Contents

Title page: (Employee HRMS Details)

This report shows Employee details of all employees' weather working or ex – employees. Showing all details such as department, education qualification, pay band, job role, age, job level, monthly income etc.

Data Source Description:

Dataset detail is like below:

1.	**Attrition**	**Showing job status of employee (currently working or ex-employee)**
2.	**Business Travel**	**Showing Business travelling status of employee**
3.	**CF_age band**	**This column shows the age band of employee**
4.	**CF_attrition label**	**This column shows the attrition status of employees (currently working or Ex)**
5.	**Department**	**Shows the department of particular employee**
6.	**Education Field**	**Shows the education field of employee**

7.	**emp no**	**This column shows the unique emp number of employee**
8.	**Employee Number**	**Shows the employee number of particular employee**
9.	**Gender**	**Express the gender of employee**
10.	**Job Role**	**This column shows the role of employee in organization**
11.	**Marital Status**	**Shows the marital status of employee**
12.	**Over Time**	**Shows the status of over time done by employee**
13.	**Over18**	**Shows the 18+ status of employee (employee is 18+ or not)**
14.	**Training Times Last Year**	**Training time of last year**
15.	**Age**	**Age of particular employee**
16.	**CF_current Employee**	**Shows the CF of current employee**
17.	**Daily Rate**	**Per day wage of particular employee**
18.	**Distance From Home**	**Shows the overall distance from home to office**
19.	**Education**	**Shows the education qualification of employee**
20.	**Employee Count**	**Shows the count of employee**
21.	**Environment Satisfaction**	**Environment satisfaction rating**
22.	**Hourly Rate**	**Shows the hourly rate for particular employee**
23.	**Job Involvement**	**Job involvement rating**
24.	**Job Level**	**Shows the level of job**
25.	**Job Satisfaction**	**Job satisfaction rating**
26.	**Monthly Income**	**This column shows the monthly income of particular employee**
27.	**Monthly Rate**	**Shows the monthly rate**
28.	**Num Companies Worked**	**Number of companies worked**
29.	**Percent Salary Hike**	**This column shows the salary hike percentage of particular employee**
30.	**Performance Rating**	**Performance rating of employee**
31.	**Relationship Satisfaction**	**Relationship satisfaction rating**
32.	**Standard Hours**	**Weekly standard hours of working**

33.	**Stock Option Level**	**Rating of stock option level**
34.	**Total Working Years**	**Shows the total working (in years)**
35.	**Work Life Balance**	**Working life balance rating**
36.	**Years At Company**	**Number of years in company**
37.	**Years In Current Role**	**Number of years in current role**
38.	**Years Since Last Promotion**	**Number of years since last promotion**
39.	**Years With Curr Manager**	**Number of years count with current manager**

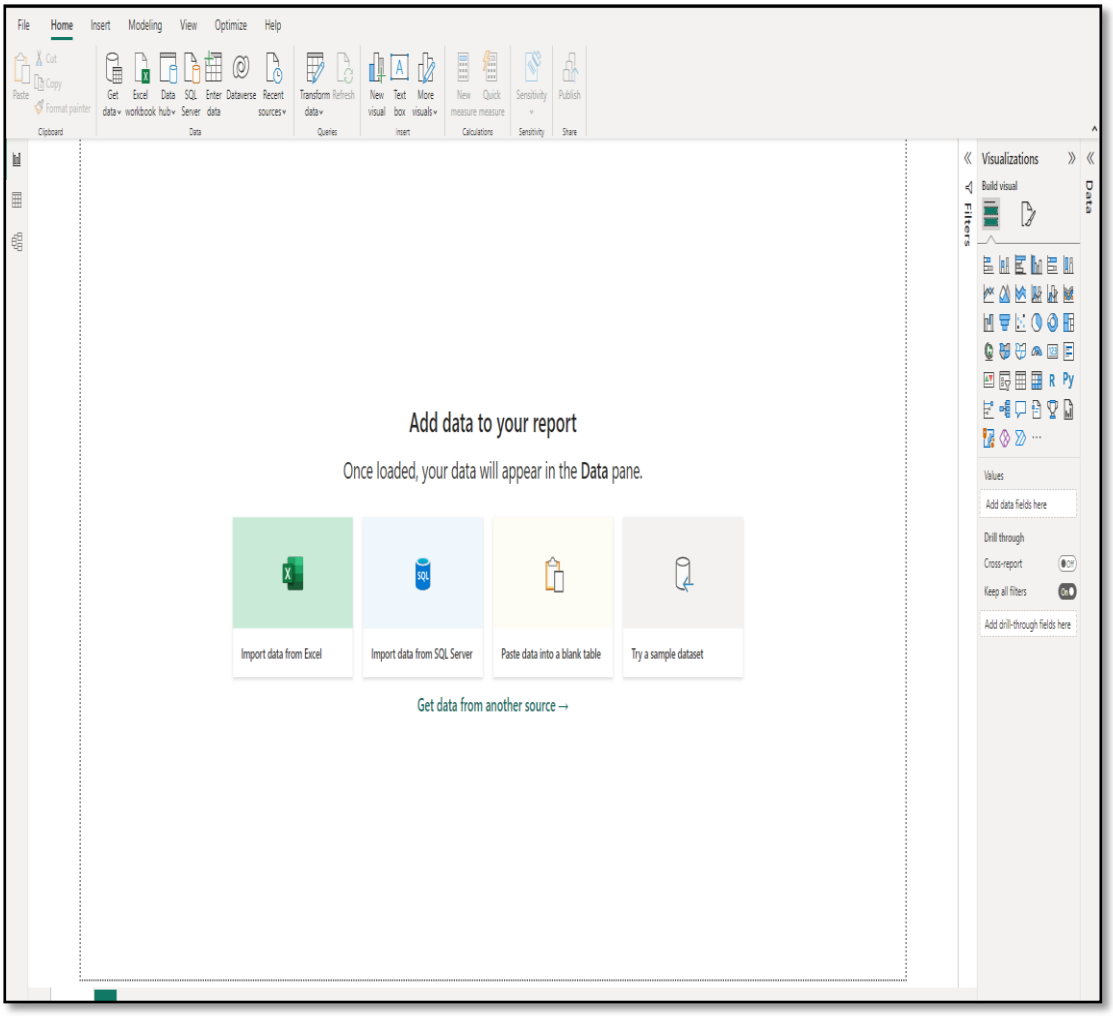
Business Questions:

- Which degree is done the most by females?
- Which department had the highest salary?
- Which age group has the highest number of employees?
- How many employees work overtime according to marital status?
- Which employees have the highest number according to marital status?
- How many overall fresher employees, male and female, are working in company?
- Which department had the highest performance rating?
- Which age group of employees has the highest job involvement?
- Which employee has higher work life rating according to marital status?

