EXCEL ASSIGNMENT

Question 1: What is the difference between 'Paste' and 'Paste Special' in Excel? Briefly explain with examples.

Ans - Paste

- What it does: Pastes *everything* exactly as copied.
- Includes: Values, formulas, formatting, borders, and sometimes comments.
- Example:
    - Copy a cell with the formula =A1+B1 → Paste it → the formula and formatting both come along.

Paste Special

- What it does: Lets you choose *what part* of the copied content to paste.
- Options include: Values only, formulas only, formats only, transpose, multiply/divide, etc.
- Examples:
    - Paste Values: Copy a formula cell → Paste Special → Values → only the result (number) is pasted, not the formula.
    - Paste Formats: Copy a styled cell → Paste Special → Formats → only the look is applied.
    - Transpose: Copy a vertical list → Paste Special → Transpose → it becomes horizontal.

In short:

- Paste = everything
- Paste Special = only what you choose

Question 2: Describe the functions and usefulness of 'Freeze Panes' and 'Split Panes' in Excel.

Ans - Freeze Panes

- Function: Locks specific rows or columns so they stay visible while you scroll.
- Usefulness: Helps you keep headers or labels in view when working with large datasets.
- Example:
    - Freeze the top row → column headings remain visible as you scroll down.
    - Freeze the first column → row labels stay visible when scrolling sideways.

Split Panes

- Function: Divides the worksheet window into separate, scrollable sections.
- Usefulness: Lets you view and work on different parts of the same worksheet at the same time.
- Example:
    - Split the sheet to compare data at the top and bottom without scrolling back and forth.

Key Difference

- Freeze Panes: Keeps rows/columns fixed permanently until unfrozen.
- Split Panes: Creates movable viewing sections that can be adjusted or removed easily.

Question 3: Explain the difference between inserting a new row and inserting a new column in Excel. Can you insert multiple rows or columns at once?

Ans - Difference between inserting a new row and a new column in Excel

- Inserting a new row:
    - Adds a horizontal row above the selected row.
    - Existing rows shift downward.
    - Example: Select row 5 → Insert → a new blank row appears above row 5.
- Inserting a new column:
    - Adds a vertical column to the left of the selected column.
    - Existing columns shift to the right.
    - Example: Select column C → Insert → a new blank column appears before column C.

Inserting multiple rows or columns

Yes, you can insert multiple rows or columns at once.

- Multiple rows:
    - Select the same number of existing rows as you want to insert → Right-click → Insert.
- Multiple columns:
    - Select multiple columns → Right-click → Insert.

Example:

- Select 3 rows → Insert → 3 new rows are added.
- Select 2 columns → Insert → 2 new columns are added.

Question 4: What are logical functions in Excel? Provide examples of at least two logical functions and their applications.

Ans - Logical Functions in Excel

Logical functions are used to make decisions in Excel by testing conditions and returning results based on whether those conditions are TRUE or FALSE.

Examples of Logical Functions and Their Applications

1. IF Function

- Purpose: Tests a condition and returns one value if it's TRUE and another if it's FALSE.
- Syntax: =IF(logical_test, value_if_true, value_if_false)
- Example:
  =IF(A1>=50, "Pass", "Fail")
  Application: Used to determine whether a student has passed or failed based on marks.

2. AND Function

- Purpose: Checks multiple conditions and returns TRUE only if all conditions are true.
- Syntax: =AND(condition1, condition2)
- Example:
  =AND(A1>=50, B1="Yes")
  Application: Used to check eligibility, such as passing marks *and* attendance requirement.

(Optional) 3. OR Function

- Purpose: Returns TRUE if any one of the conditions is true.
- Example:
  =OR(A1>=50, B1="Yes")
  Application: Used when meeting at least one condition is sufficient.

In summary

Logical functions help Excel analyze conditions, make decisions, and automate results based on data.

Question 5: Discuss the purpose of 'XLOOKUP' and how it differs from the traditional 'VLOOKUP' function.

Ans - XLOOKUP is a modern Excel lookup function designed to find and return values from a range or array. Its main purpose is to replace older lookup functions like VLOOKUP, HLOOKUP, and LOOKUP by providing a more flexible, reliable, and easier-to-use solution.

Purpose of XLOOKUP

XLOOKUP searches for a specified value in one range and returns a corresponding value from another range. It can search vertically or horizontally, return exact or approximate matches, and handle errors gracefully.

Key Differences Between XLOOKUP and VLOOKUP

Feature	XLOOKUP	VLOOKUP
Lookup direction	Can look left or right	Can only look to the right
Column reference	Uses arrays (no column index numbers)	Requires column index number
Exact match default	Yes	No (needs FALSE)
Error handling	Built-in if_not_found argument	Requires IFERROR
Search flexibility	Can search top-to-bottom or bottom-to-top	Top-to-bottom only
Horizontal lookup	Yes (replaces HLOOKUP)	No
Formula robustness	Does not break if columns are inserted	Can break if column order changes

Example

- VLOOKUP:
  =VLOOKUP(A2, A:B, 2, FALSE)
- XLOOKUP:
  =XLOOKUP(A2, A:A, B:B, "Not found")

