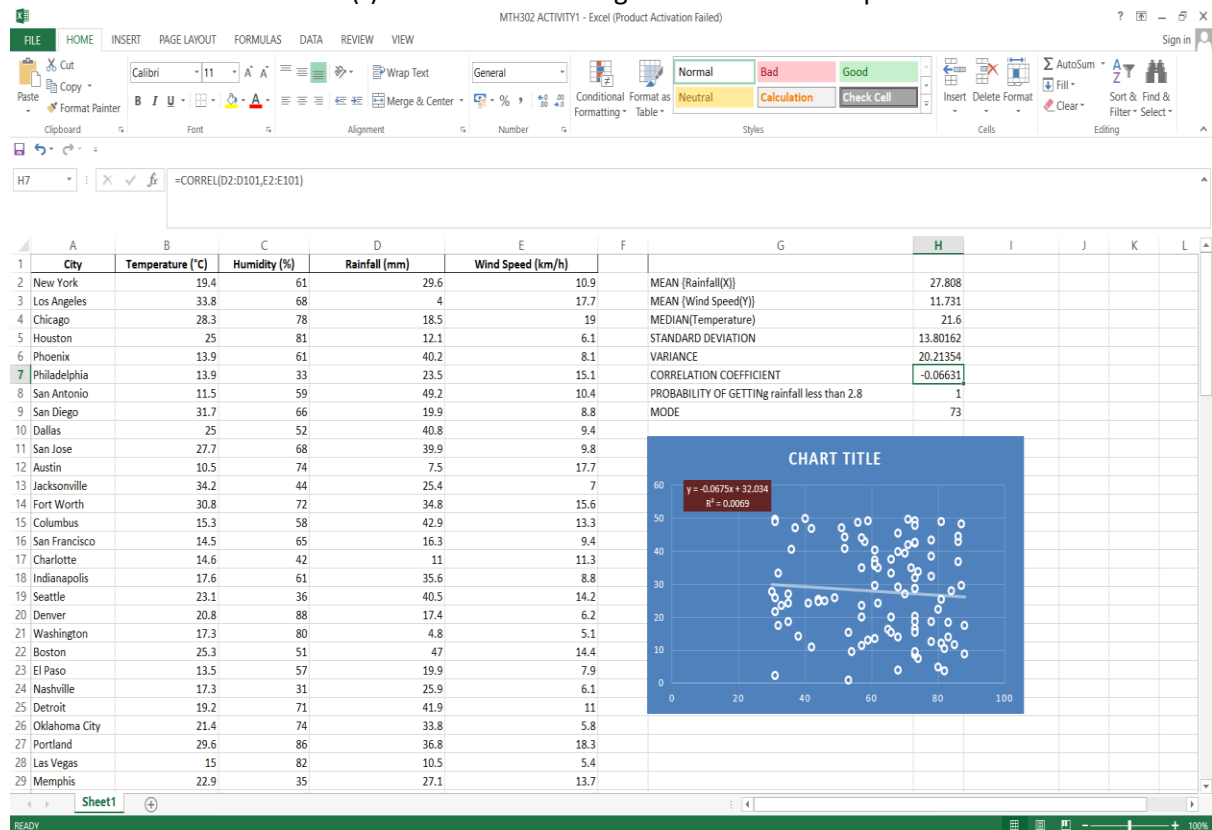**ACTIVITY-2**

Real-life Data Analysis Challenge

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COURSE CODE: MTH302

SUBMITTED TO: Dr. Indu Bala Mam

1.Correlation Coefficient (r) between the two variables:-
• The correlation coefficient (r) measures the strength of the relationship between X and Y.

City	Temperature (°C)	Humidity (%)	Rainfall (mm)	Wind Speed (km/h)			
New York	19.4	61	29.6	10.9		MEAN {Rainfall(X)}	27.808
Los Angeles	33.8	68	4	17.7		MEAN {Wind Speed(Y)}	11.731
Chicago	28.3	78	18.5	19		MEDIAN(Temperature)	21.6
Houston	25	81	12.1	6.1		STANDARD DEVIATION	13.80162
Phoenix	13.9	61	40.2	8.1		VARIANCE	20.21354
Philadelphia	13.9	33	23.5	15.1		CORRELATION COEFFICIENT	-0.06631
San Antonio	11.5	59	49.2	10.4		PROBABILITY OF GETTINg rainfall less than 2.8	1
San Diego	31.7	66	19.9	8.8		MODE	73
Dallas	25	52	40.8	9.4			
San Jose	27.7	68	39.9	9.8			
Austin	10.5	74	7.5	17.7			
Jacksonville	34.2	44	25.4	7			
Fort Worth	30.8	72	34.8	15.6			
Columbus	15.3	58	42.9	13.3			
San Francisco	14.5	65	16.3	9.4			
Charlotte	14.6	42	11	11.3			
Indianapolis	17.6	61	35.6	8.8			
Seattle	23.1	36	40.5	14.2			
Denver	20.8	88	17.4	6.2			
Washington	17.3	80	4.8	5.1			
Boston	25.3	51	47	14.4			
El Paso	13.5	57	19.9	7.9			
Nashville	17.3	31	25.9	6.1			
Detroit	19.2	71	41.9	11			
Oklahoma City	21.4	74	33.8	5.8			
Portland	29.6	86	36.8	18.3			
Las Vegas	15	82	10.5	5.4			
Memphis	22.9	35	27.1	13.7			

2. Regression Line Equation (Y = a + bX) :
y=-0.0675x + 32.034

3. Coefficient of determination:
The coefficient of determination (R^2) shows how well the regression line fits the data.
R power 2=0.0069

4. Scatter Plot of the data Steps:
1. Select Data
2. Go to Insert → Scatter Plot
3. Click "Add Trendline"
4. Check "Display Equation on Chart" and "Display R² value"
• This visually represents the relationship between X and Y with the regression line.

CHART TOOLS

FILE HOME INSERT PAGE LAYOUT FORMULAS DATA REVIEW VIEW DESIGN FORMAT

Chart 1   fx   =SERIES(,Sheet1!$C$2:$C$101,Sheet1!$D$2:$D$101,1)

	City	Temperature (°C)	Humidity (%)	Rainfall (mm)	Wind Speed (km/h)			
1	City	Temperature (°C)	Humidity (%)	Rainfall (mm)	Wind Speed (km/h)			
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20	Denver	20.8	88	17.4	6.2			
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22	Boston	25.3	51	47	14.4			
23	El Paso	13.5	57	19.9	7.9			
24	Nashville	17.3	31	25.9	6.1			
25	Detroit	19.2	71	41.9	11			
26	Oklahoma City	21.4	74	33.8	5.8			
27	Portland	29.6	86	36.8	18.3			
28	Las Vegas	15	82	10.5	5.4			
29	Memphis	22.9	35	27.1	13.7			

y = -0.0675x + 32.034
R² = 0.0069

Sheet1

READY