



EMPLOYEE DATA ANALYSIS ASSESSMENT

Name- Debashree Priya Sahoo

1. Can you create a pivot table to summarize the total number of employees in each department?

Row Labels	Count of Employee ID
Admin Offices	80
Executive Office	24
IT/IS	430
Production	2020
Sales	331
Software Engineering	115
(blank)	
Grand Total	3000

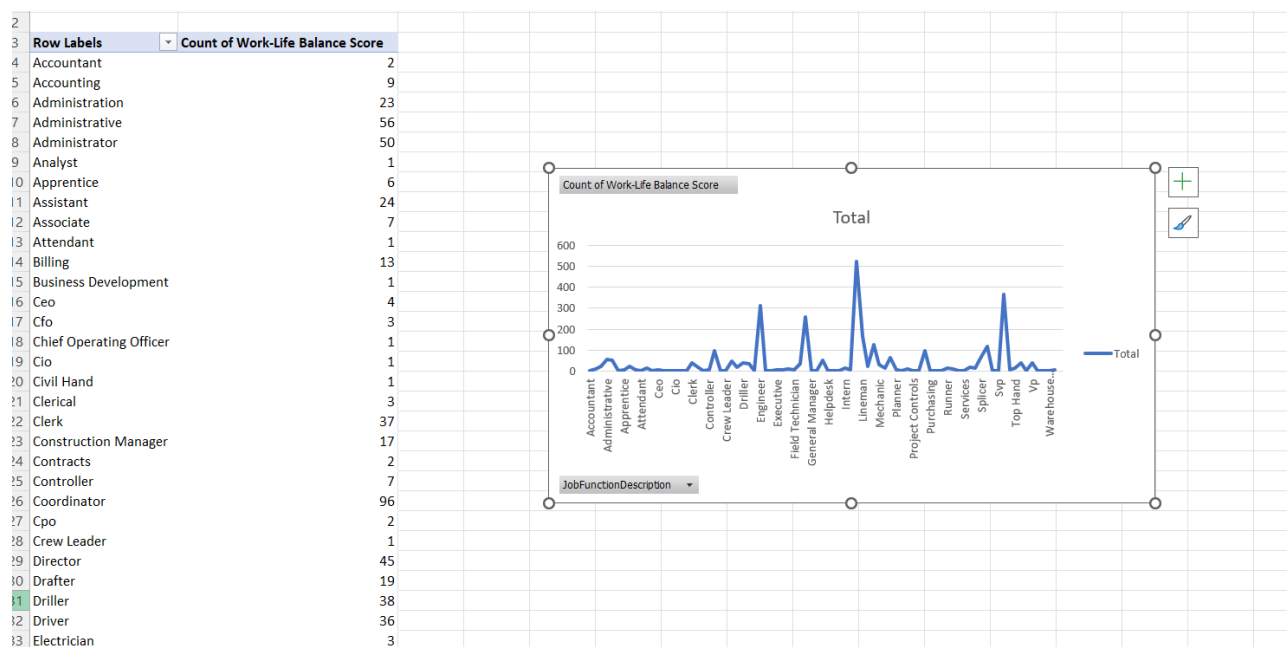
2. Apply conditional formatting to highlight employees with a "Performance Score" below 3 in red.

The screenshot shows an Excel spreadsheet with the following columns: M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z, AA, AB, AC, AD, AE, AF, AG, AH. The data is organized into rows, with the first row (M2) containing the following values: 1, Employee Termination, Termination, Descri, Department, Type, Division, DOB, State, Job, Functional, Gender, Location, Race, Desc, Marital, De, Performan, Current, Employee, Rating. The subsequent rows (N2 to AH2) contain employee data. The 'Performance Score' column (Y) is highlighted in red for values below 3. The 'Employee Rating' column (Z) is highlighted in red for values below 3. The 'Employee ID' column (X) is highlighted in red for values below 3. The 'Employee Name' column (W) is highlighted in red for values below 3. The 'Employee Address' column (V) is highlighted in red for values below 3. The 'Employee Contact' column (U) is highlighted in red for values below 3. The 'Employee Status' column (T) is highlighted in red for values below 3. The 'Employee History' column (S) is highlighted in red for values below 3. The 'Employee Notes' column (R) is highlighted in red for values below 3. The 'Employee Comments' column (Q) is highlighted in red for values below 3. The 'Employee Feedback' column (P) is highlighted in red for values below 3. The 'Employee Evaluation' column (O) is highlighted in red for values below 3. The 'Employee Review' column (N) is highlighted in red for values below 3. The 'Employee Assessment' column (M) is highlighted in red for values below 3.