Conclusion

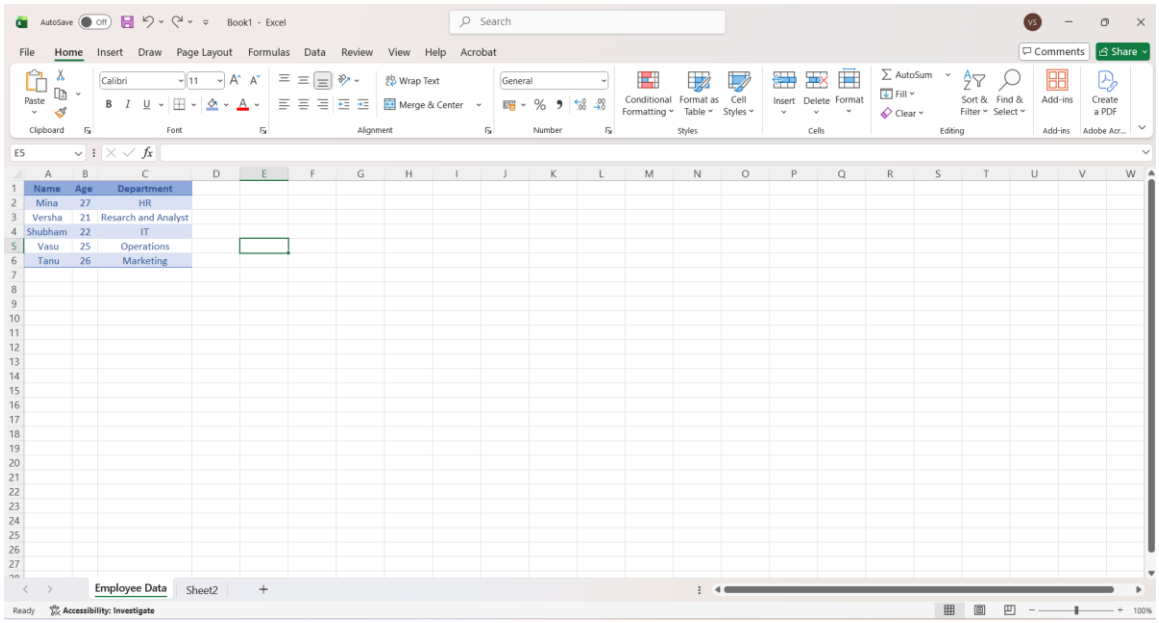
XLOOKUP is more powerful and user-friendly than VLOOKUP. It eliminates many limitations of VLOOKUP, reduces errors, and makes Excel formulas more readable and reliable. As a result, XLOOKUP is now the recommended lookup function in modern versions of Excel.

Question 6: Create a worksheet titled 'Employee Data' with columns: Name, Age, Department. Add 5 rows of data. Format as follows:

● Bold and center-align the header row

● Apply a fill color

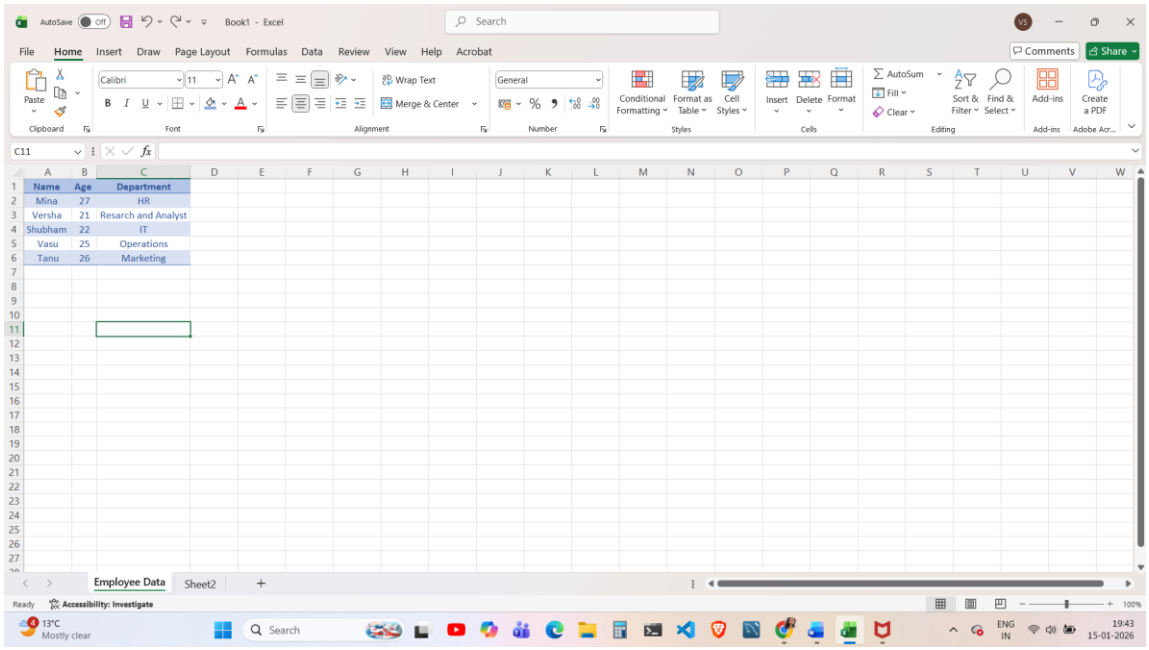
● Auto-fit column width



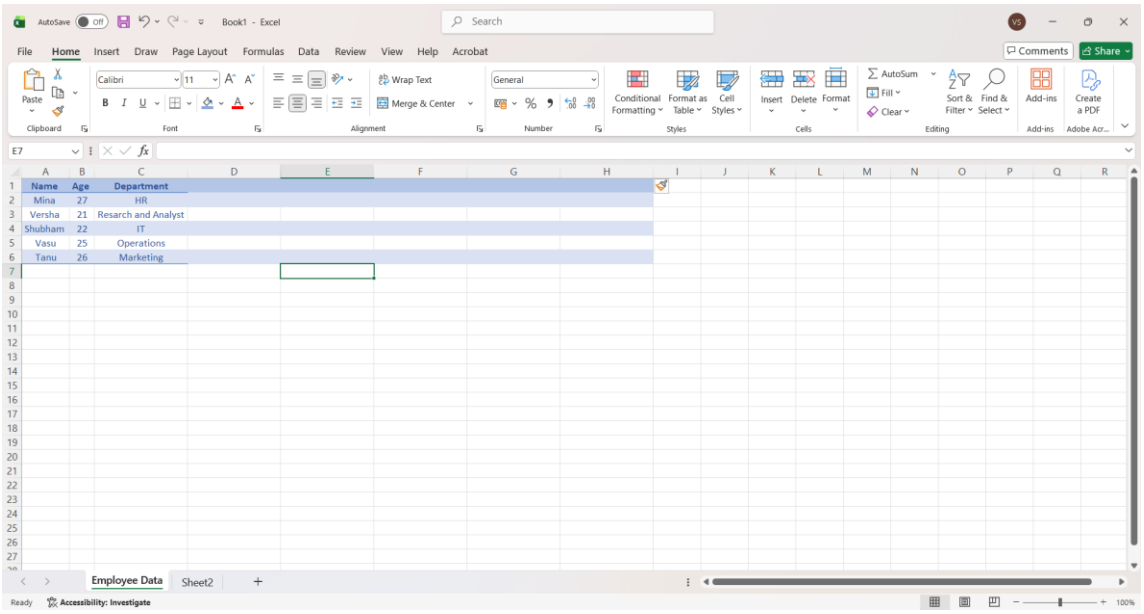
Question 7: Demonstrate how to insert and delete multiple rows and columns in Excel.

Ans -

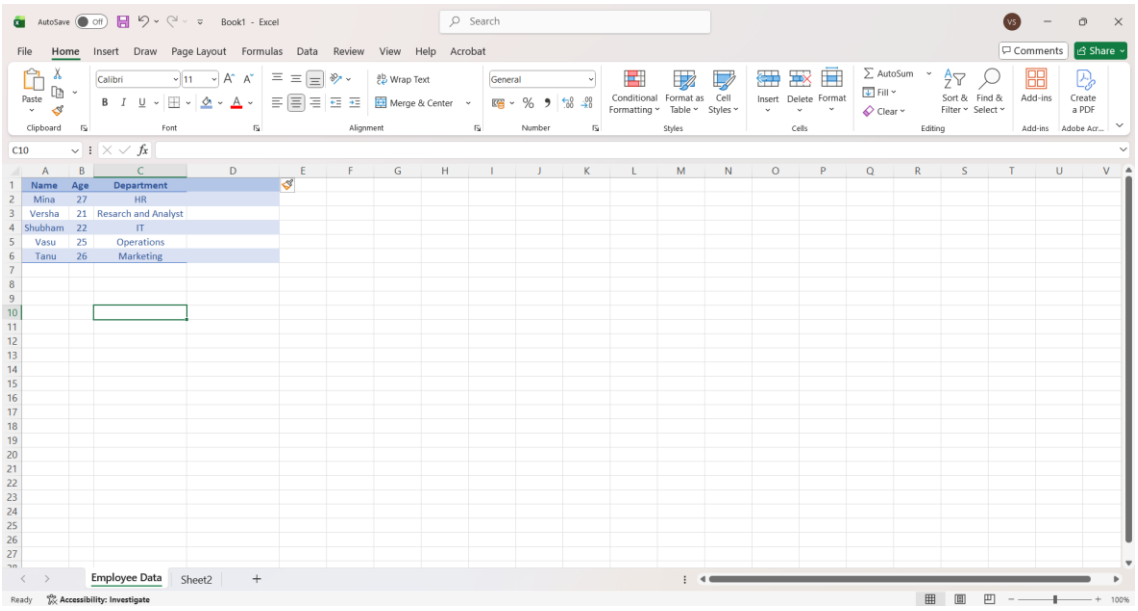
BEFORE INSERTING ROWS



AFTER INSERTING ROW



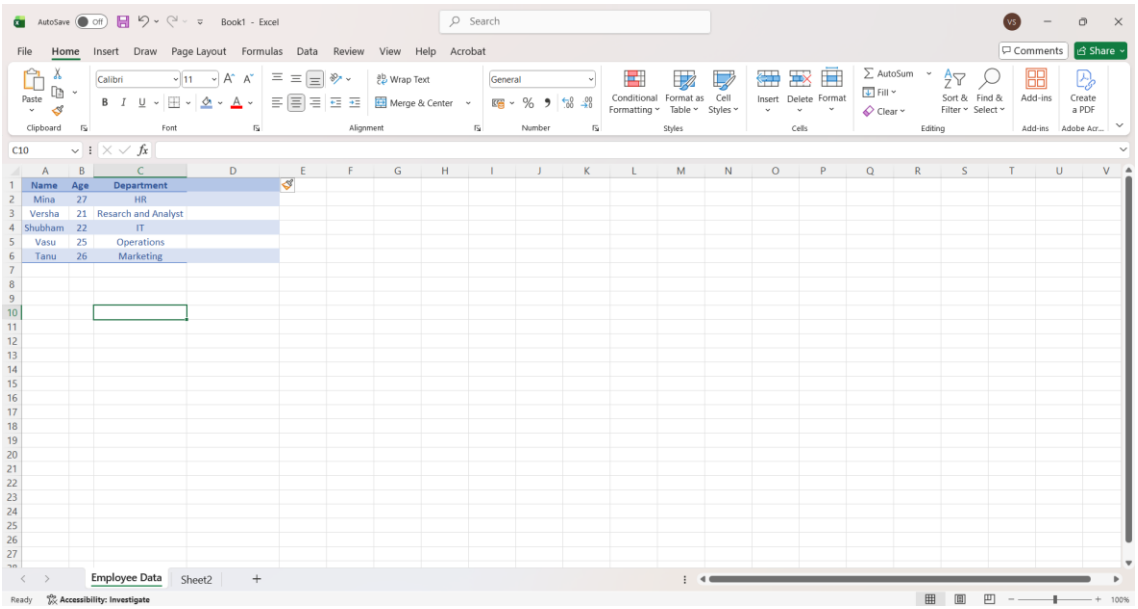
AFTER DELETING ROWS



Question 8: Use Excel's 'Find and Replace' feature to update department names in a sample table.

