EMPLOYEE DATA ANALYSIS

TASK - 2 (USING MICROSOFT EXCEL)

BY VISHAL KUMAR

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

Department	Employees
Admin Offices	80
Executive Office	24
IT/IS	430
Production	2020
Sales	331
Software Engineering	115
Grand Total	**3000**

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

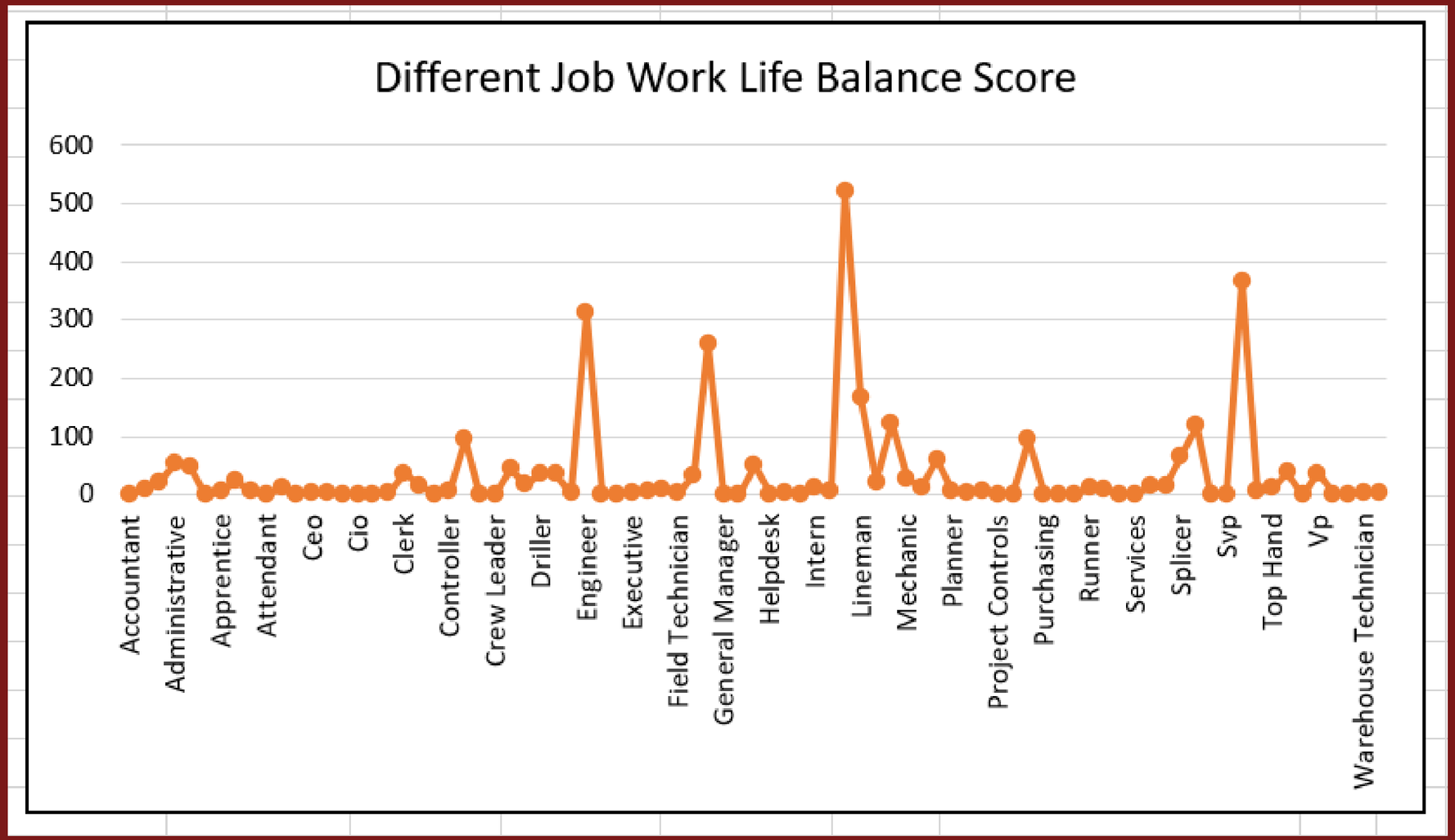
DepartmentType	Division	DOB	State	JobFunctionDescription	GenderCode	LocationCode	RaceDesc	MaritalDesc	Performance Score	Current Employee Rating	Score
Production	General - Con	19-10-1976	MA	Operator	Male	80948	Asian	Married	Exceeds	3	4
Production	Field Operations	20-10-1956	MA	Laborer	Female	95266	Black	Single	Exceeds	3	4
Production	Field Operations	03-06-1944	MA	Laborer	Female	33304	White	Divorced	Exceeds	3	4
Production	Shop (Fleet)	12-10-1987	MA	Shop	Female	36632	Hispanic	Married	Needs Improvement	3	2
Production	Field Operations	24-02-1997	MA	Technician	Female	20625	White	Widowed	PIP	3	3
Production	General - Eng	26-11-1953	MA	Engineer	Male	26283	Black	Married	PIP	3	3
Production	General - Con	28-01-1986	MA	Flagger	Female	67750	White	Single	Needs Improvement	3	2
Production	Project Management - Con	25-01-1962	MA	Coordinator	Female	53913	Hispanic	Widowed	Needs Improvement	3	2
Production	General - Sga	28-05-1993	MA	Lineman	Male	76052	White	Single	Needs Improvement	3	2
Production	Field Operations	07-03-1995	MA	Laborer	Female	61768	Other	Single	Exceeds	3	4
Production	Field Operations	19-03-1951	MA	Director	Male	33335	Asian	Divorced	Needs Improvement	3	2