3. Calculate the average "Satisfaction Score" for male and female employees separately using a pivot table.

Row Labels	Average of Satisfaction Score
Female	3.020214031
Male	3.024279211
(blank)	
Grand Total	3.022

4. Create a chart to visualize the distribution of "Work-Life Balance Score" for different job functions



5. Filter the data to display only terminated employees and find out the most common "Termination Type."

Row Labels	Count of TerminationType
Involuntary	388
Resignation	380
Retirement	377
Unk	1467
Voluntary	388
(blank)	
Grand Total	3000

Unk is the most common termination type

6. Calculate the average "Engagement Score" for each department using a pivot table.

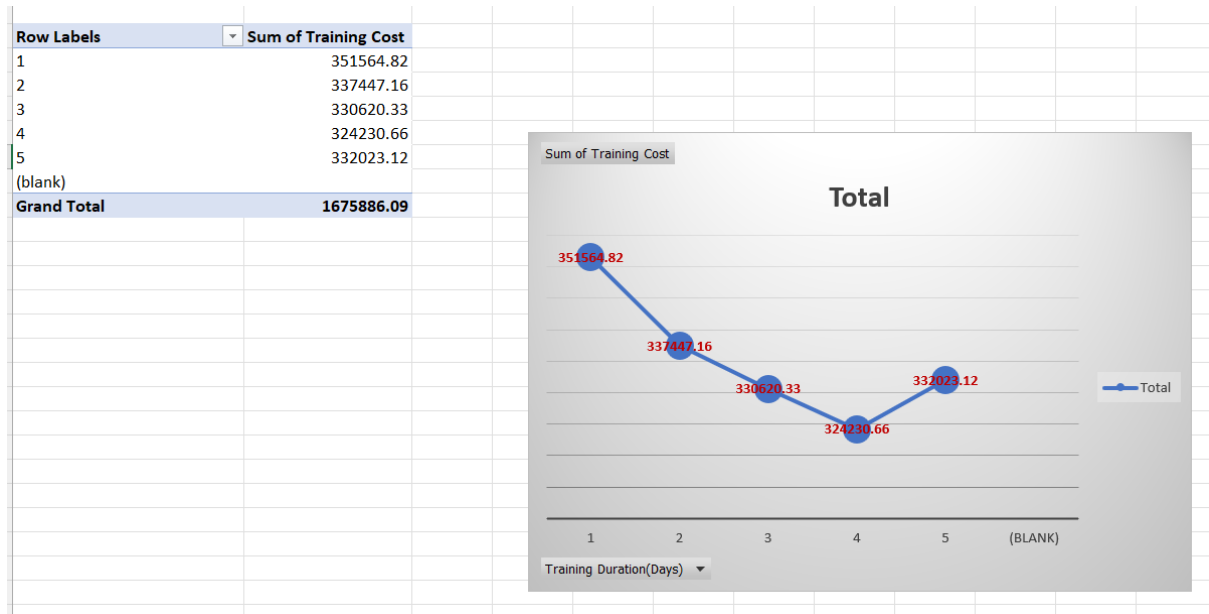
Row Labels	Average of Engagement Score
Admin Offices	2.75
Executive Office	2.583333333
IT/IS	2.853488372
Production	2.976237624
Sales	2.933534743
Software Engineering	2.843478261
(blank)	
Grand Total	2.939666667

8. Can you identify the department with the highest average "Employee Rating"?

Row Labels	Average of Current Employee Rating
Admin Offices	3.025
Executive Office	2.791666667
IT/IS	2.969767442
Production	2.982178218
Sales	2.909365559
Software Engineering	2.904347826
(blank)	
Grand Total	2.969

