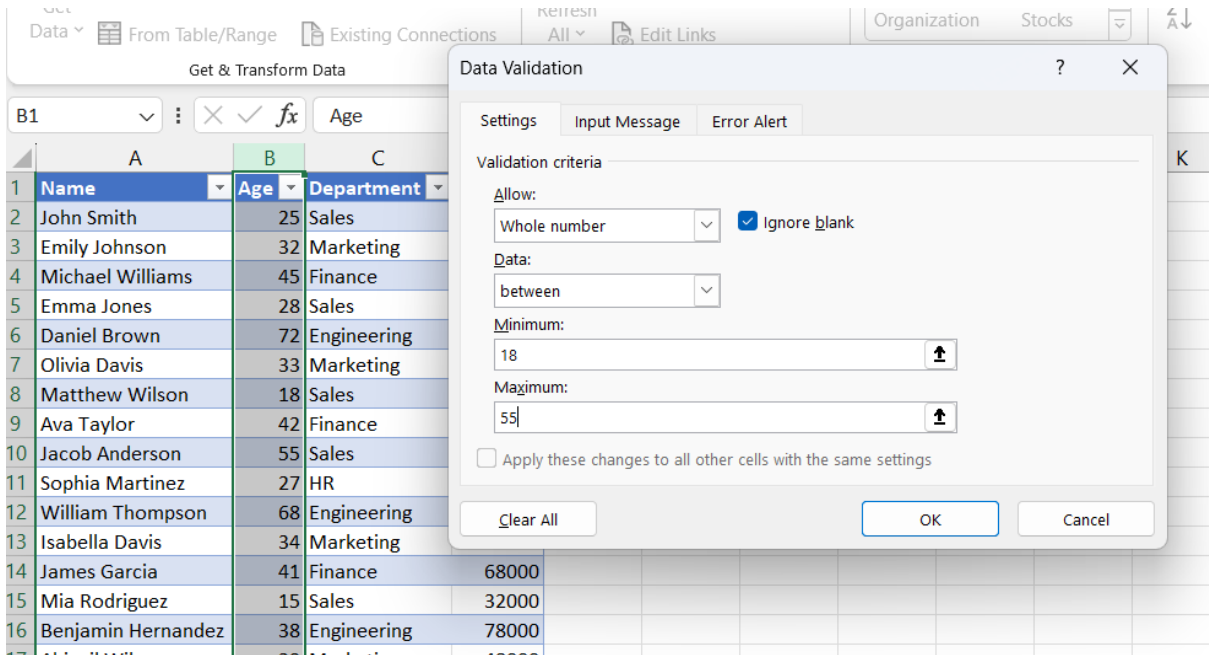


Lesson 1.4 Task – Data validation and conditional formatting:

Task 1:

Apply data validation to the following columns:

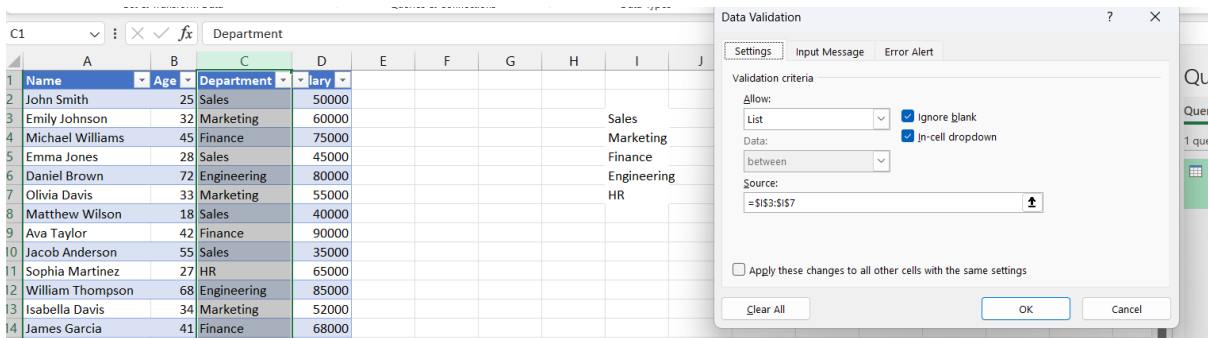
1. Age: Restrict the data entry to whole numbers between 18 and 65.