Working on Power BI Desktop PBIX file:

Creating PBI file: I have used power Bi desktop and saved the file as below.

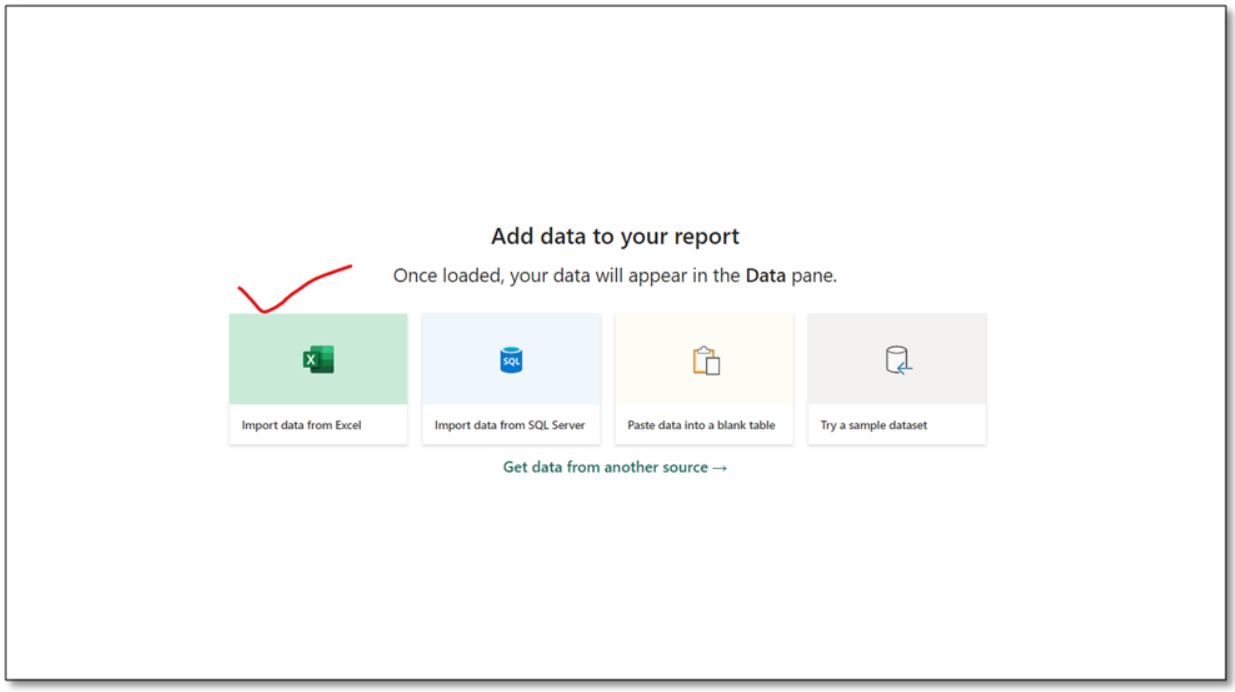
Importing Data-Sheet in power bi desktop:



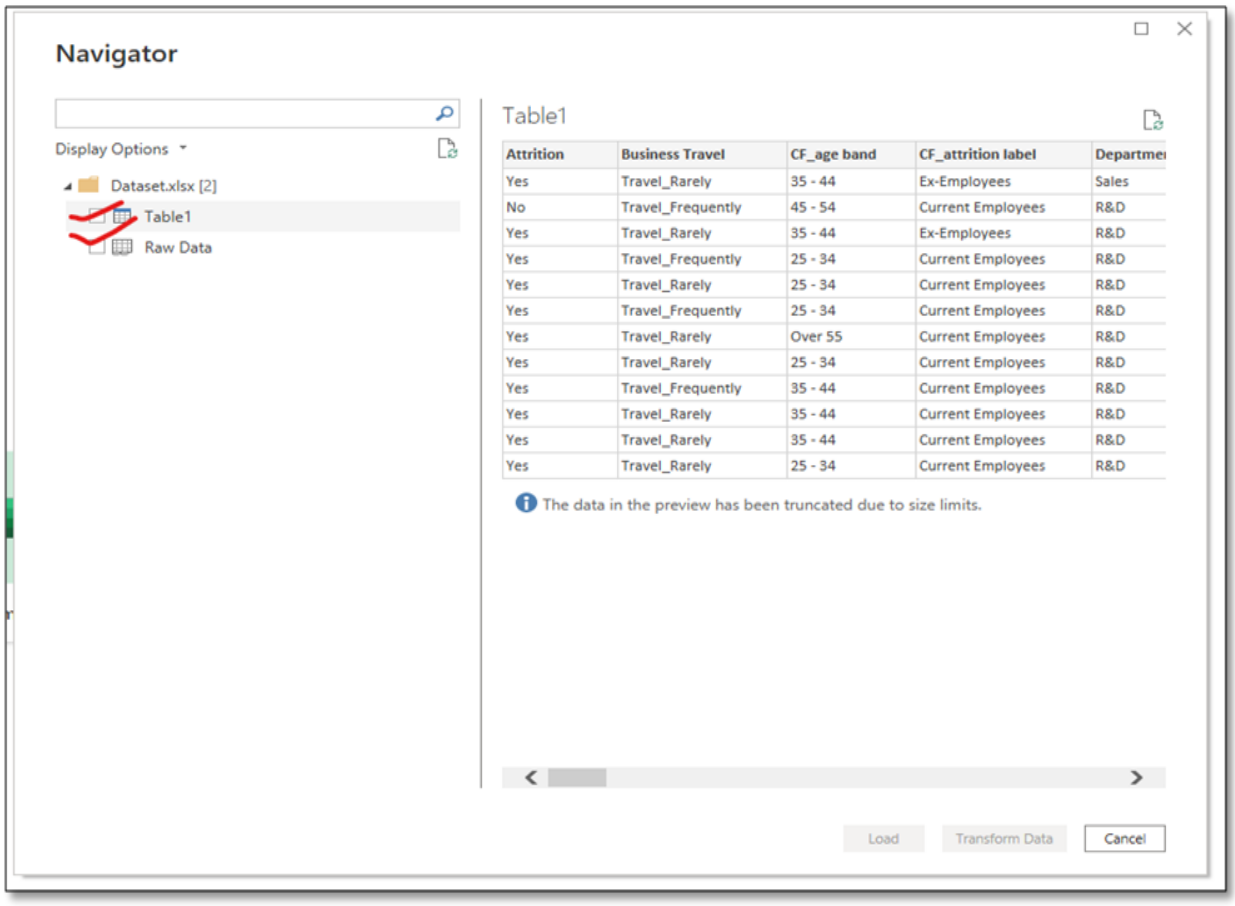
Data Cleaning: -

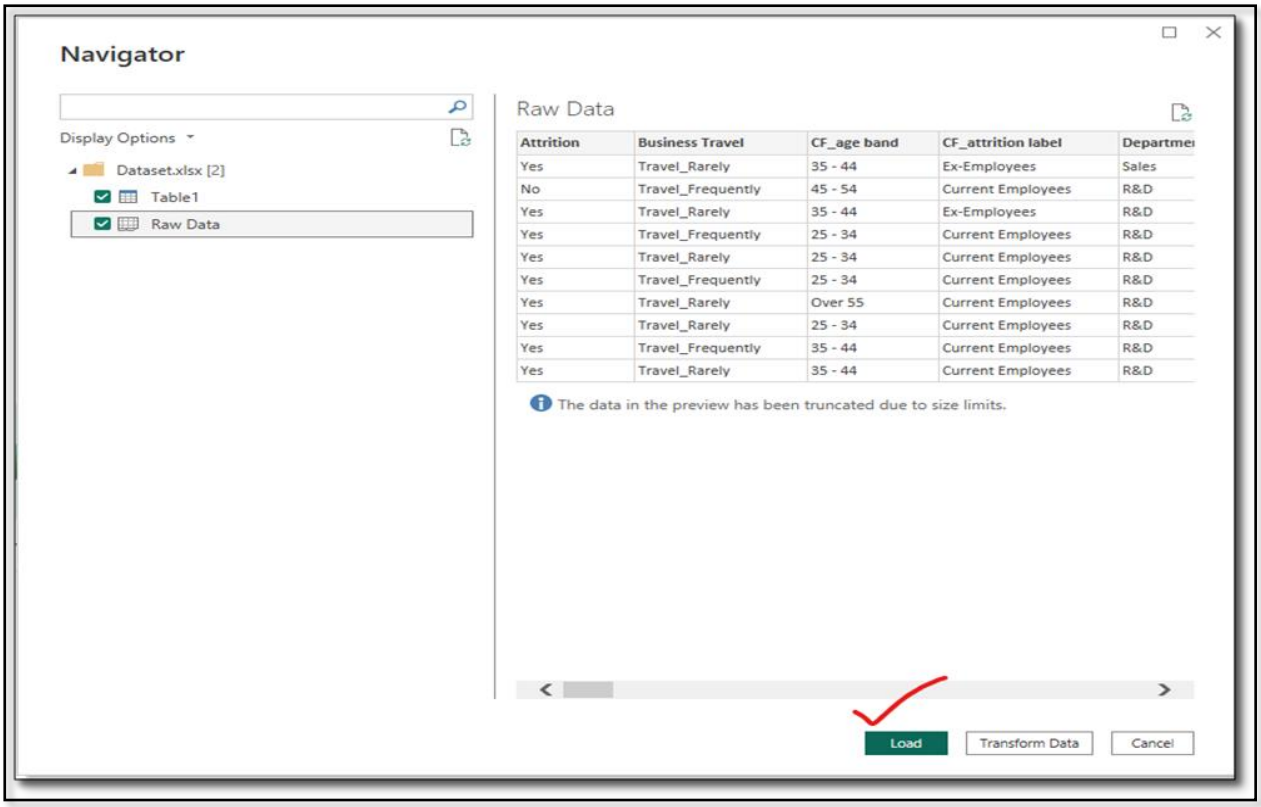
Load the data sheet in power-bi

-

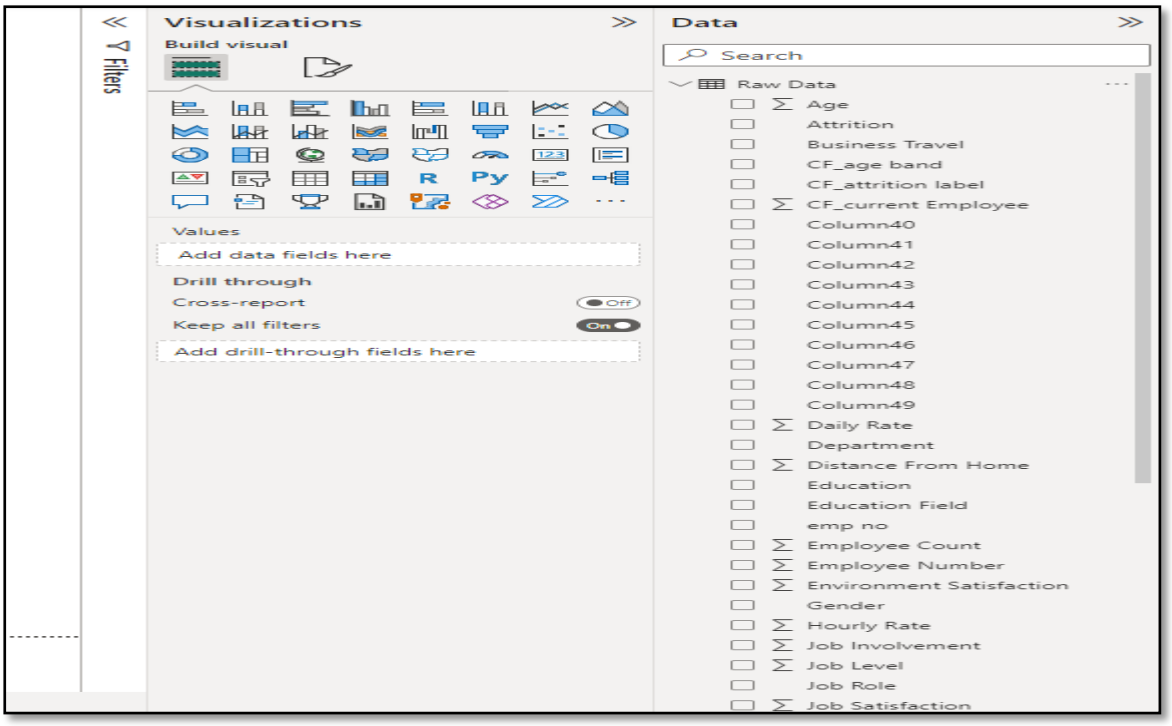


- After that, select the file from Excel. And load them.