Admin offices has the highest average Employee Rating

9. Create a scatter plot to explore the relationship between "Training Duration (Days)" and "Training Cost."



10. Build a pivot table that shows the count of employees by "RaceDesc" and "GenderCode."

Row Labels	Count of GenderCode
Asian	629
Female	346
Male	283
Black	618
Female	346
Male	272
Hispanic	572
Female	325
Male	247
Other	582
Female	318
Male	264
White	599
Female	347
Male	252
(blank)	
(blank)	
Grand Total	3000

11. Use INDEX and MATCH functions to find the "Training Program Name" for an employee with a specific ID.

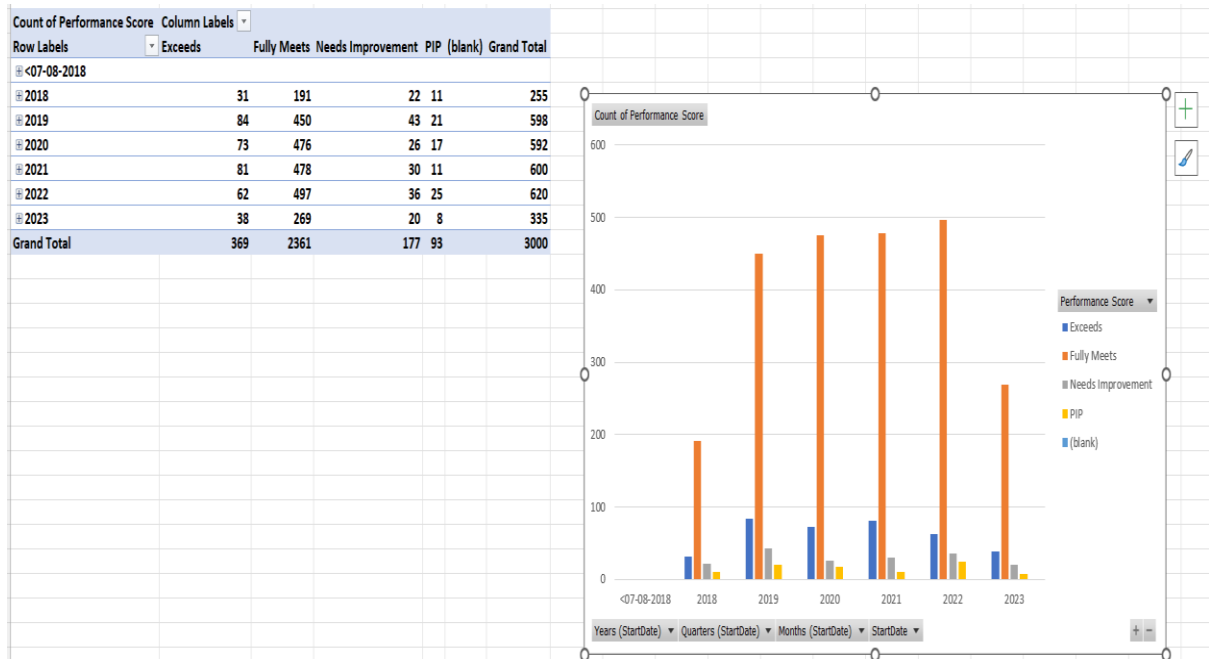
K4 : =INDEX(C:C,MATCH(A2,A:A,0))

	A	B	C	D	E	F	G	H	I	J	K	L
1	Employee ID	Training Date	Training Program Name	Training Ty	Training O	Location	Trainer	Training D	Training Cost			
2	1001	21-Sep-22	Customer Service	Internal	Failed	Port Greg	Amanda D	4	510.83			
3	1002	19-Jul-23	Leadership Development	Internal	Failed	Brandonvii	Brittany Cl	2	582.37			
4	1003	24-Feb-23	Technical Skills	Internal	Incomplete	Port Briani	Mark Robe	4	777.06		Customer Service	
5	1004	12-Jan-23	Customer Service	Internal	Complete	Knightborc	Richard Fis	2	824.3			
6	1005	12-May-23	Communication Skills	External	Passed	Bruceshire	Heather Sh	4	145.99		Employee_ID	Training Program
7	1006	08-May-23	Project Management	Internal	Failed	Erinfort	Michael Di	2	838.07		1012	Technical Skills
8	1007	14-May-23	Leadership Development	External	Failed	New Chris	Virginia Cl	2	667.32			
9	1008	02-Aug-23	Technical Skills	External	Incomplete	Lowemouf	Erica Maxv	2	758.18			
10	1009	21-Aug-22	Customer Service	Internal	Incomplete	Johnland	Katelyn Ha	2	101.21			
11	1010	19-Aug-22	Communication Skills	External	Incomplete	Lake Kimf	Rhonda Cl	5	332.25			
12	1011	06-Nov-22	Communication Skills	Internal	Complete	Smithshire	Natalie Fie	1	803.98			
13	1012	28-Mar-23	Technical Skills	External	Failed	Howardbu	Theresa M	3	887.08			