The screenshot shows an Excel spreadsheet with columns A, B, and C. Column A is 'Name', Column B is 'Age', and Column C is 'Department'. The 'Age' column is selected, and the 'Data Validation' dialog box is open. The 'Settings' tab is active, showing 'Allow: Whole number' and 'Data: between' with 'Minimum: 18' and 'Maximum: 65'. The 'Ignore blank' checkbox is checked. The 'Apply these changes to all other cells with the same settings' checkbox is unchecked. The 'Clear All', 'OK', and 'Cancel' buttons are visible at the bottom.

	A	B	C
1	Name	Age	Department
2	John Smith	25	Sales
3	Emily Johnson	32	Marketing
4	Michael Williams	45	Finance
5	Emma Jones	28	Sales
6	Daniel Brown	72	Engineering
7	Olivia Davis	33	Marketing
8	Matthew Wilson	18	Sales
9	Ava Taylor	42	Finance
10	Jacob Anderson	55	Sales
11	Sophia Martinez	27	HR
12	William Thompson	68	Engineering
13	Isabella Davis	34	Marketing
14	James Garcia	41	Finance
15	Mia Rodriguez	15	Sales
16	Benjamin Hernandez	38	Engineering

2. Department: Allow only specific values from a predefined list (e.g., Sales, Marketing, Finance).



The screenshot shows the same Excel spreadsheet with columns A, B, and C. Column A is 'Name', Column B is 'Age', and Column C is 'Department'. The 'Department' column is selected, and the 'Data Validation' dialog box is open. The 'Settings' tab is active, showing 'Allow: List' and 'Data: between' with 'Source: =\$I\$3:\$I\$7'. The 'Ignore blank' checkbox is checked. The 'Apply these changes to all other cells with the same settings' checkbox is unchecked. The 'Clear All', 'OK', and 'Cancel' buttons are visible at the bottom.

	A	B	C	D	E	F	G	H	I	J
1	Name	Age	Department	Salary						
2	John Smith	25	Sales	50000						
3	Emily Johnson	32	Marketing	60000						
4	Michael Williams	45	Finance	75000					Sales	
5	Emma Jones	28	Sales	45000					Marketing	
6	Daniel Brown	72	Engineering	80000					Finance	
7	Olivia Davis	33	Marketing	55000					Engineering	
8	Matthew Wilson	18	Sales	40000					HR	
9	Ava Taylor	42	Finance	90000						
10	Jacob Anderson	55	Sales	35000						
11	Sophia Martinez	27	HR	65000						
12	William Thompson	68	Engineering	85000						
13	Isabella Davis	34	Marketing	52000						
14	James Garcia	41	Finance	68000						

3. Salary: Limit the data entry to decimal numbers with a maximum of 2 decimal places.
4. Salary: Limit the range between 30,000 and 100,000

	A	B	C	D
1	Name	Age	Department	Salary
2	John Smith	25	Sales	50000.00
3	Emily Johnson	32	Marketing	60000.00
4	Michael Williams	45	Finance	75000.00
5	Emma Jones	28	Sales	45000.00
6	Daniel Brown	72	Engineering	80000.00
7	Olivia Davis	33	Marketing	55000.00
8	Matthew Wilson	18	Sales	40000.00
9	Ava Taylor	42	Finance	90000.00
10	Jacob Anderson	55	Sales	35000.00
11	Sophia Martinez	27	HR	65000.00
12	William Thompson	68	Engineering	85000.00
13	Isabella Davis	34	Marketing	52000.00
14	James Garcia	41	Finance	68000.00
15	Mia Rodriguez	15	Sales	32000.00
16	Benjamin Hernandez	38	Engineering	78000.00
17	Abigail Wilson	29	Marketing	48000.00
18	Alexander Gonzalez	52	Finance	71000.00
19	Emily Perez	35	IT	60000.00

Data Validation

Settings Input Message Error Alert

Validation criteria

Allow: Decimal ☒ Ignore blank

Data: between

Minimum: 30000

Maximum: 100000

☐ Apply these changes to all other cells with the same settings

Clear All OK Cancel

Enter new employee information and ensure that the data validation rules are enforced for each entry.

Task 2:

Use the same Excel worksheet from Part 1 or create a new one with a dataset of your choice.

Apply the following conditional formatting techniques to the dataset:

1. Colour Scales: Apply a colour scale to the "Salary" column to visually represent the distribution of salaries, with higher salaries appearing in darker shades.

