1006	Meera Reddy	+91 9876543215	₹ 60,000	ZABCD6789K	333, Hilltop, Hyderabad
1007	Arjun Singh	+91 9876543216	₹ 42,000	EFGHI7890L	444, River View, Kolkata
1008	Nisha Verma	+91 9876543217	₹ 58,000	JKLMN1234M	555, Skyline, Pune
1009	Vivek Sharma	+91 9876543218	₹ 47,000	OPQRS5678N	666, Garden Rd, Jaipur
1010	Aarti Yadav	+91 9876543219	₹ 53,000	TUVWX9012O	777, Sunshine Ave, Lucknow

Employee Data	**Employee ID**	1001	1002	1003	1004	1005	1006	1007	1008	1009	1010
	Employee Name	Rajesh Kumar	Priya Sharma	Sanjay Patel	Anjali Gupta	Sameer Khan	Meera Reddy	Arjun Singh	Nisha Verma	Vivek Sharma	Aarti Yadav
	Contact Details	+91 9876543210	+91 9876543211	+91 9876543212	+91 9876543213	+91 9876543214	+91 9876543215	+91 9876543216	+91 9876543217	+91 9876543218	+91 9876543219
	Salary	₹ 50,000	₹ 45,000	₹ 55,000	₹ 48,000	₹ 52,000	₹ 60,000	₹ 42,000	₹ 58,000	₹ 47,000	₹ 53,000
	PAN No	ABCDE1234F	FGHIJ5678G	KLMNO9012H	PQRST2345I	UVWXY3456J	ZABCD6789K	EFGHI7890L	JKLMN1234M	OPQRS5678N	TUVWX9012O
	Address	123, Main St, Delhi	456, Park Ave, Mumbai	789, MG Road, Bangalore	101, Lake View, Chennai	222, Beach Rd, Goa	333, Hilltop, Hyderabad	444, River View, Kolkata	555, Skyline, Pune	666, Garden Rd, Jaipur	777, Sunshine Ave, Lucknow

Method 2 – Sorting Data

- In the following dataset, we will sort data in ascending order based on the Name.
- Select the column you want to sort by.
- Go to the Home tab and click on Sort A to Z from Sort & Filter to sort in ascending order.

Employee Data					
Employee ID	**Employee Name**	**Contact Details**	**Salary**	**PAN No**	**Address**
1001	Rajesh Kumar	+91 9876543210	₹ 50,000	ABCDE1234F	123, Main St, Delhi
1002	Priya Sharma	+91 9876543211	₹ 45,000	FGHIJ5678G	456, Park Ave, Mumbai
1003	Sanjay Patel	+91 9876543212	₹ 55,000	KLMNO9012H	789, MG Road, Bangalore
1004	Anjali Gupta	+91 9876543213	₹ 48,000	PQRST2345I	101, Lake View, Chennai
1005	Sameer Khan	+91 9876543214	₹ 52,000	UVWXY3456J	222, Beach Rd, Goa
1006	Meera Reddy	+91 9876543215	₹ 60,000	ZABCD6789K	333, Hilltop, Hyderabad
1007	Arjun Singh	+91 9876543216	₹ 42,000	EFGHI7890L	444, River View, Kolkata
1008	Nisha Verma	+91 9876543217	₹ 58,000	JKLMN1234M	555, Skyline, Pune
1009	Vivek Sharma	+91 9876543218	₹ 47,000	OPQRS5678N	666, Garden Rd, Jaipur
1010	Aarti Yadav	+91 9876543219	₹ 53,000	TUVWX9012O	777, Sunshine Ave, Lucknow