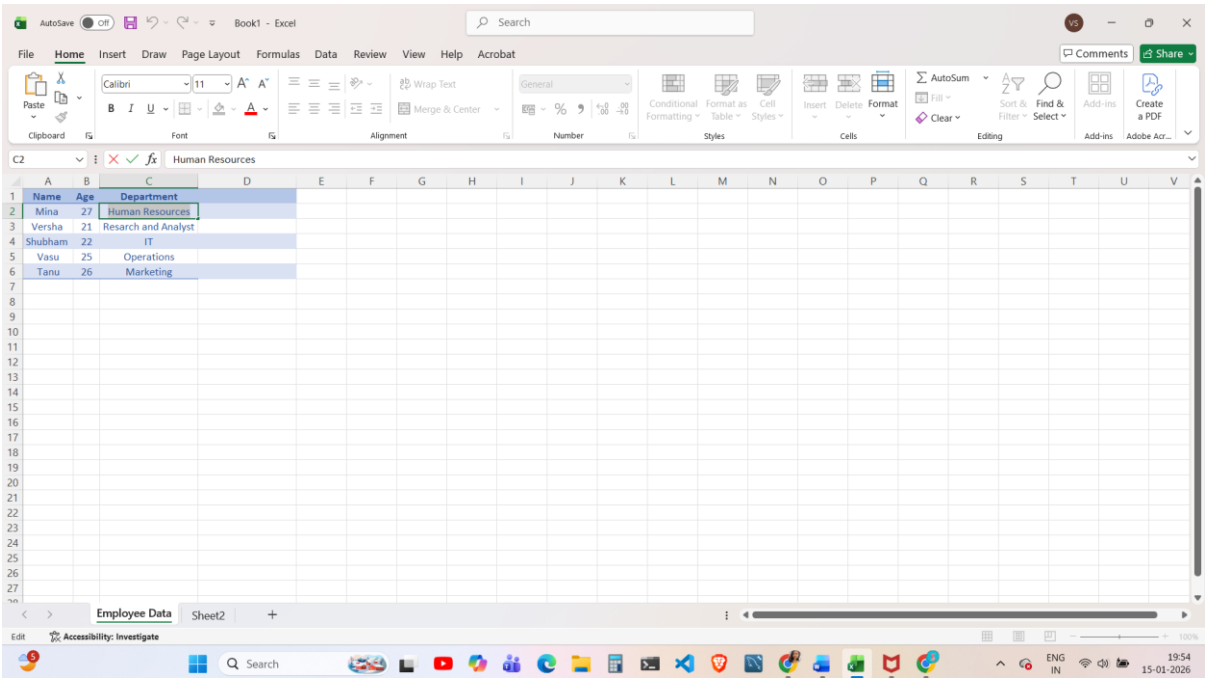
Ans-

Before using find and replace feature



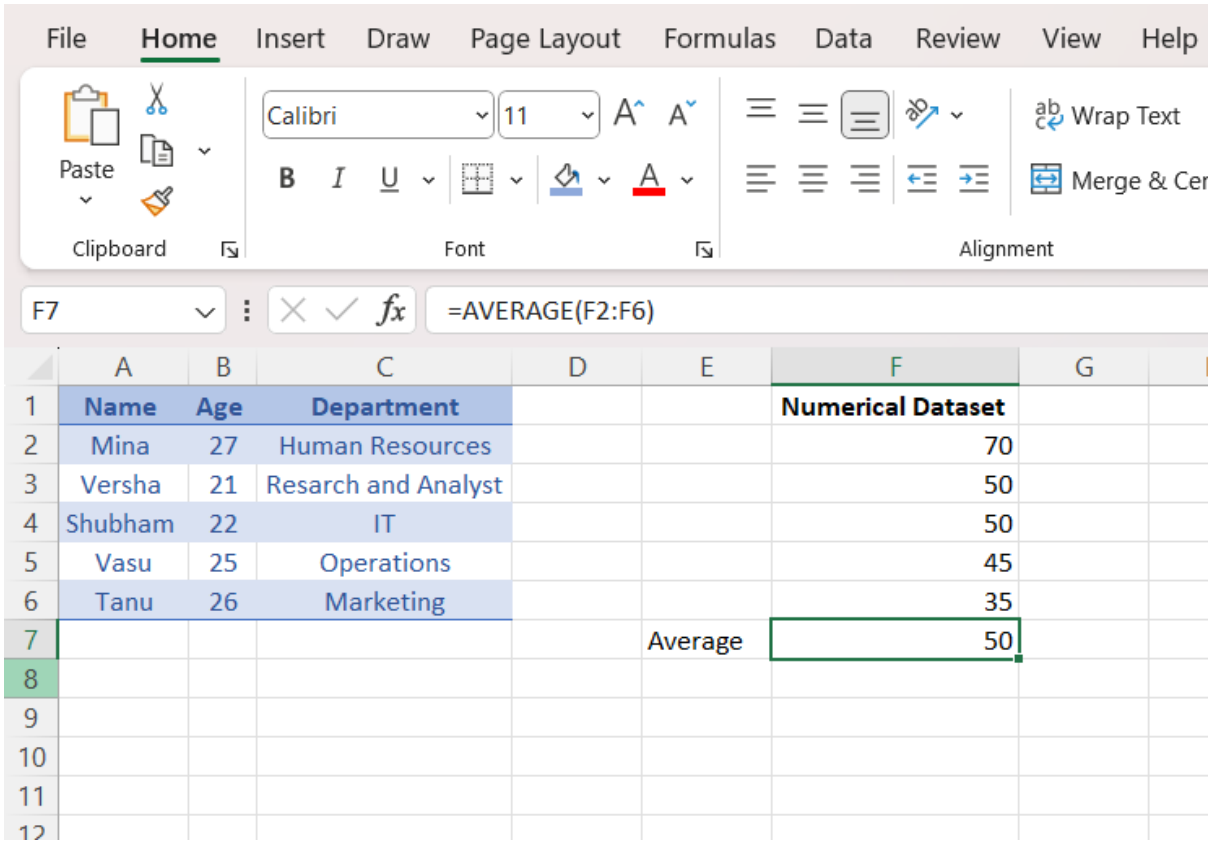
Find – HR

Replace with - Human Resources



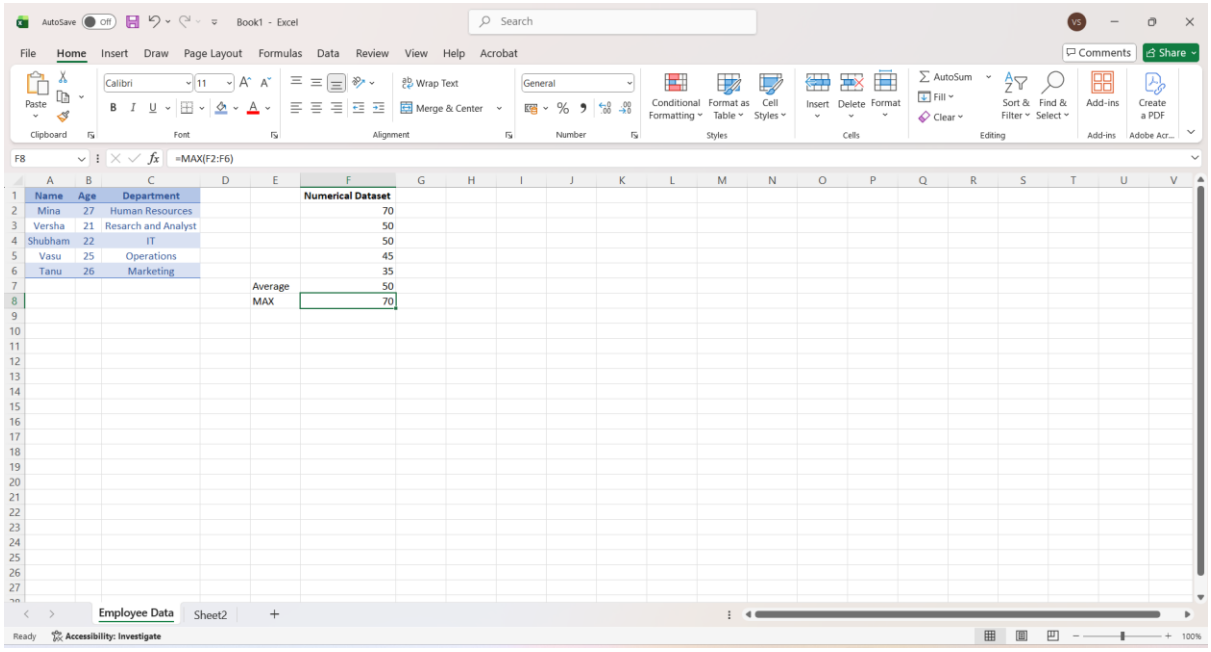
Question 9: Create a small numerical dataset and apply the following functions:

- **AVERAGE**