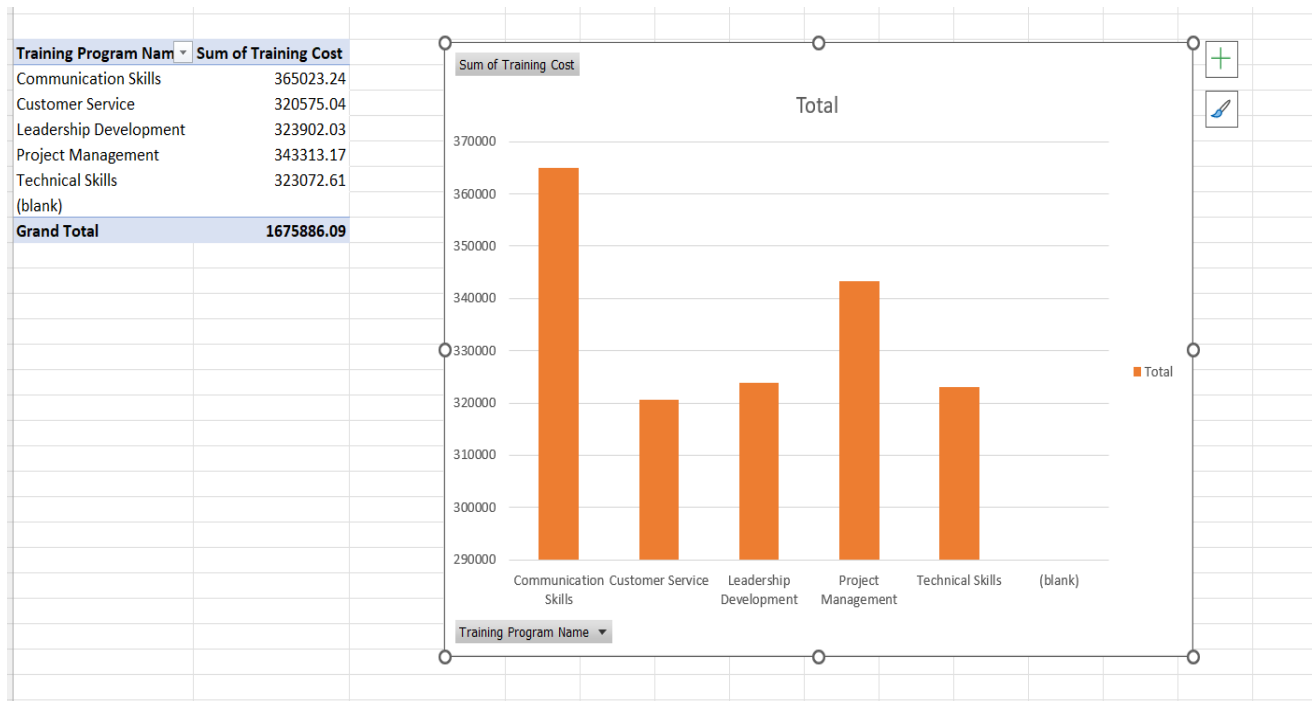
12. Create a multi-level pivot table to analyze the "Performance Score" by "BusinessUnit" and "JobFunctionDescription".