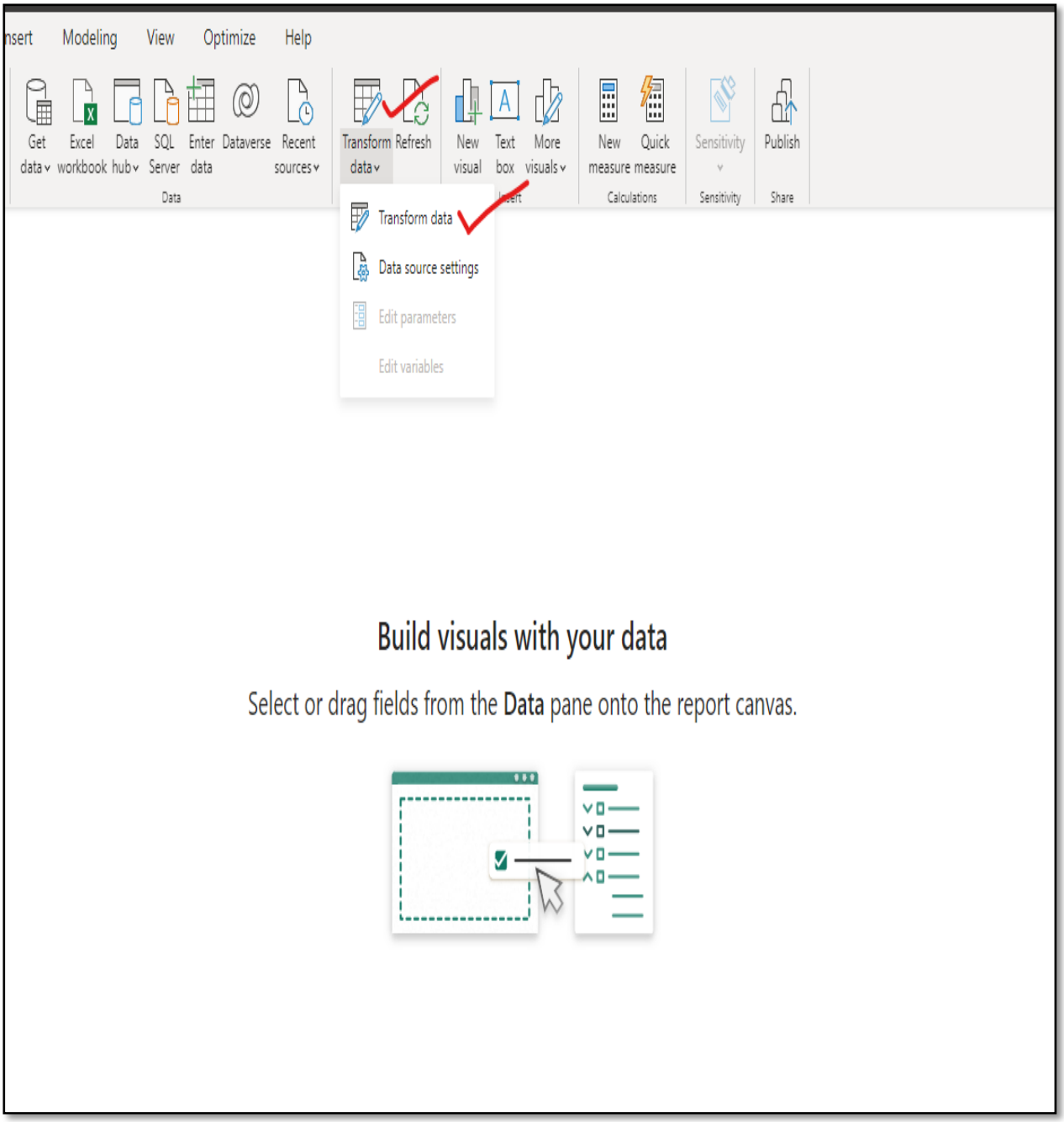


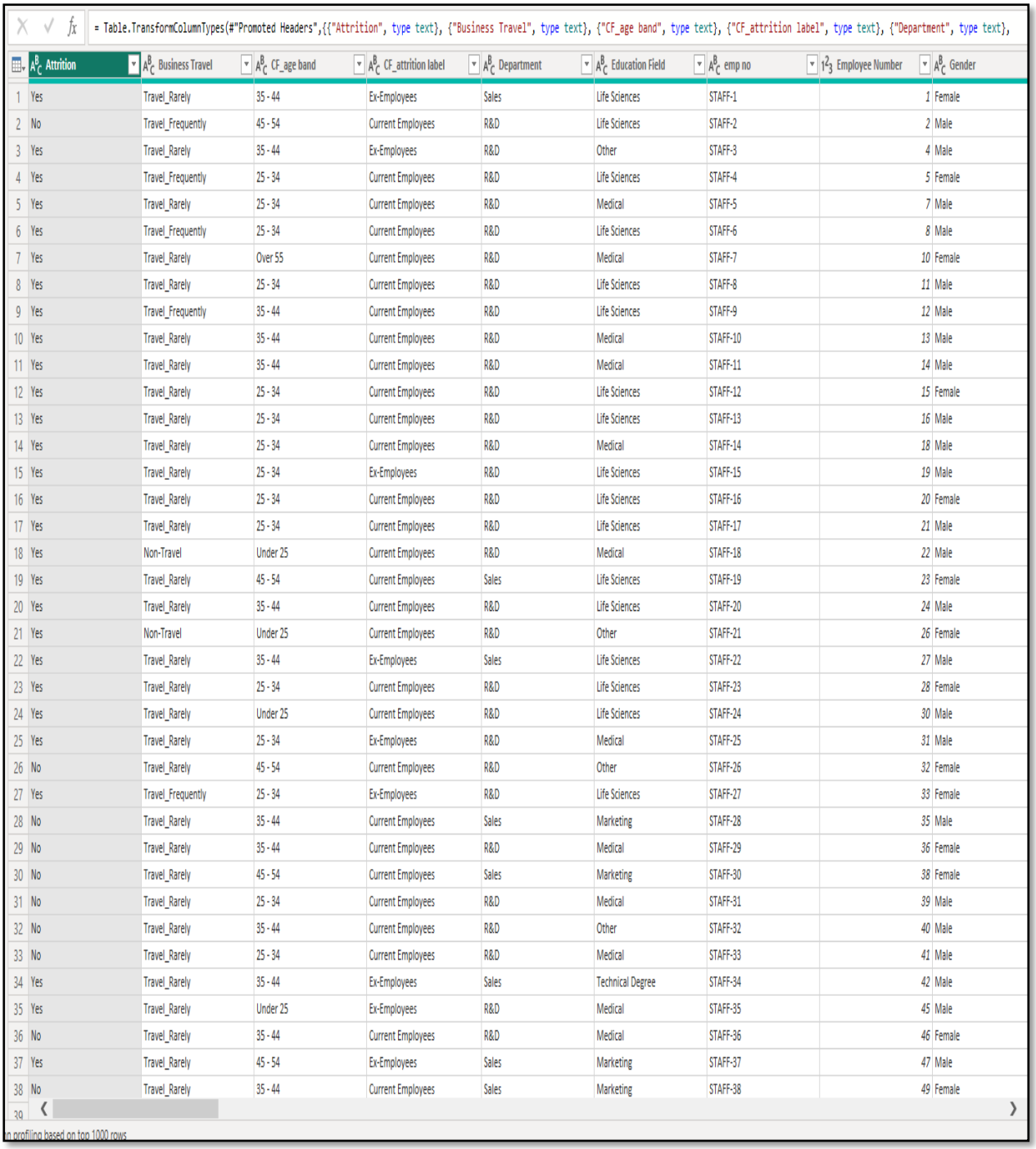


- There are 39 columns in the data sheet.



- “Transform data”





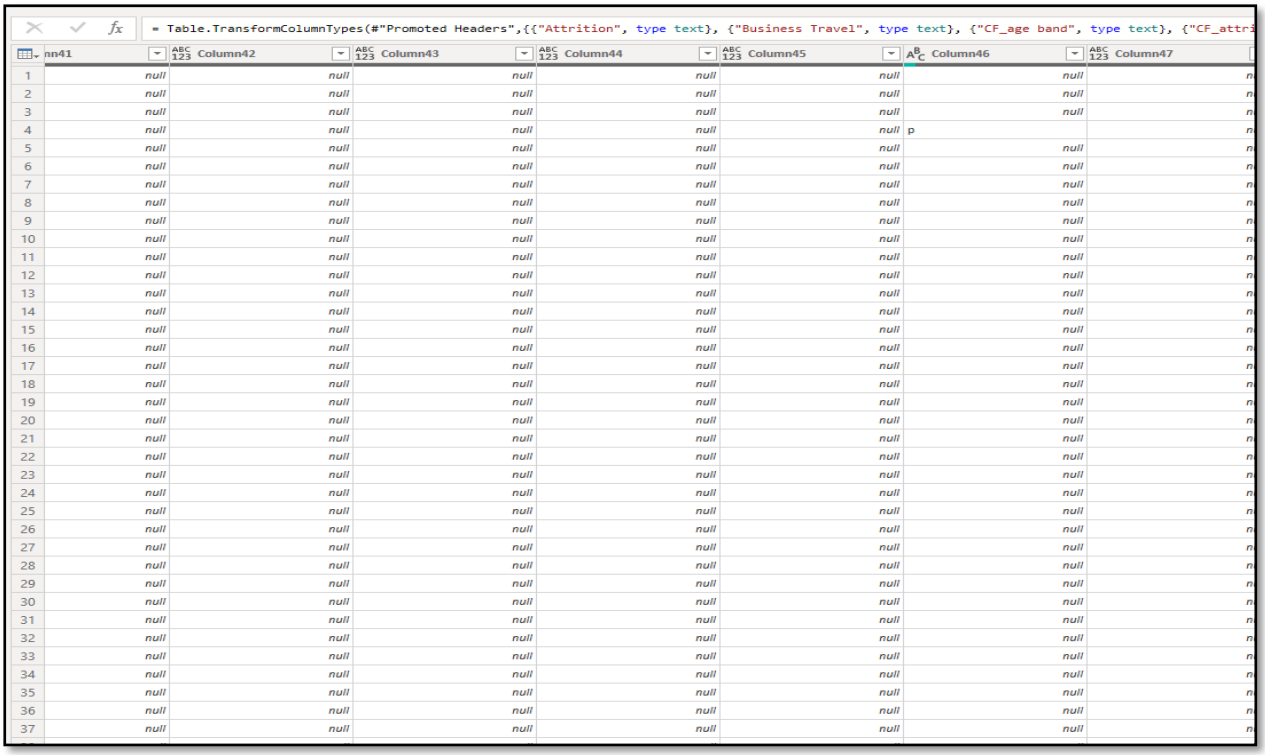
= Table.TransformColumnTypes(#"Promoted Headers",{{"Attrition", type text}, {"Business Travel", type text}, {"CF_age band", type text}, {"CF_attrition label", type text}, {"Department", type text},