Employee Data					
Employee ID	**Employee Name**	**Contact Details**	**Salary**	**PAN No**	**Address**
1010	Aarti Yadav	+91 9876543219	₹ 53,000	TUVWX9012O	777, Sunshine Ave, Lucknow
1004	Anjali Gupta	+91 9876543213	₹ 48,000	PQRST2345I	101, Lake View, Chennai
1007	Arjun Singh	+91 9876543216	₹ 42,000	EFGHI7890L	444, River View, Kolkata
1006	Meera Reddy	+91 9876543215	₹ 60,000	ZABCD6789K	333, Hilltop, Hyderabad
1008	Nisha Verma	+91 9876543217	₹ 58,000	JKLMN1234M	555, Skyline, Pune
1002	Priya Sharma	+91 9876543211	₹ 45,000	FGHIJ5678G	456, Park Ave, Mumbai
1001	Rajesh Kumar	+91 9876543210	₹ 50,000	ABCDE1234F	123, Main St, Delhi
1005	Sameer Khan	+91 9876543214	₹ 52,000	UVWXY3456J	222, Beach Rd, Goa
1003	Sanjay Patel	+91 9876543212	₹ 55,000	KLMNO9012H	789, MG Road, Bangalore
1009	Vivek Sharma	+91 9876543218	₹ 47,000	OPQRS5678N	666, Garden Rd, Jaipur

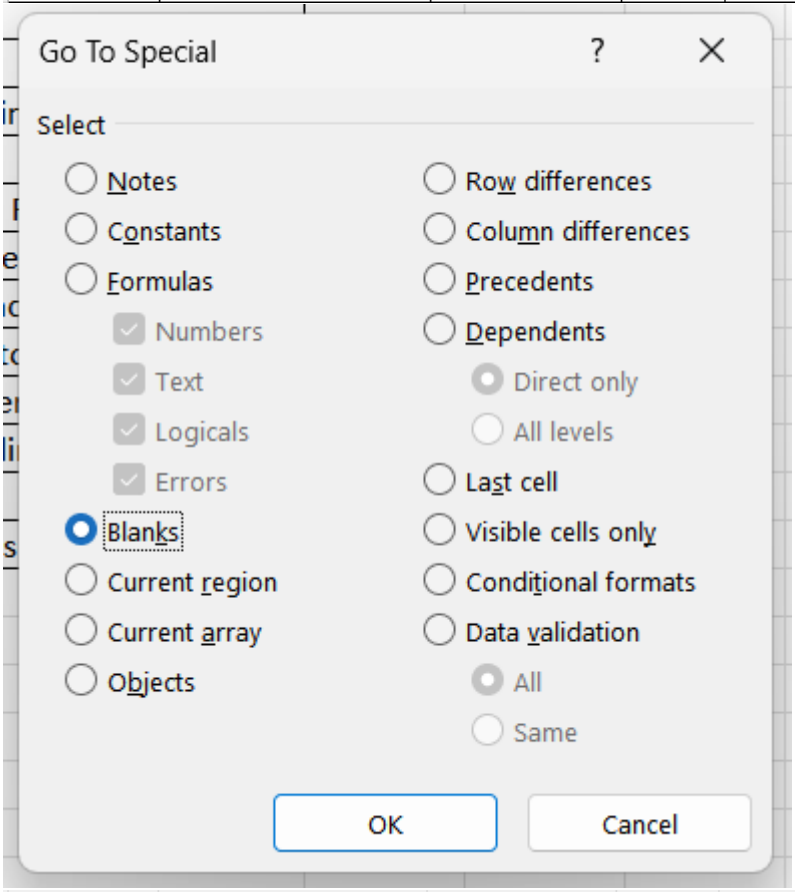
Method 3 – Filling Blank Cells

Blank cells make a dataset unfulfilled. We can insert zeros in those cells to have a better representation.

- Select the entire range.
- Go to the Home tab and select Find & Select from the ribbon.
- Pick Go To Select… from the available options.
- Select Blanks and click on OK.
- The blank cells within the selected range will be selected.
- Insert zero and press Ctrl + Enter.