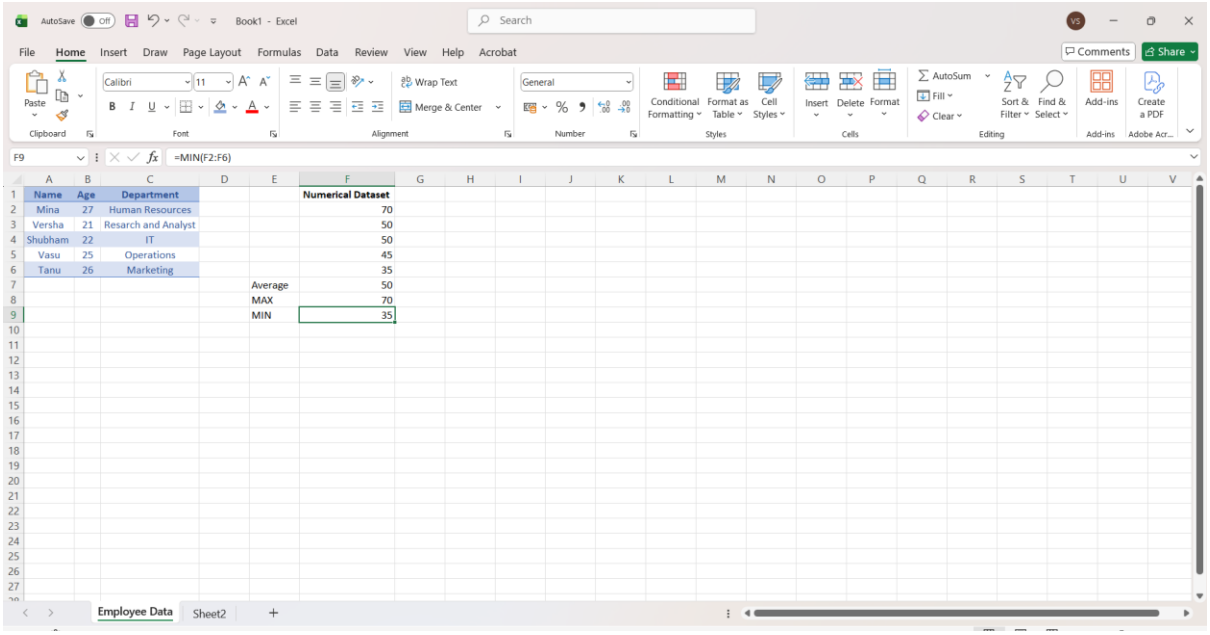


	A	B	C	D	E	F	G
1	Name	Age	Department			Numerical Dataset	
2	Mina	27	Human Resources			70	
3	Versha	21	Research and Analyst			50	
4	Shubham	22	IT			50	
5	Vasu	25	Operations			45	
6	Tanu	26	Marketing			35	
7					Average	50	
8							
9							
10							
11							
12							