Production	General - Con	16-01-1960	MA	Foreman	Male	69290	White	Married	Exceeds	3	4
Production	Field Operations	06-03-1991	MA	Laborer	Female	65106	Black	Divorced	Needs Improvement	3	2
Production	Aerial	27-12-1991	MA	Lineman	Female	12740	Black	Divorced	Needs Improvement	3	2
Production	Field Operations	16-06-1977	MA	Laborer	Male	58121	White	Widowed	Needs Improvement	3	2
Production	General - Con	08-08-1964	MA	Foreman	Female	95591	Black	Widowed	Needs Improvement	3	2
Production	Executive	03-04-1967	MA	Executive Assistant	Male	70072	Asian	Single	Needs Improvement	3	2
IT/IS	Field Operations	12-09-1975	MA	Supervisor	Male	2134	Other	Divorced	Needs Improvement	3	2
IT/IS	Aerial	21-01-1942	MA	Director	Male	2134	Asian	Single	Needs Improvement	3	2
IT/IS	Finance & Accounting	17-06-2001	MA	Intern	Male	2045	Other	Divorced	Needs Improvement	3	2
IT/IS	Field Operations	22-10-1996	MA	Top Hand	Male	1887	White	Widowed	Needs Improvement	3	2
IT/IS	Shop (Fleet)	16-09-1977	MA	Manager	Male	2056	Other	Single	Exceeds	3	4
IT/IS	General - Con	05-12-1947	MA	Technician	Female	2056	Other	Married	Needs Improvement	3	2
IT/IS	Field Operations	14-01-1966	MA	Technician	Female	2110	Other	Divorced	Exceeds	3	4
IT/IS	Catv	04-12-1974	MA	Foreman	Female	1886	Asian	Single	Needs Improvement	3	2
IT/IS	Field Operations	01-04-1946	MA	Engineer	Female	2970	Hispanic	Married	Fully Meets	3	3
IT/IS	General - Con	02-05-1944	MA	Foreman	Female	13058	Other	Single	Fully Meets	3	3
IT/IS	Executive	24-10-1986	MA	Executive Assistant	Female	20602	White	Widowed	Fully Meets	3	3