Row Labels	Count of Performance Score
Accountant	2
WBL	2
Accounting	9
CCDR	1
MSC	1
NEL	1
PYZ	2
SVG	1
TNS	3
Administration	23
BPC	3
CCDR	1
EW	1
MSC	6
NEL	1
PL	1
PYZ	2
SVG	3
TNS	2
WBL	3
Administrative	56
BPC	7
CCDR	4
EW	7
MSC	10
NEL	5
PL	4
PYZ	2
SVG	5
TNS	5

13. Design a dynamic chart that allows users to select and visualize the performance of any employee over time.



14. Calculate the total training cost for each "Training Program Name" and display it in a bar chart.



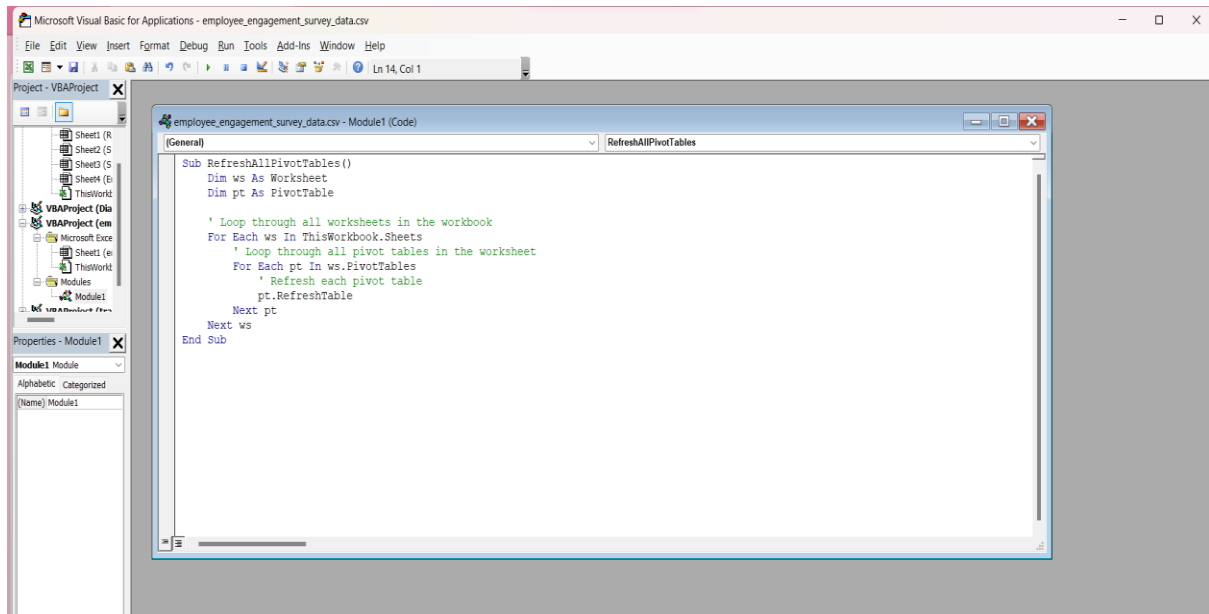
15. Apply advanced conditional formatting to highlight the top 10% and bottom 10% of employees based on "Current Employee Rating."