A	B	C	D
Name	Age	Department	Salary
John Smith	25	Sales	50000.00
Emily Johnson	32	Marketing	60000.00
Michael Williams	45	Finance	75000.00
Emma Jones	28	Sales	45000.00
Daniel Brown	72	Engineering	80000.00
Olivia Davis	33	Marketing	55000.00
Matthew Wilson	18	Sales	40000.00
Ava Taylor	42	Finance	90000.00
Jacob Anderson	55	Sales	35000.00
Sophia Martinez	27	HR	65000.00
William Thompson	68	Engineering	85000.00
Isabella Davis	34	Marketing	52000.00
James Garcia	41	Finance	68000.00
Mia Rodriguez	15	Sales	32000.00
Benjamin Hernandez	38	Engineering	78000.00
Abigail Wilson	29	Marketing	48000.00
Alexander Gonzalez	52	Finance	71000.00
Emily Perez	35	IT	60000.00
Daniel Lewis	45	Sales	5500.00
Elizabeth Adams	31	Marketing	58000.00
Joseph Lee	40	Finance	72000.00

2. Data Bars: Add data bars to the "Age" column to visually compare the ages within the column.

	A	B	C
1	Name	Age	Department
2	John Smith	25	Sales
3	Emily Johnson	32	Marketing
4	Michael Williams	45	Finance
5	Emma Jones	28	Sales
6	Daniel Brown	72	Engineering
7	Olivia Davis	33	Marketing
8	Matthew Wilson	18	Sales
9	Ava Taylor	42	Finance
10	Jacob Anderson	55	Sales
11	Sophia Martinez	27	HR
12	William Thompson	68	Engineering
13	Isabella Davis	34	Marketing
14	James Garcia	41	Finance
15	Mia Rodriguez	15	Sales
16	Benjamin Hernandez	38	Engineering
17	Abigail Wilson	29	Marketing
18	Alexander Gonzalez	52	Finance
19	Emily Perez	35	IT
20	Daniel Lewis	45	Sales
21	Elizabeth Adams	31	Marketing
22	Joseph Lee	40	Finance
23	Olivia Green	26	HR
24	Andrew Scott	37	Sales
25	Samantha Walker	31	Marketing
26	Matthew Hall	20	Finance

3. Apply icon sets to the Salary column to indicate if each person's salary is higher, lower or equal to 52000.

	A	B	C	D	E	F	G	H	I	J	K	L
1	Name	Age	Department	Salary								
2	John Smith	25	Sales	50000								
3	Emily Johnson	32	Marketing	60000								
4	Michael Williams	45	Finance	75000								
5	Emma Jones	28	Sales	45000								
6	Daniel Brown	72	Engineering	80000								
7	Olivia Davis	33	Marketing	55000								
8	Matthew Wilson	18	Sales	40000								
9	Ava Taylor	42	Finance	90000								
10	Jacob Anderson	55	Sales	35000								
11	Sophia Martinez	27	HR	65000								
12	William Thompson	68	Engineering	85000								
13	Isabella Davis	34	Marketing	52000								
14	James Garcia	41	Finance	68000								
15	Mia Rodriguez	15	Sales	32000								
16	Benjamin Hernandez	38	Engineering	78000								
17	Abigail Wilson	29	Marketing	48000								
18	Alexander Gonzalez	52	Finance	71000								
19	Emily Perez	35	IT	60000								
20	Daniel Lewis	45	Sales	5500								
21	Elizabeth Adams	31	Marketing	58000								
22	Joseph Lee	40	Finance	72000								
23	Olivia Green	26	HR	63000								
24	Andrew Scott	37	Sales	42000								
25	Samantha Walker	31	Marketing	49000								
26	Matthew Hall	20	Finance	85000								

Edit Formatting Rule


Select a Rule Type:

- Format all cells based on their values
- Format only cells that contain
- Format only top or bottom ranked values
- Format only values that are above or below average
- Format only unique or duplicate values
- Use a formula to determine which cells to format




Edit the Rule Description:

Format all cells based on their values:

Format Style: Icon Sets Reverse Icon Order

Icon Style:  Show Icon Only

Display each icon according to these rules:

Icon		Value	Type
	when value is	>= 52000	Number
	when < 52000 and	>= 52000	Number
	when < 52000		

OK Cancel