We will have the blank cells filled with zeros

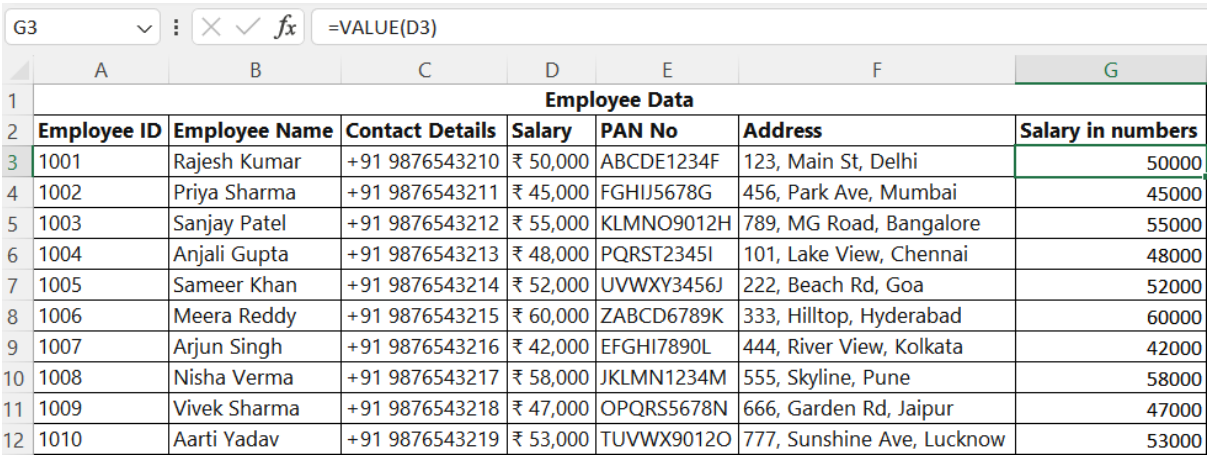
Employee Data					
Employee ID	**Employee Name**	**Contact Details**	**Salary**	**PAN No**	**Address**
1001	Rajesh Kumar	+91 9876543210	₹ 50,000		123, Main St, Delhi
1002	Priya Sharma	+91 9876543211	₹ 45,000	FGHIJ5678G	
1003	Sanjay Patel	+91 9876543212	₹ 55,000	KLMNO9012H	789, MG Road, Bangalore
1004	Anjali Gupta	+91 9876543213	₹ 48,000	PQRST2345I	101, Lake View, Chennai
1005	Sameer Khan	+91 9876543214	₹ 52,000	UVWXY3456J	222, Beach Rd, Goa
1006	Meera Reddy	+91 9876543215	₹ 60,000	ZABCD6789K	333, Hilltop, Hyderabad
1007	Arjun Singh		₹ 42,000	EFGHI7890L	444, River View, Kolkata
1008	Nisha Verma	+91 9876543217	₹ 58,000	JKLMN1234M	555, Skyline, Pune
1009	Vivek Sharma	+91 9876543218	₹ 47,000	OPQRS5678N	
1010	Aarti Yadav	+91 9876543219	₹ 53,000		777, Sunshine Ave, Lucknow



0					
Employee ID	**Employee Name**	**Contact Details**	**Salary**	**PAN No**	**Address**
1001	Rajesh Kumar	+91 9876543210	₹ 50,000	0	123, Main St, Delhi
1002	Priya Sharma	+91 9876543211	₹ 45,000	FGHIJ5678G	0
1003	Sanjay Patel	+91 9876543212	₹ 55,000	KLMNO9012H	789, MG Road, Bangalore
1004	Anjali Gupta	+91 9876543213	₹ 48,000	PQRST2345I	101, Lake View, Chennai
1005	Sameer Khan	+91 9876543214	₹ 52,000	UVWXY3456J	222, Beach Rd, Goa
1006	Meera Reddy	+91 9876543215	₹ 60,000	ZABCD6789K	333, Hilltop, Hyderabad
1007	Arjun Singh	0	₹ 42,000	EFGHI7890L	444, River View, Kolkata
1008	Nisha Verma	+91 9876543217	₹ 58,000	JKLMN1234M	555, Skyline, Pune
1009	Vivek Sharma	+91 9876543218	₹ 47,000	OPQRS5678N	0
1010	Aarti Yadav	+91 9876543219	₹ 53,000	0	777, Sunshine Ave, Lucknow