- **MAX**

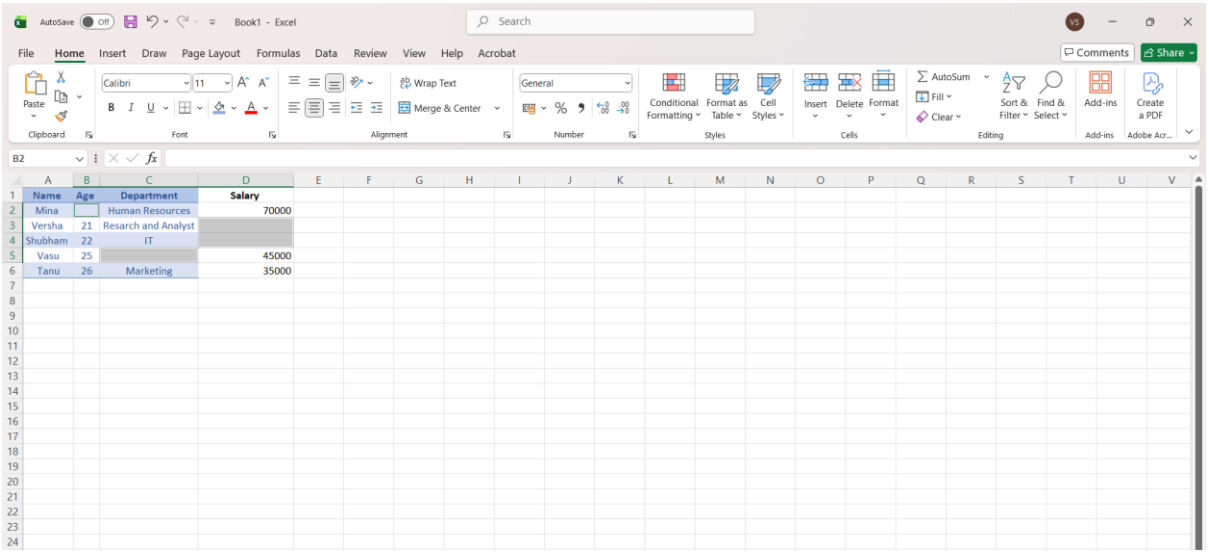


- **MIN**

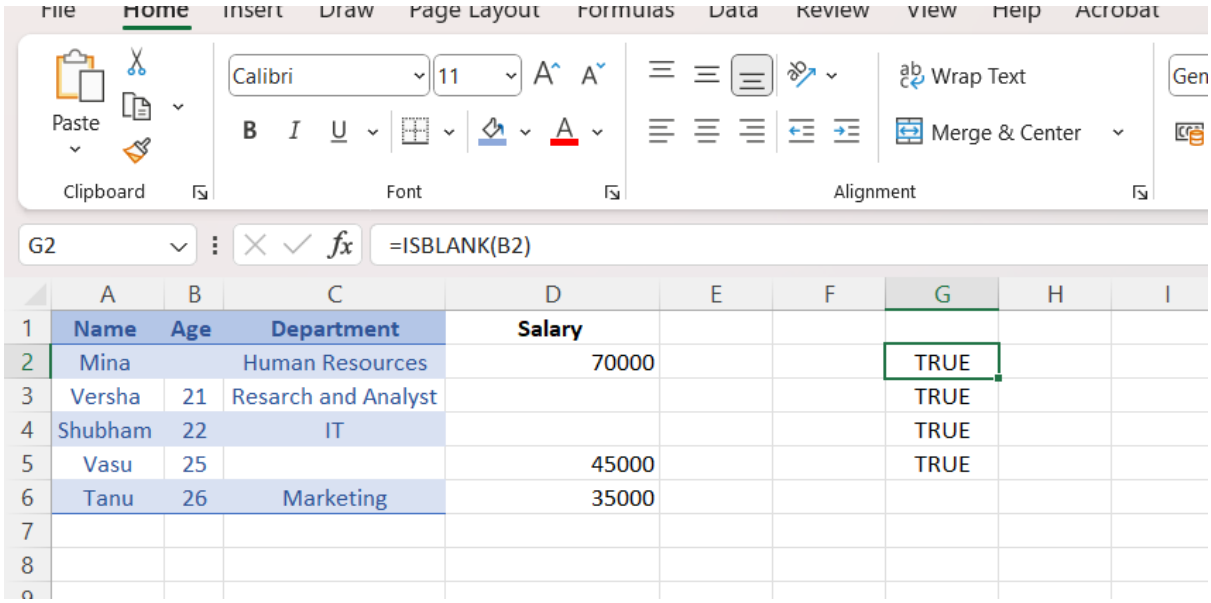


Question 10: You're working with a dataset that contains missing values. As a Data Scientist, explain how you'd detect and handle missing data using Excel. Mention tools like:

- **Go To Special**



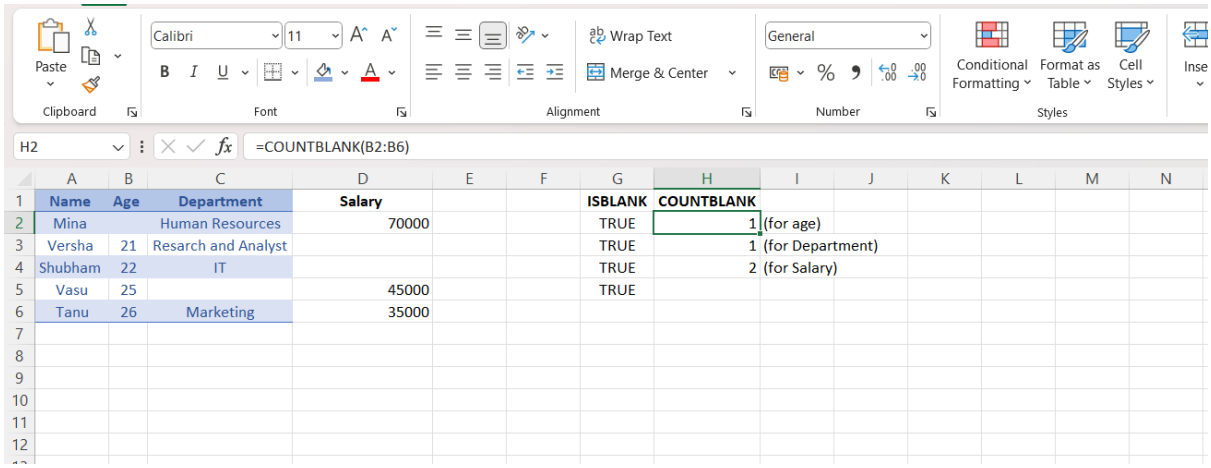
- **ISBLANK**



	A	B	C	D	E	F	G	H	I
1	**Name**	**Age**	**Department**	**Salary**					
2	Mina		Human Resources	70000			TRUE		
3	Versha	21	Resarch and Analyst				TRUE		
4	Shubham	22	IT				TRUE		
5	Vasu	25		45000			TRUE		
6	Tanu	26	Marketing	35000					
7									
8									

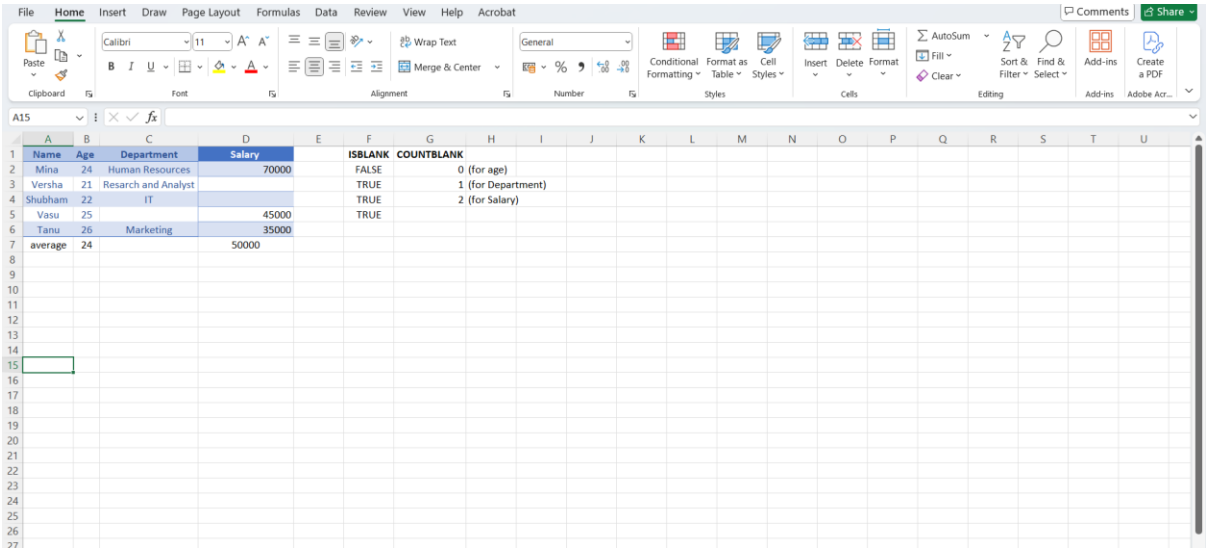
After applying ISBLANK for all the missing value columns