	Attrition	Business Travel	CF_age band	CF_attrition label	Department	Education Field	emp no	Employee Number	Gender
1	Yes	Travel_Rarely	35 - 44	Ex-Employees	Sales	Life Sciences	STAFF-1	1	Female
2	No	Travel_Frequently	45 - 54	Current Employees	R&D	Life Sciences	STAFF-2	2	Male
3	Yes	Travel_Rarely	35 - 44	Ex-Employees	R&D	Other	STAFF-3	4	Male
4	Yes	Travel_Frequently	25 - 34	Current Employees	R&D	Life Sciences	STAFF-4	5	Female
5	Yes	Travel_Rarely	25 - 34	Current Employees	R&D	Medical	STAFF-5	7	Male
6	Yes	Travel_Frequently	25 - 34	Current Employees	R&D	Life Sciences	STAFF-6	8	Male
7	Yes	Travel_Rarely	Over 55	Current Employees	R&D	Medical	STAFF-7	10	Female
8	Yes	Travel_Rarely	25 - 34	Current Employees	R&D	Life Sciences	STAFF-8	11	Male
9	Yes	Travel_Frequently	35 - 44	Current Employees	R&D	Life Sciences	STAFF-9	12	Male
10	Yes	Travel_Rarely	35 - 44	Current Employees	R&D	Medical	STAFF-10	13	Male
11	Yes	Travel_Rarely	35 - 44	Current Employees	R&D	Medical	STAFF-11	14	Male
12	Yes	Travel_Rarely	25 - 34	Current Employees	R&D	Life Sciences	STAFF-12	15	Female
13	Yes	Travel_Rarely	25 - 34	Current Employees	R&D	Life Sciences	STAFF-13	16	Male
14	Yes	Travel_Rarely	25 - 34	Current Employees	R&D	Medical	STAFF-14	18	Male
15	Yes	Travel_Rarely	25 - 34	Ex-Employees	R&D	Life Sciences	STAFF-15	19	Male
16	Yes	Travel_Rarely	25 - 34	Current Employees	R&D	Life Sciences	STAFF-16	20	Female
17	Yes	Travel_Rarely	25 - 34	Current Employees	R&D	Life Sciences	STAFF-17	21	Male
18	Yes	Non-Travel	Under 25	Current Employees	R&D	Medical	STAFF-18	22	Male
19	Yes	Travel_Rarely	45 - 54	Current Employees	Sales	Life Sciences	STAFF-19	23	Female
20	Yes	Travel_Rarely	35 - 44	Current Employees	R&D	Life Sciences	STAFF-20	24	Male
21	Yes	Non-Travel	Under 25	Current Employees	R&D	Other	STAFF-21	26	Female
22	Yes	Travel_Rarely	35 - 44	Ex-Employees	Sales	Life Sciences	STAFF-22	27	Male
23	Yes	Travel_Rarely	25 - 34	Current Employees	R&D	Life Sciences	STAFF-23	28	Female
24	Yes	Travel_Rarely	Under 25	Current Employees	R&D	Life Sciences	STAFF-24	30	Male
25	Yes	Travel_Rarely	25 - 34	Ex-Employees	R&D	Medical	STAFF-25	31	Male
26	No	Travel_Rarely	45 - 54	Current Employees	R&D	Other	STAFF-26	32	Female
27	Yes	Travel_Frequently	25 - 34	Ex-Employees	R&D	Life Sciences	STAFF-27	33	Female
28	No	Travel_Rarely	35 - 44	Current Employees	Sales	Marketing	STAFF-28	35	Male
29	No	Travel_Rarely	35 - 44	Current Employees	R&D	Medical	STAFF-29	36	Female
30	No	Travel_Rarely	45 - 54	Current Employees	Sales	Marketing	STAFF-30	38	Female
31	No	Travel_Rarely	25 - 34	Current Employees	R&D	Medical	STAFF-31	39	Male
32	No	Travel_Rarely	35 - 44	Current Employees	R&D	Other	STAFF-32	40	Male
33	No	Travel_Rarely	25 - 34	Current Employees	R&D	Medical	STAFF-33	41	Male
34	Yes	Travel_Rarely	35 - 44	Ex-Employees	Sales	Technical Degree	STAFF-34	42	Male
35	Yes	Travel_Rarely	Under 25	Ex-Employees	R&D	Medical	STAFF-35	45	Male
36	No	Travel_Rarely	35 - 44	Current Employees	R&D	Medical	STAFF-36	46	Female
37	Yes	Travel_Rarely	45 - 54	Ex-Employees	Sales	Marketing	STAFF-37	47	Male
38	No	Travel_Rarely	35 - 44	Current Employees	Sales	Marketing	STAFF-38	49	Female

n profiling based on top 1000 rows

Removing Null Columns from Data Sheet: -

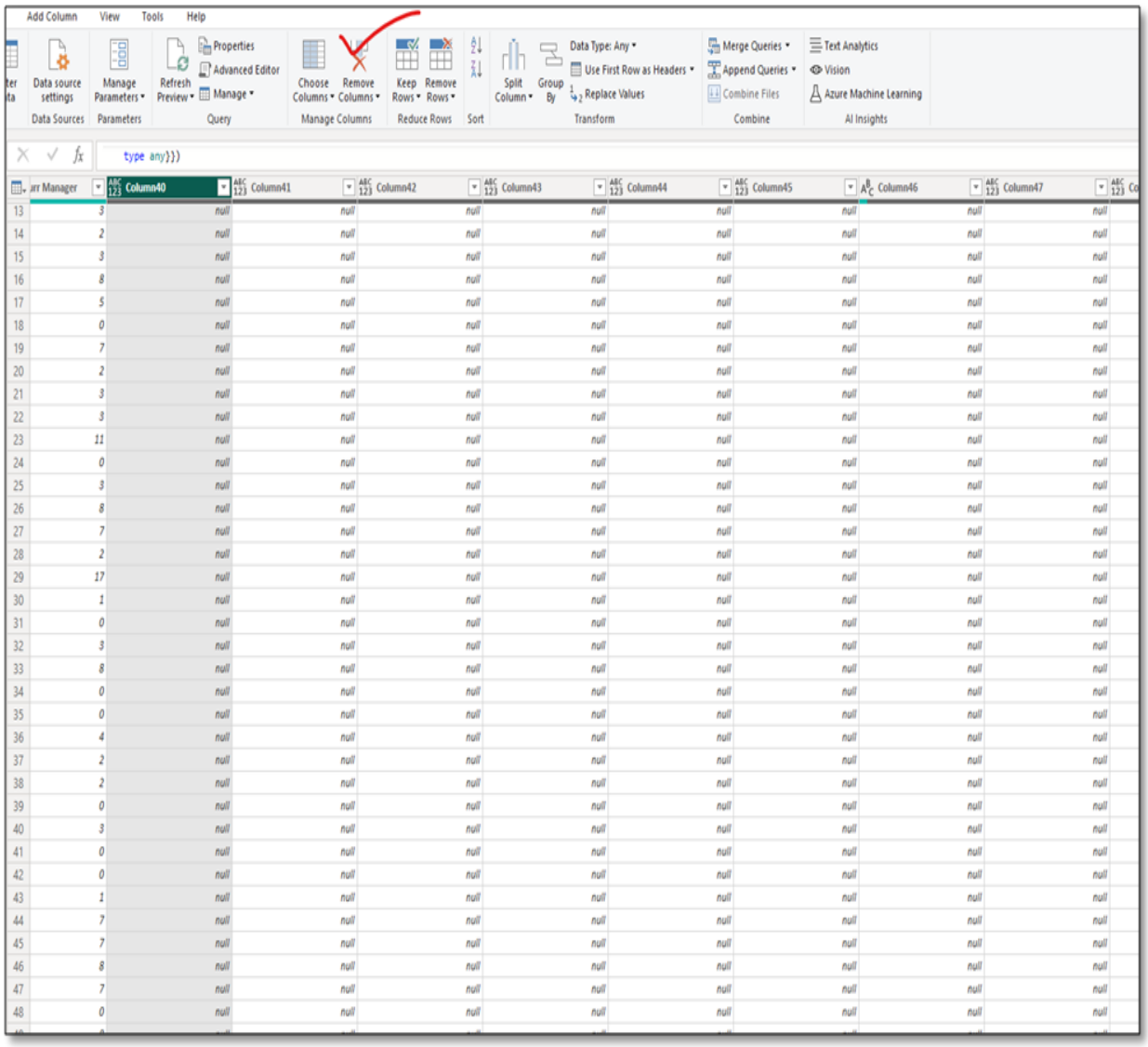
- If the datasheet has any column completely null then it can be removed from the data sheet.