tType	Division	DOB	State	JobFunc	Gender	Color	Location	Race	Desc	Marital	De	Performance Score	Current Employee Rati	Satisfaction Score	Work-Life	Engagement Score	
	General - E	#####	CA	Technician	Female		90007	Hispanic	Divorced	Exceeds			4		1	5	2
	Engineers	#####	OR	Engineer	Female		97756	White	Divorced	Fully Meets			2		2	2	4
	Splicing	24-11-198	CO	Splicer	Male		80820	Other	Single	Fully Meets			3		4	3	2
	General - E	17-02-196	TX	Technician	Female		43481	Asian	Widowed	Fully Meets			3		1	4	3
	General - E	18-09-199	CO	Technician	Male		5168	Black	Single	Fully Meets			5		4	3	2
	Field Oper.	#####	CO	Coordinator	Male		27270	Hispanic	Divorced	Needs Improvement			3		2	1	5
	Shop (Flee	17-06-199	MA	Mechanic	Male		66835	Black	Widowed	Needs Improvement			5		1	2	2
	Project M	17-05-196	TX	Technician	Female		96336	Hispanic	Widowed	Fully Meets			2		1	4	5
	Fielders	14-11-199	IN	Engineer	Male		19665	Other	Widowed	Fully Meets			4		5	4	2
	Field Oper.	16-01-197	KY	Technician	Female		61457	Asian	Widowed	Fully Meets			5		4	2	2
	General - E	13-11-195	TX	Laborer	Male		93051	Other	Married	Fully Meets			5		5	2	1
	General - E	24-05-196	CA	Coordinator	Female		13249	Hispanic	Married	Fully Meets			2		4	1	3
	Project M	#####	ND	Manager	Female		18983	Black	Divorced	Fully Meets			1		4	5	5
	Field Oper.	27-10-199	IN	Technician	Male		78938	Black	Married	Exceeds			2		1	3	4
	Field Oper.	#####	MA	Foreman	Male		2478	Asian	Divorced	Fully Meets			2		4	4	1
	Catv	19-07-199	MA	Supervisor	Female		2763	Hispanic	Divorced	Fully Meets			2		4	2	2
	Field Oper.	26-10-198	MA	Driller	Female		2346	Asian	Divorced	Exceeds			4		3	5	4
	Undergrou	#####	MA	Laborer	Female		2124	Hispanic	Widowed	Fully Meets			1		1	3	4
	Engineers	#####	MA	Engineer	Female		30766	Hispanic	Married	Fully Meets			5		2	5	1
	Billable Co	13-03-196	MA	Engineer	Male		95618	Other	Divorced	Fully Meets			3		3	1	2
	General - E	17-03-198	MA	Technician	Male		76278	Asian	Married	Fully Meets			3		2	3	5
	General - E	#####	MA	Specialist	Male		77580	Hispanic	Married	Fully Meets			2		4	2	1
	Field Oper.	#####	MA	Foreman	Male		37983	Asian	Married	Fully Meets			3		4	2	4
	Engineers	24-07-196	MA	Engineer	Female		20847	Black	Single	Fully Meets			3		5	3	5
	Project M	25-11-196	MA	Technician	Female		95682	Black	Divorced	Fully Meets			3		1	5	4
	Executive	22-05-195	MA	Vp	Male		21624	Asian	Married	Fully Meets			3		5	3	5
	Field Oper.	15-08-195	MA	Locator	Female		2667	Other	Widowed	Fully Meets			3		3	3	2
	Field Oper.	19-05-195	MA	Laborer	Male		16052	Hispanic	Single	Fully Meets			3		4	3	5
	Splicing	29-12-198	MA	Splicer	Female		45376	Asian	Divorced	Needs Improvement			3		5	5	3
	Finance &	#####	MA	Administra	Male		33204	Other	Divorced	Fully Meets			3		1	1	4
	Field Oper.	#####	MA	Technician	Male		76198	Hispanic	Widowed	Fully Meets			3		5	4	5
	Wireline C	19-09-195	MA	Manager	Female		47113	Asian	Divorced	Exceeds			3		4	1	5

16. Use a calculated field in a pivot table to determine the average "Engagement Score" per year.

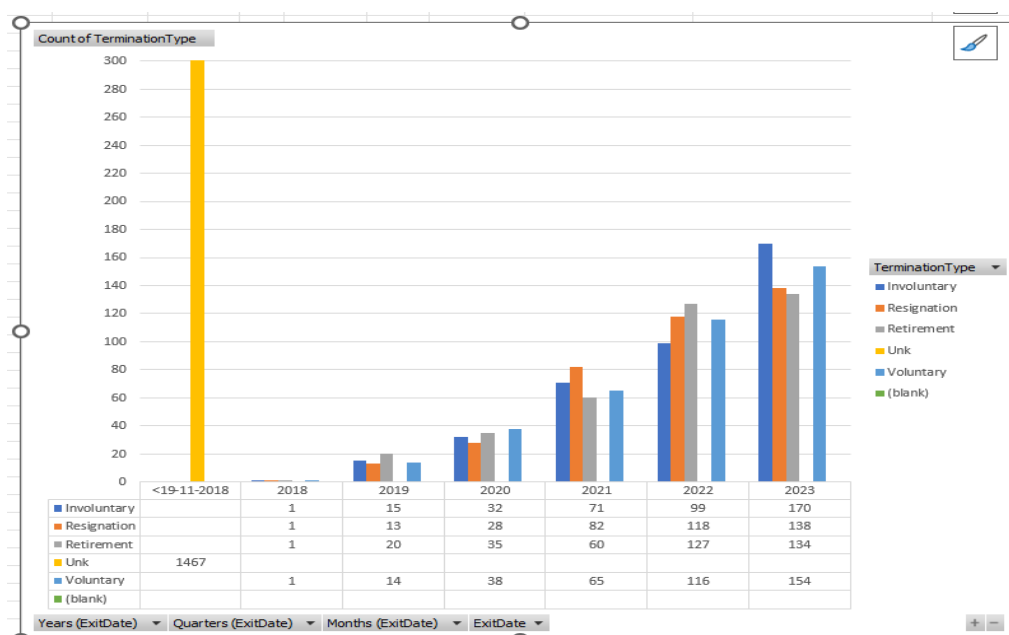
Years	Average of Engagement Score
<07-08-2018	
2018	2.917647059
2019	2.933110368
2020	2.967905405
2021	2.95
2022	2.980645161
2023	2.823880597
Grand Total	2.939666667