... Working Sheet | Ques-4 | Ques-5 | Ques-6 | Ques-9 | Ques-15 | Sheet1 | training_and_development_data | Ques-16 | employee_engagement_survey_data | recruitment_data | Ques-7 ...

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

Gender	Average of Satisfaction Score
Female	3
Male	3
Other	3
Grand Total	**3**

4. Create a chart to visualize the distribution of the "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."

Termination Type	Employees
Involuntary	388
Resignation	380
Retirement	377
Unk	1467
Voluntary	388
Grand Total	**3000**

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

Department	Average of Engagement Score
Admin Offices	2.94
Executive Office	2.94
IT/IS	2.94
Production	2.94
Sales	2.94
Software Engineering	2.94

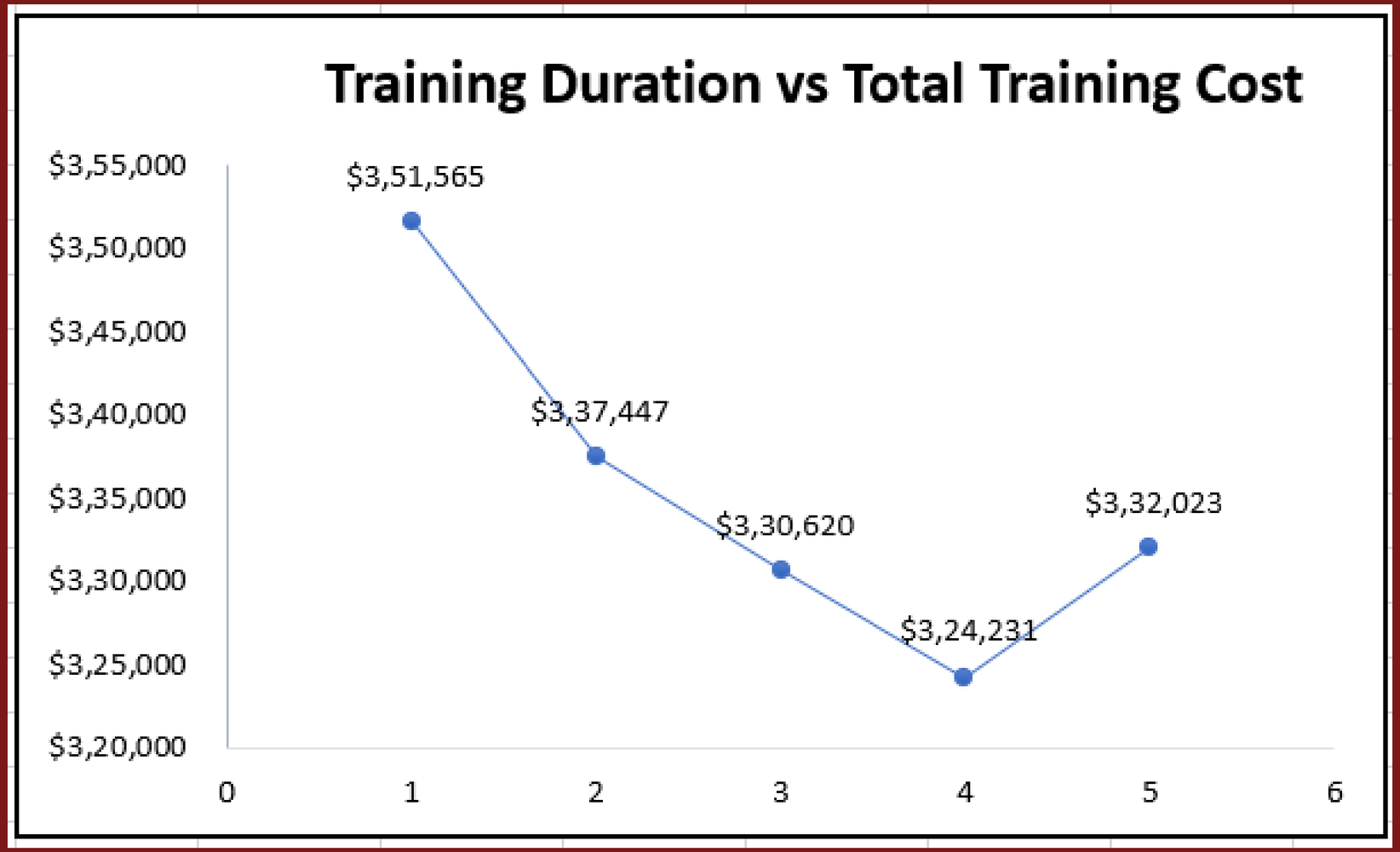
7. Use VLOOKUP to find the supervisor's email address for a specific employee.

Using VLOOKUP	
Employee ID	1040
Name	Steven Villa
Supervisor's Email	joseph36@example.com

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

Department	Average of Employee Rating
Admin Offices	3.03
Executive Office	2.79
IT/IS	2.97
Production	2.98
Sales	2.91
Software Engineering	2.90

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."

Race	Female	Male
Asian	346	283
Black	346	272
Hispanic	325	247
Other	318	264
White	347	252
Grand Total	**1682**	**1318**