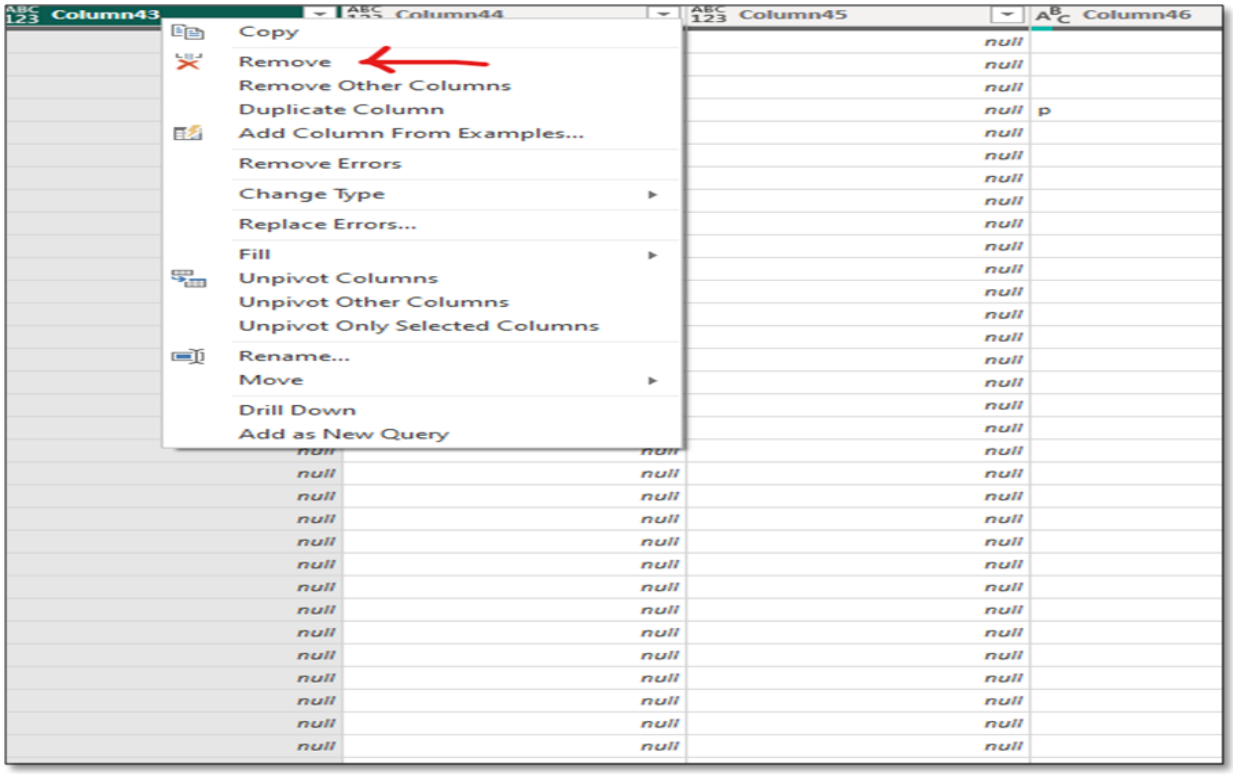


- The null column can removed by two ways,

(a) Either by options “remove Columns” in Ribbon tab or

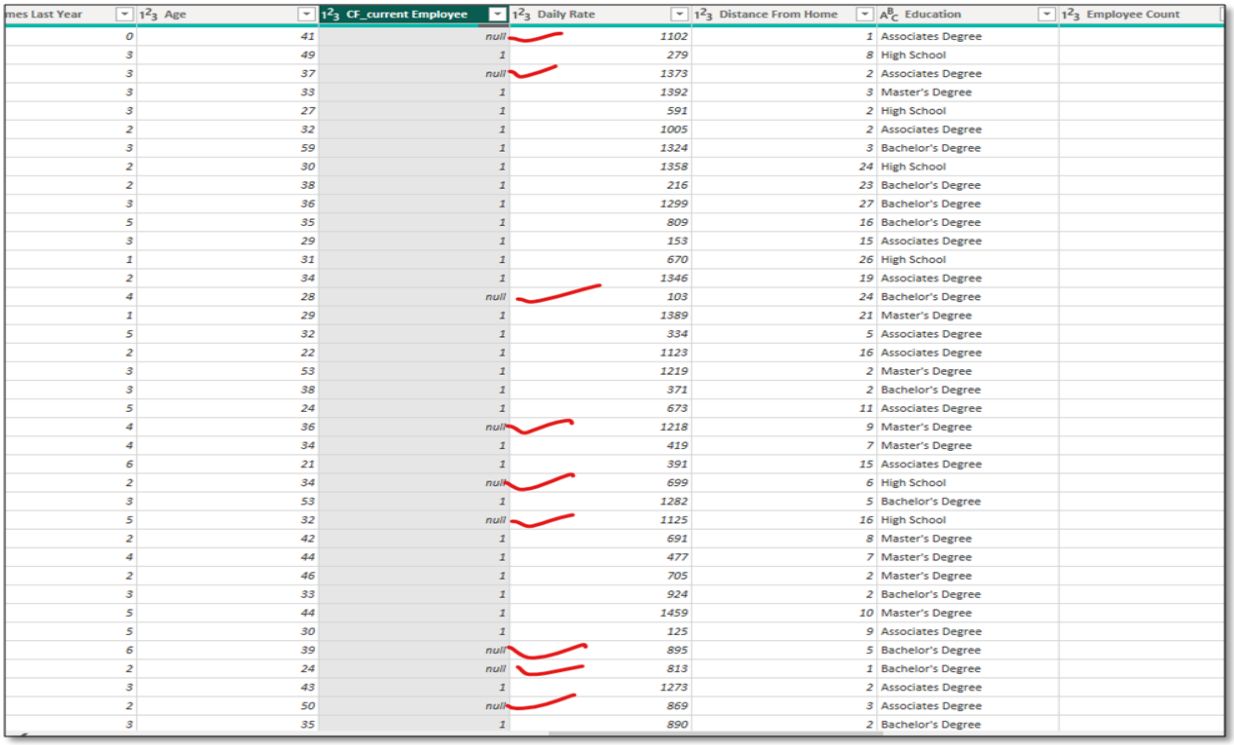
(b) By clicking right column on null column header.