17. Can you build a macro that automates the process of updating and refreshing all pivot tables in the workbook?



18. Create a histogram to understand the distribution of "ExitDate" for terminated employees.

Count of TerminationType	Column Labels					
Exit Date	Involuntary	Resignation	Retirement	Unk	Voluntary (blank)	Grand Total
<19-11-2018				1467		1467
2018	1	1	1		1	4
2019	15	13	20		14	62
2020	32	28	35		38	133
2021	71	82	60		65	278
2022	99	118	127		116	460
2023	170	138	134		154	596
Grand Total	388	380	377	1467	388	3000



L7	=SUMPRODUCT((F2:F100="Port Greg")*(I2:I100))											
	A	B	C	D	E	F	G	H	I	J	K	L
1	Employee ID	Training Date	Training Program Name	Training Type	Training Outcome	Location	Trainer	Training Duration	Training Cost			
2	1001	21-Sep-22	Customer Service	Internal	Failed	Port Greg	Amanda D	4	510.83			
3	1002	19-Jul-23	Leadership Development	Internal	Failed	Brandonville	Brittany Cl	2	582.37			
4	1003	24-Feb-23	Technical Skills	Internal	Incomplete	Port Brien	Mark Robe	4	777.06			
5	1004	12-Jan-23	Customer Service	Internal	Complete	Knightbridge	Richard Fis	2	824.3			
6	1005	12-May-23	Communication Skills	External	Passed	Bruce Shire	Heather St	4	145.99	Location	Training cost	
7	1006	08-May-23	Project Management	Internal	Failed	Erinfort	Michael Di	2	838.07	Port Greg		510.83
8	1007	14-May-23	Leadership Development	External	Failed	New Chris	Virginia Cl	2	667.32	Erinfort		838.07

EMPLOYEE DATA ANALYSIS DASHBOARD

Total Employee count

3000

Sum of Training Cost

1.68M

Average of Satisfaction Score

3.02

Average of Work-Life Balance Score

2.99

Average of Engagement Score

2.94

DepartmentType

Ad... Exe... IT/IS
Pro... Sal... Sof...

Count of GenderCode by GenderCode

GenderCode	Count
Female	1800
Male	1200

Sum of Training Cost by Training Program Name

Training Program Name	Sum of Training Cost
Commu... Skills	365K
Project Manage...	343K
Leadersh... Develop...	324K
Technical Skills	323K
Customer Service	321K

ExitDate

-- 19... 29...
17... 25... 04...
09... 13... 26...

Sum of Work-Life Balance Score by Year and DepartmentType

Year	Admin Offices	Executive Office	IT/IS
2018	~100	~100	~100
2020	~100	~100	~100
2022	~100	~100	~100

Count of Performance Score by Year and Performance Score

Year	Exceeds	Fully Meets	Needs Improvement	PIP
2018	~10	~10	~10	~10
2020	~10	~10	~10	~10
2022	~10	~10	~10	~10

Count of Employee ID by RaceDesc and GenderCode

RaceDesc	GenderCode	Count of Employee ID
Asian	Female	~350
Asian	Male	~280
Black	Female	~350
Black	Male	~280
Hispanic	Female	~320
Hispanic	Male	~250
Other	Female	~320
Other	Male	~270
White	Female	~350
White	Male	~250