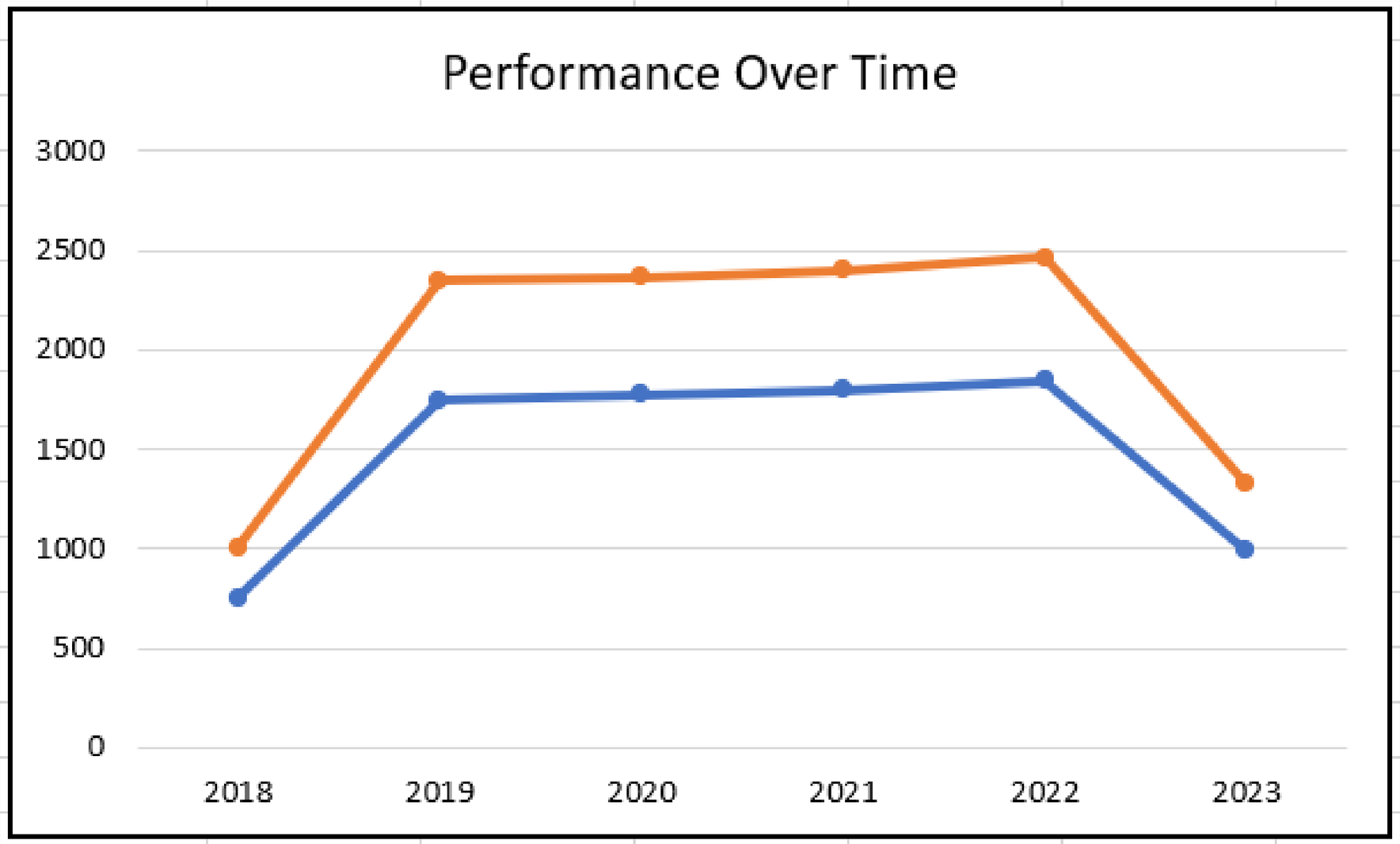
11. Use INDEX and MATCH functions to find the "Training Program Name" for an employee with a specific ID.

Employee ID	Training Program Name
1001	Customer Service
1002	Leadership Development
1003	Technical Skills
1004	Customer Service
1005	Communication Skills
1006	Project Management
1007	Leadership Development
1008	Technical Skills
1009	Customer Service
1010	Communication Skills
1011	Communication Skills
1012	Technical Skills
1013	Project Management
1014	Customer Service
1015	Leadership Development