Method 4 – Fixing Numbers

- Use the following formula with the VALUE function to put the numbers in the number format:
  =VALUE(D3)



	A	B	C	D	E	F	G
1	Employee Data						
2	**Employee ID**	**Employee Name**	**Contact Details**	**Salary**	**PAN No**	**Address**	**Salary in numbers**
3	1001	Rajesh Kumar	+91 9876543210	₹ 50,000	ABCDE1234F	123, Main St, Delhi	50000
4	1002	Priya Sharma	+91 9876543211	₹ 45,000	FGHIJ5678G	456, Park Ave, Mumbai	45000
5	1003	Sanjay Patel	+91 9876543212	₹ 55,000	KLMNO9012H	789, MG Road, Bangalore	55000
6	1004	Anjali Gupta	+91 9876543213	₹ 48,000	PQRST2345I	101, Lake View, Chennai	48000
7	1005	Sameer Khan	+91 9876543214	₹ 52,000	UVWXY3456J	222, Beach Rd, Goa	52000
8	1006	Meera Reddy	+91 9876543215	₹ 60,000	ZABCD6789K	333, Hilltop, Hyderabad	60000
9	1007	Arjun Singh	+91 9876543216	₹ 42,000	EFGHI7890L	444, River View, Kolkata	42000
10	1008	Nisha Verma	+91 9876543217	₹ 58,000	JKLMN1234M	555, Skyline, Pune	58000
11	1009	Vivek Sharma	+91 9876543218	₹ 47,000	OPQRS5678N	666, Garden Rd, Jaipur	47000
12	1010	Aarti Yadav	+91 9876543219	₹ 53,000	TUVWX9012O	777, Sunshine Ave, Lucknow	53000

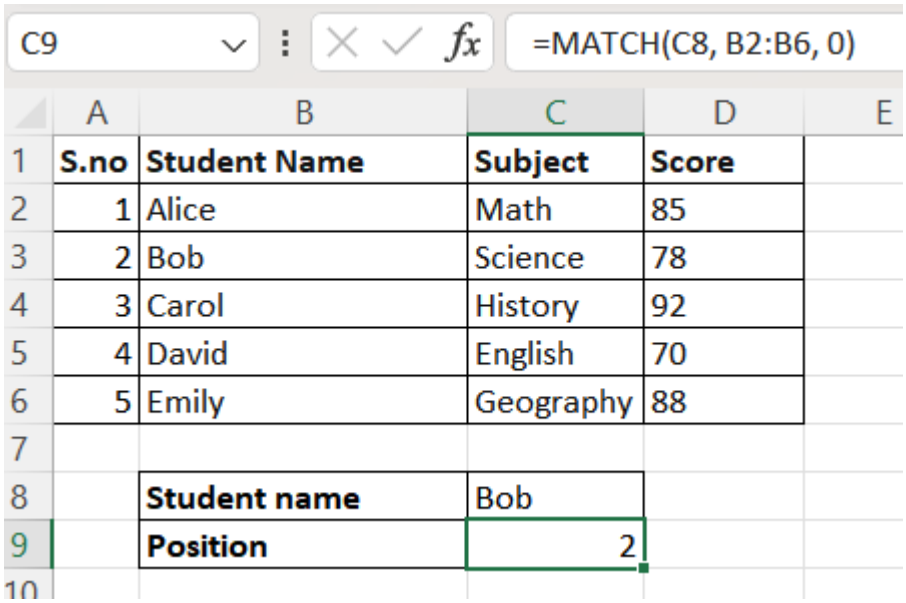
PRACTICAL 10

Create a data to implement MATCH function and INDEX Function.