- **COUNTBLANK**



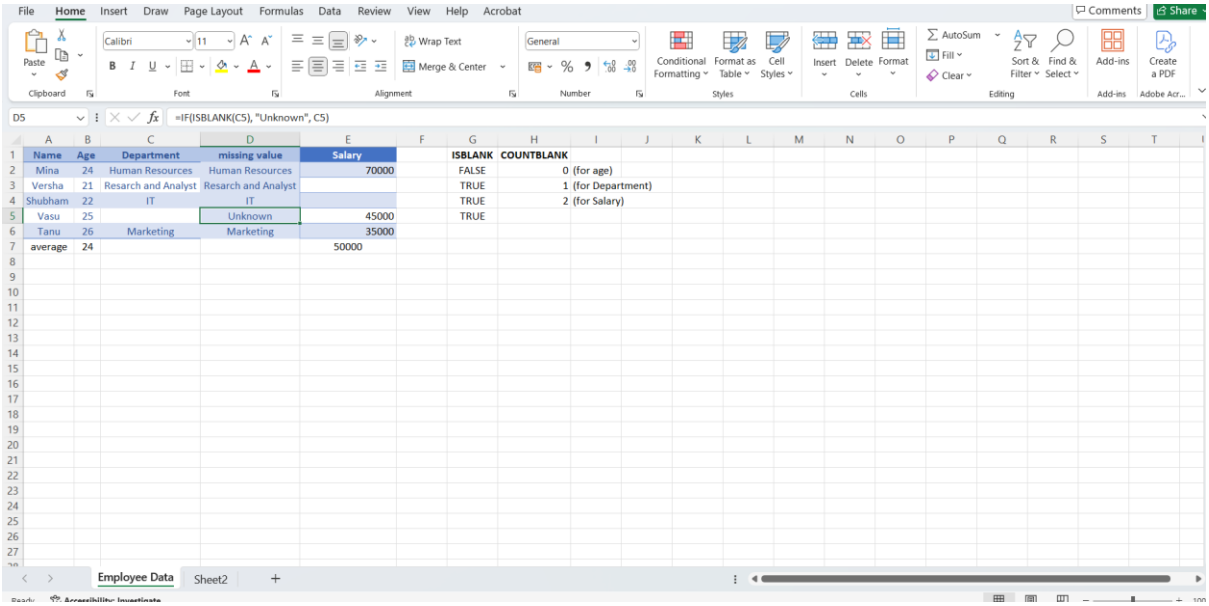
	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	**Name**	**Age**	**Department**	**Salary**			**ISBLANK**	**COUNTBLANK**						
2	Mina		Human Resources	70000			TRUE	1	(for age)					
3	Versha	21	Resarch and Analyst				TRUE	1	(for Department)					
4	Shubham	22	IT				TRUE	2	(for Salary)					
5	Vasu	25		45000			TRUE							
6	Tanu	26	Marketing	35000										
7														
8														
9														
10														
11														
12														

Handle Missing Value – Age



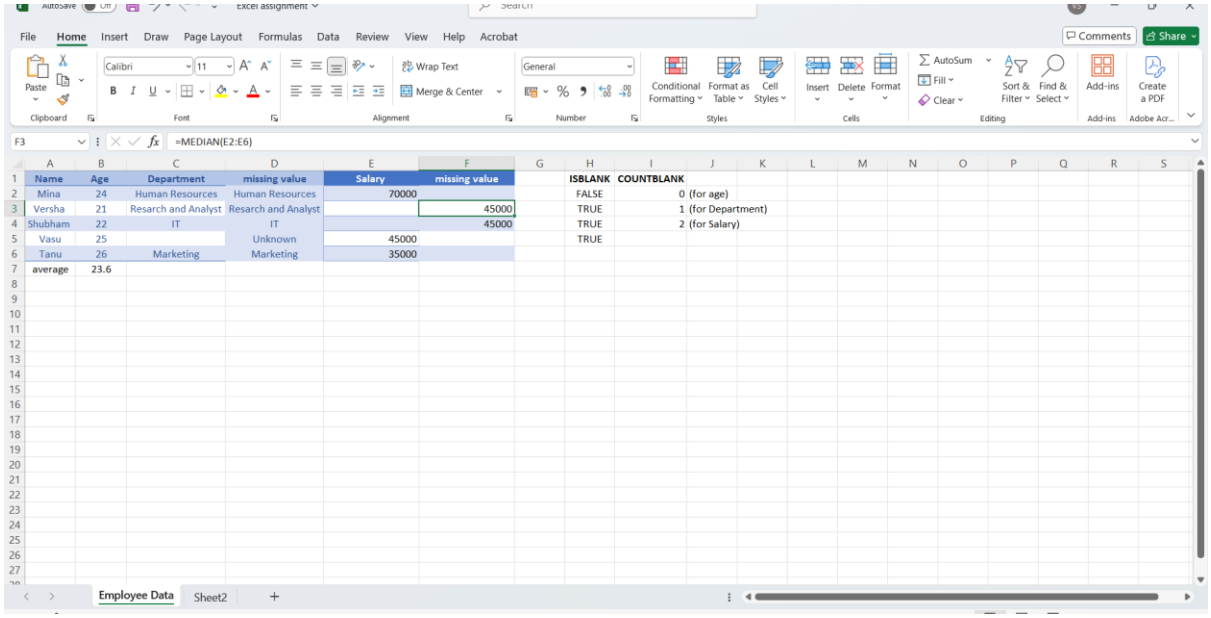
	A	B	C	D	E	F	G	H
1	Name	Age	Department	Salary		ISBLANK	COUNTBLANK	
2	Mina	24	Human Resources	70000		FALSE	0	(for age)
3	Versha	21	Resarch and Analyst			TRUE	1	(for Department)
4	Shubham	22	IT			TRUE	2	(for Salary)
5	Vasu	25		45000		TRUE		
6	Tanu	26	Marketing	35000				
7	average	24		50000				

Handle Missing Value – Department



	A	B	C	D	E	F	G	H	I
1	Name	Age	Department	missing value	Salary		ISBLANK	COUNTBLANK	
2	Mina	24	Human Resources	Human Resources	70000		FALSE	0	(for age)
3	Versha	21	Resarch and Analyst	Resarch and Analyst			TRUE	1	(for Department)
4	Shubham	22	IT	IT			TRUE	2	(for Salary)
5	Vasu	25		Unknown	45000		TRUE		
6	Tanu	26	Marketing	Marketing	35000				
7	average	24			50000				

Handle Missing Value – Salary.



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
1	Name	Age	Department	missing value	Salary	missing value		ISBLANK	COUNTBLANK										
2	Mina	24	Human Resources	Human Resources	70000			FALSE	0 (for age)										
3	Versha	21	Resarch and Analyst	Resarch and Analyst		45000		TRUE	1 (for Department)										
4	Shubham	22	IT	IT		45000		TRUE	2 (for Salary)										
5	Vasu	25		Unknown	45000			TRUE											
6	Tanu	26	Marketing	Marketing	35000														
7	average	23.6																	