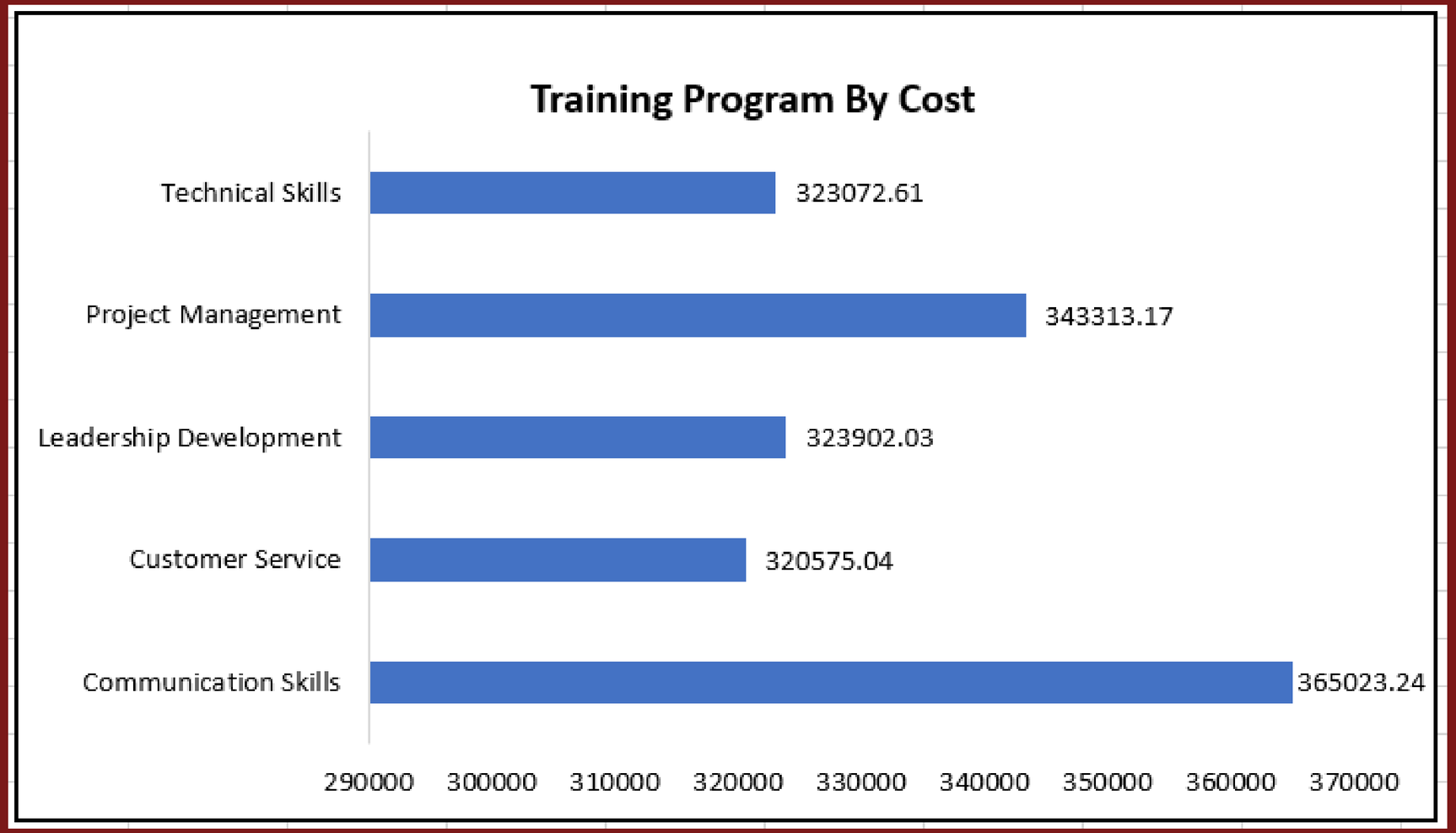
12. Create a multi-level pivot table to analyze the "Performance Score" by "BusinessUnit" and "JobFunctionDescription."

Business Unit & Job Function Descriptio	Performance Scores
⊞ BPC	303
⊞ CCDR	300
⊞ EW	302
⊞ MSC	296
⊞ NEL	304
⊞ PL	301
⊞ PYZ	299
⊞ SVG	304
⊞ TNS	297
⊟ WBL	294
Accountant	2
Administration	3
Administrative	7
Administrator	6
Apprentice	1
Billing	2
Civil Hand	1
Clerical	1
Clerk	4
Construction Manager	2
Controller	1
Coordinator	15
Director	4
Drafter	2
Driller	4
Driver	1
Electrician	1
Engineer	35
Estimator	1
Flagger	7
Foreman	27
Groundman	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."