MATCH Function:

The MATCH function searches for a specified value in a range and returns its position (row or column number).

Syntax: MATCH(lookup_value, lookup_array, [match_type])

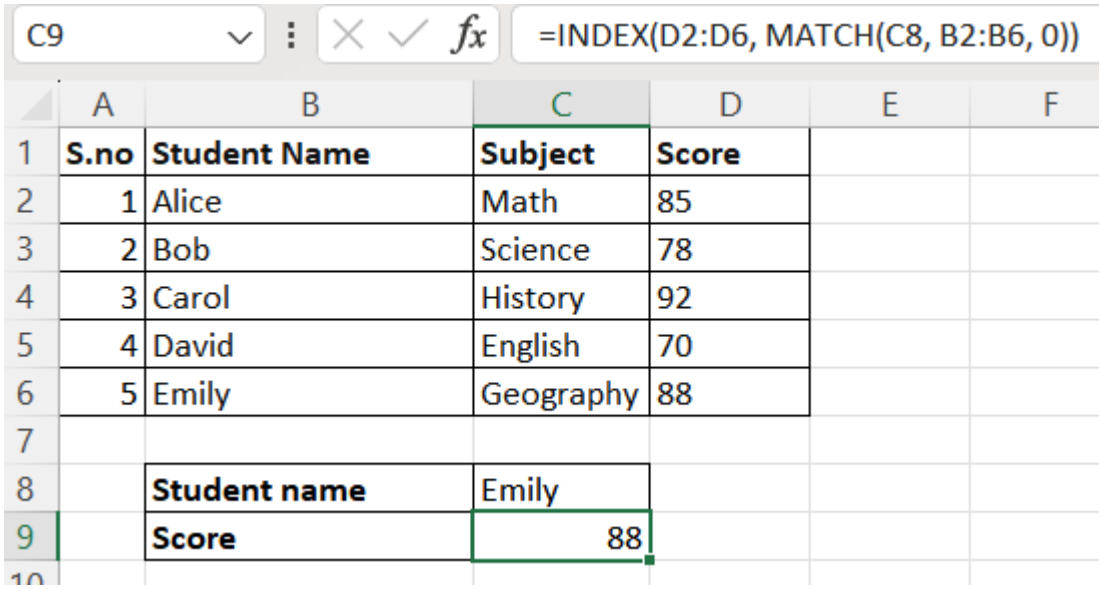


	A	B	C	D	E
1	**S.no**	**Student Name**	**Subject**	**Score**	
2	1	Alice	Math	85	
3	2	Bob	Science	78	
4	3	Carol	History	92	
5	4	David	English	70	
6	5	Emily	Geography	88	
7					
8		**Student name**	Bob		
9		**Position**	2		
10					

INDEX Function:

The INDEX function retrieves a value from a specified range based on its row and column numbers.

Syntax: INDEX(array, row_num, [column_num])



	A	B	C	D	E	F
1	**S.no**	**Student Name**	**Subject**	**Score**		
2	1	Alice	Math	85		
3	2	Bob	Science	78		
4	3	Carol	History	92		
5	4	David	English	70		
6	5	Emily	Geography	88		
7						
8		**Student name**	Emily			
9		**Score**	88			
10						

PRACTICAL 11

Create a data and implement IFNA and IFERROR functions.