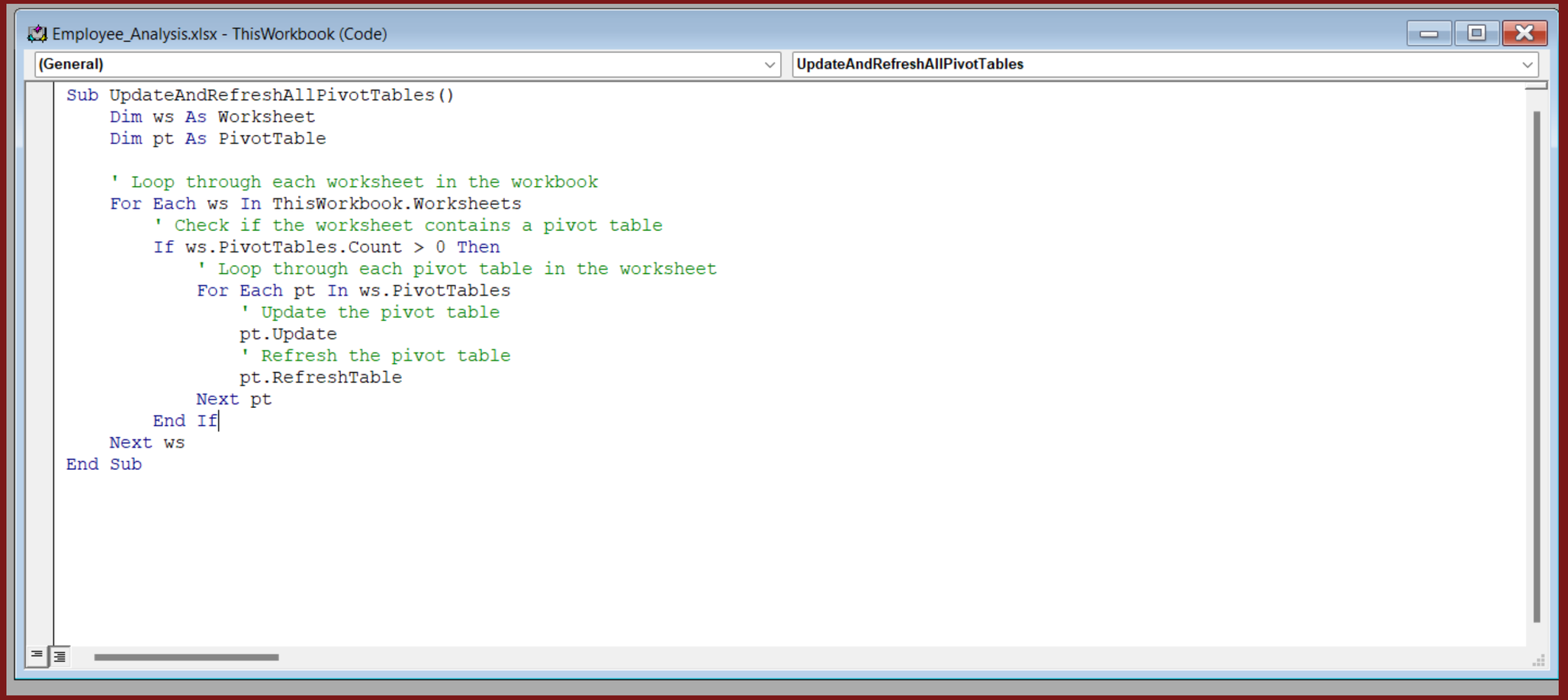
DepartmentType	Division	DOB	State	JobFunctionDescription	GenderCode	LocationCode	RaceDesc	MaritalDesc	Performance Score	Current Employee Rating
Production	General - Con	05-06-1948	MA	Technician	Female	18116	Hispanic	Married	Fully Meets	3
Production	Field Operations	01-12-1964	MA	Groundman	Female	67210	Black	Married	Fully Meets	3
Production	Project Management - Con	19-10-1997	MA	Manager	Female	60616	Other	Divorced	Fully Meets	3
Production	Field Operations	17-07-1985	MA	Construction Manager	Female	17358	Black	Single	Fully Meets	3
Production	Aerial	25-02-1964	MA	Lineman	Female	29605	Black	Widowed	PIP	2
Production	Catv	19-05-1950	MA	Laborer	Female	51886	Other	Divorced	PIP	5
Production	General - Sga	29-03-1969	MA	Vp	Female	66261	Hispanic	Widowed	PIP	4
Production	Aerial	24-11-1944	MA	Coordinator	Female	26880	Other	Divorced	Exceeds	4
Production	Fielders	13-12-1964	MA	Engineer	Female	35098	Hispanic	Married	PIP	5
Production	Field Operations	23-01-1966	MA	Driller	Female	90728	Asian	Single	Exceeds	2
Production	Field Operations	25-12-1986	MA	Construction Manager	Female	49149	Asian	Widowed	Exceeds	5
Production	Field Operations	19-08-1949	MA	Laborer	Female	73771	Hispanic	Widowed	Exceeds	2
Production	General - Sga	27-01-1960	MA	Supervisor	Female	92541	Hispanic	Single	Needs Improvement	4
Production	Wireline Construction	14-11-1962	MA	Foreman	Male	47601	White	Widowed	Exceeds	2
Production	Field Operations	27-12-1943	MA	Project Manager	Female	68361	Hispanic	Widowed	Exceeds	1
Production	Field Operations	19-09-1978	MA	Driller	Female	71922	White	Widowed	Needs Improvement	2
Production	Field Operations	22-11-1988	MA	Tower Hand	Female	51689	Other	Divorced	Exceeds	5
Production	General - Sga	13-05-1948	MA	Vp	Female	97553	Black	Single	Exceeds	4
Production	General - Con	17-05-1957	MA	Lineman	Female	92067	Asian	Single	Needs Improvement	5
Production	Engineers	24-09-1943	MA	Technician	Female	65114	Other	Widowed	Exceeds	4
Production	General - Con	20-10-1944	MA	Clerk	Female	9677	White	Widowed	Exceeds	2
Production	Engineers	24-04-1992	MA	Project Manager	Female	38475	White	Single	Exceeds	4
Production	Billable Consultants	30-03-1978	MA	Engineer	Female	25166	Asian	Married	Exceeds	2
Production	Engineers	09-03-1946	MA	Engineer	Female	81288	Black	Divorced	Needs Improvement	4
Production	Field Operations	17-05-1993	MA	Laborer	Female	45637	Hispanic	Divorced	Exceeds	2
Production	Project Management - Eng	11-06-2000	MA	Coordinator	Female	41529	White	Widowed	Exceeds	5
Production	General - Con	09-10-1941	MA	Foreman	Female	72491	White	Married	Exceeds	5
Production	Wireline Construction	17-01-1967	MA	Lineman	Female	66867	Asian	Divorced	Needs Improvement	2

... | Working Sheet | Ques-4 | Ques-5 | Ques-6 | Ques-9 | Ques-15 | Sheet1 | training_and_development_data | Ques-16 | employee_engagement_survey_data | recruitment_data | Ques-

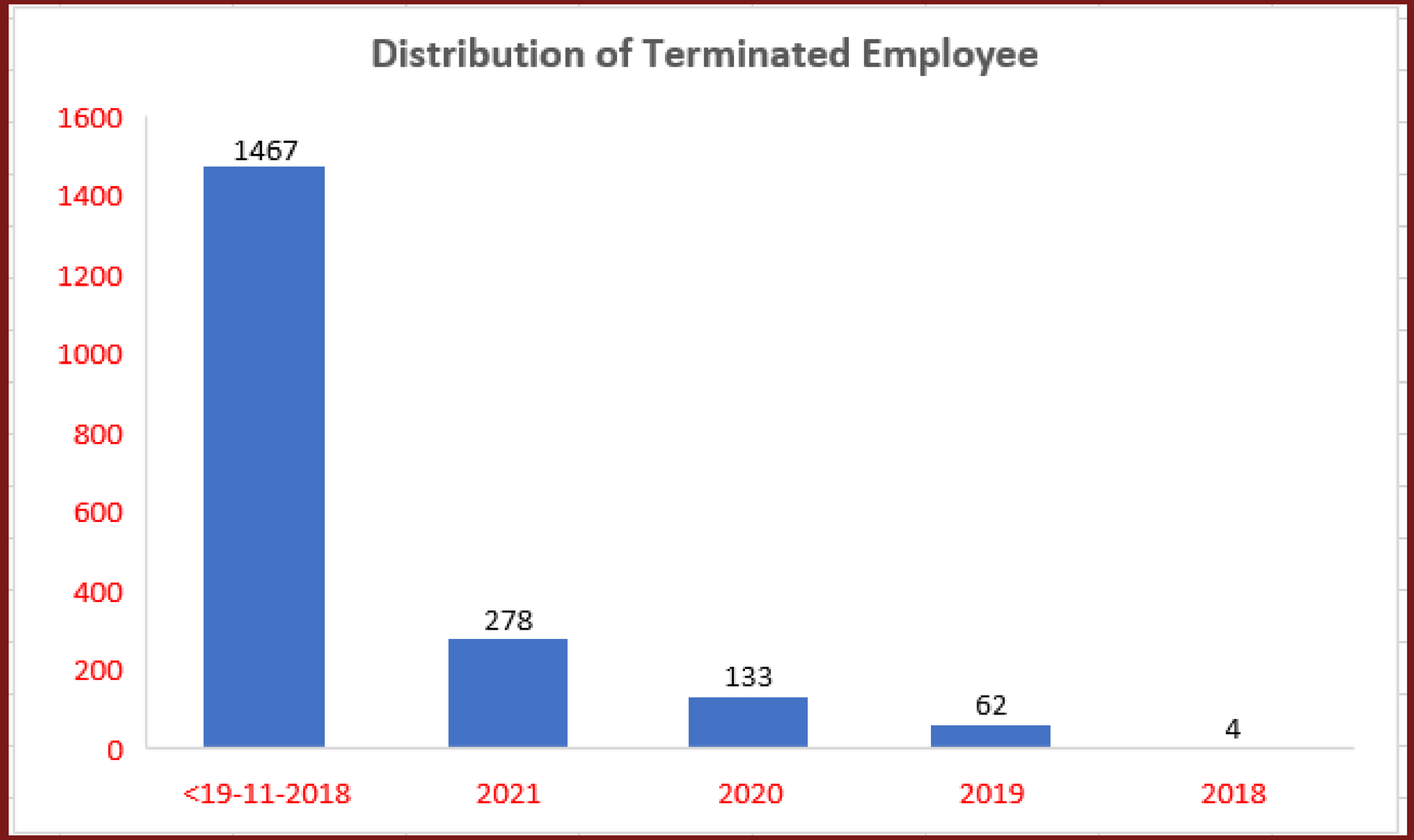
16. Use a calculated field in a pivot table to determine the average "Engagement Score" per year.