IFNA Function

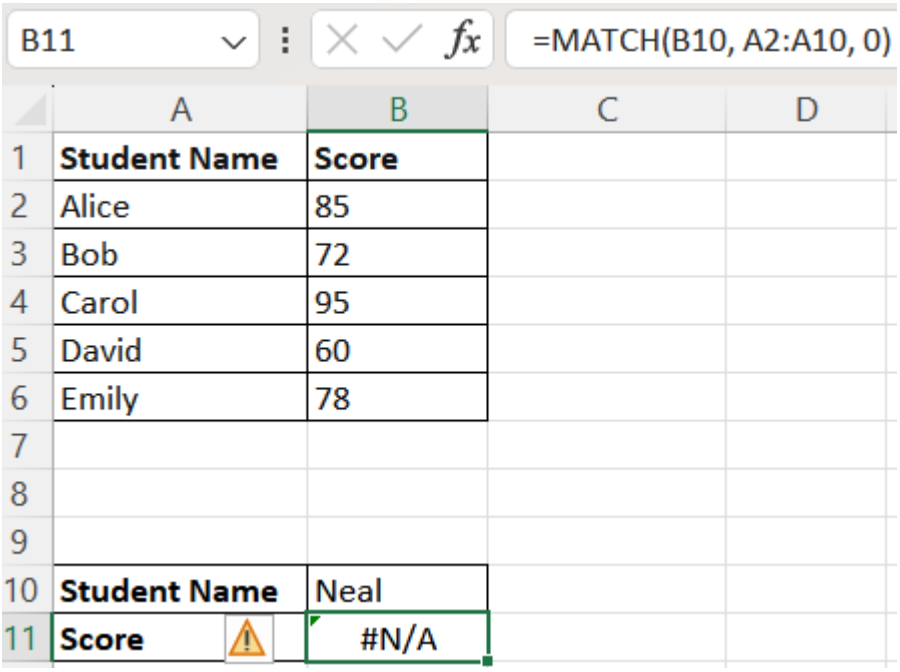
The IFNA function is used to handle #N/A errors by replacing them with a custom value. When an Excel formula cannot find a value (resulting in #N/A), the IFNA function allows you to display a user-friendly message instead.

The syntax of the IFNA function is as follows:

=IFNA(value, value_if_na)

value (required): The formula, value, or reference to check for a #N/A error.

value_if_na (required): The value to return if a #N/A error is detected.



B11 =IFNA(MATCH(B10, A2:A10, 0), "Not found")

	A	B	C	D	E	F
1	**Student Name**	**Score**				
2	Alice	85				
3	Bob	72				
4	Carol	95				
5	David	60				
6	Emily	78				
7						
8						
9						
10	**Student Name**	Neal				
11	**Score**	Not found				

IFERROR Function

The IFERROR function is more versatile and catches various errors (not just #N/A). It allows you to customize results based on different error types.

For instance, if you want to handle multiple errors, you can use IFERROR like this:

=IFERROR(formula(), "Custom error message")

D2 =(B2-C2)/B2

	A	B	C	D
1	**Product**	**Sales**	**Cost**	**Profit margin**
2	Product A	1000	800	0.2
3	Product B	0	600	#DIV/0!
4	Product C	1500	1200	0.2

D2 =IFERROR((B2 - C2) / B2, "N/A")

	A	B	C	D	E
1	**Product**	**Sales**	**Cost**	**Profit margin**	
2	Product A	1000	800	0.2	
3	Product B	0	600	N/A	
4	Product C	1500	1200	0.2	

PRACTICAL 12

Create a data and implement IF, Nested if and Logical function AND and OR with IF.

IF Function

The IF function allows you to perform different actions based on a specified condition. Its syntax is as follows:

=IF(logical_test, value_if_true, value_if_false)

logical_test: The condition you want to evaluate.

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

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

Nested IF Function

You can nest multiple IF functions to create more complex conditions.

Logical Functions AND and OR with IF

AND: Returns true if all specified conditions are true.

OR: Returns true if at least one of the specified conditions is true.

Student Name	Math Marks	Science Marks
Arjit	85	78
Bobby	72	65
kuldeep	95	88
Deep	60	50
Anil	78	82

```
=IF(AND(B2>=80,C2>=80),"High Performers",IF(OR(B2>=60,C2>=60),"Average Performers","Low Performers"))
```

Student Name	Math Marks	Science Marks	Performance
Arjit	85	78	Average Performers
Bobby	72	65	Average Performers
kuldeep	95	88	High Performers
Deep	60	50	Average Performers
Anil	78	82	Average Performers