Year	Average Engagement Score
2018	2.94
2019	2.94
2020	2.94
2021	2.94
2022	2.94
2023	2.94
Grand Total	**2.94**

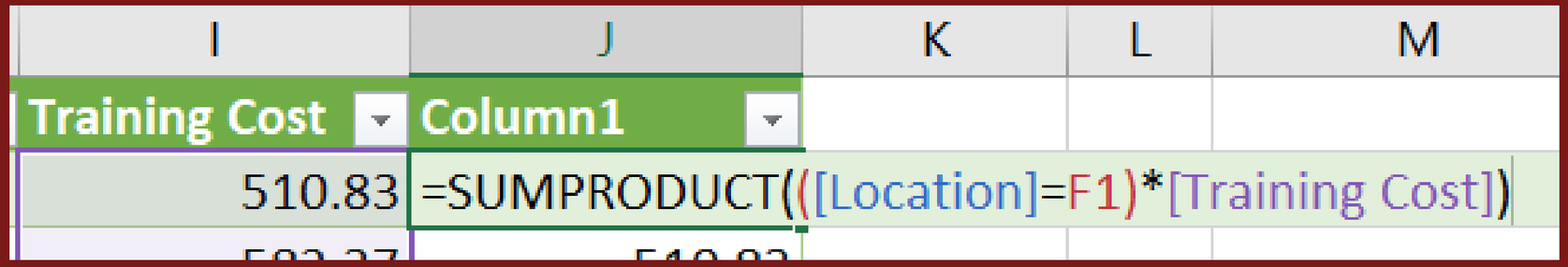
17. Can you build a macro that automates the process of updating and refreshing all pivot tables in the workbook?



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

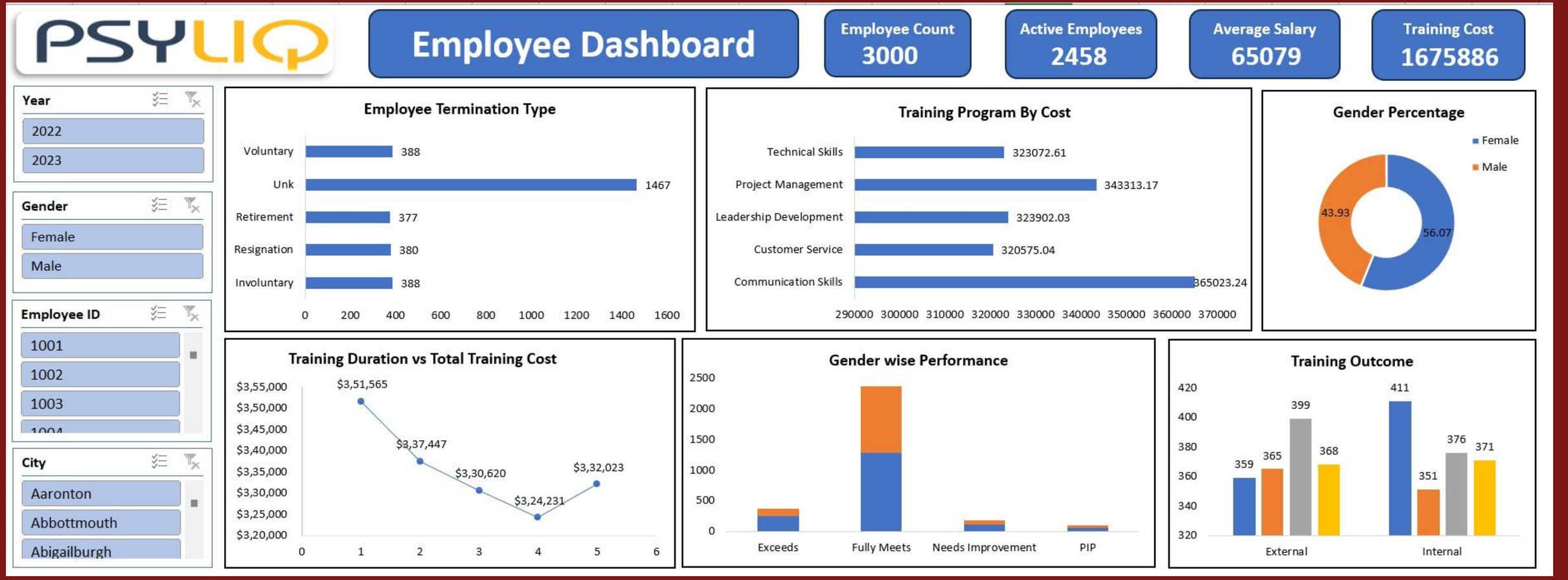


19. Utilize the SUMPRODUCT function to calculate the total training cost for employees in a specific location.



=SUMPRODUCT(array1,[array2],[array3],…)

20. Develop a dashboard that provides an overview of key HR metrics, including headcount, performance, and training costs, using charts and pivot tables.



Thank You