Add Column
View
Tools
Help
Data source settings
Manage Parameters
Refresh Preview
Properties
Advanced Editor
Manage
Choose Columns
Remove Columns
Keep Rows
Remove Rows
Split Column
Group By
Data Type: Any
Use First Row as Headers
Replace Values
Merge Queries
Append Queries
Combine Files
Text Analytics
Vision
Azure Machine Learning
Data Sources
Parameters
Query
Manage Columns
Reduce Rows
Sort
Transform
Combine
AI Insights
type any}}
Column40
Column41
Column42
Column43
Column44
Column45
Column46
Column47



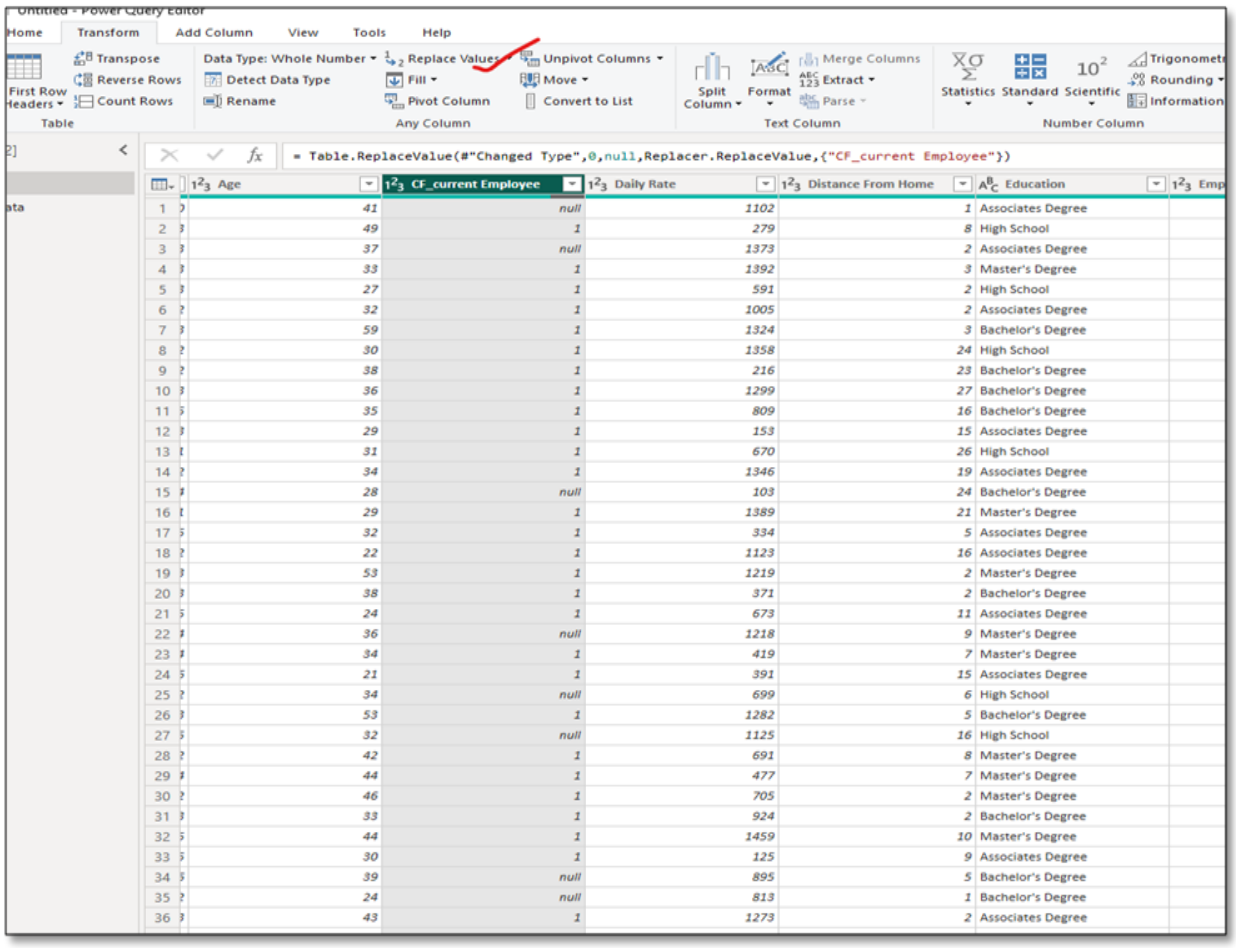
Removing Null values in Column:-

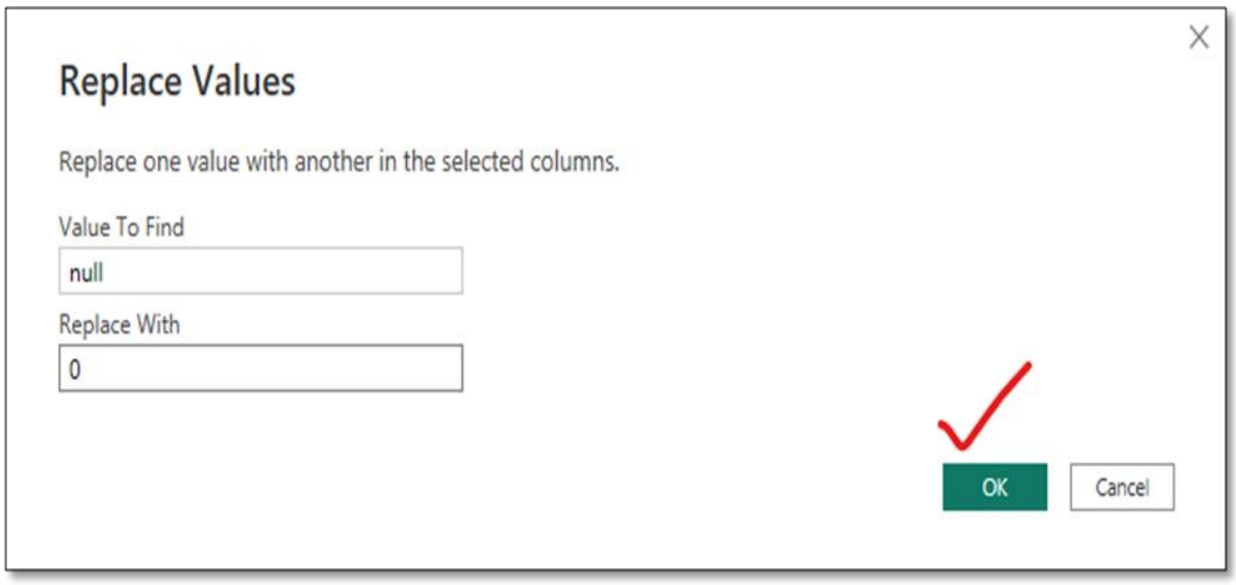
If any column is having null then it can be replaced using replace values.

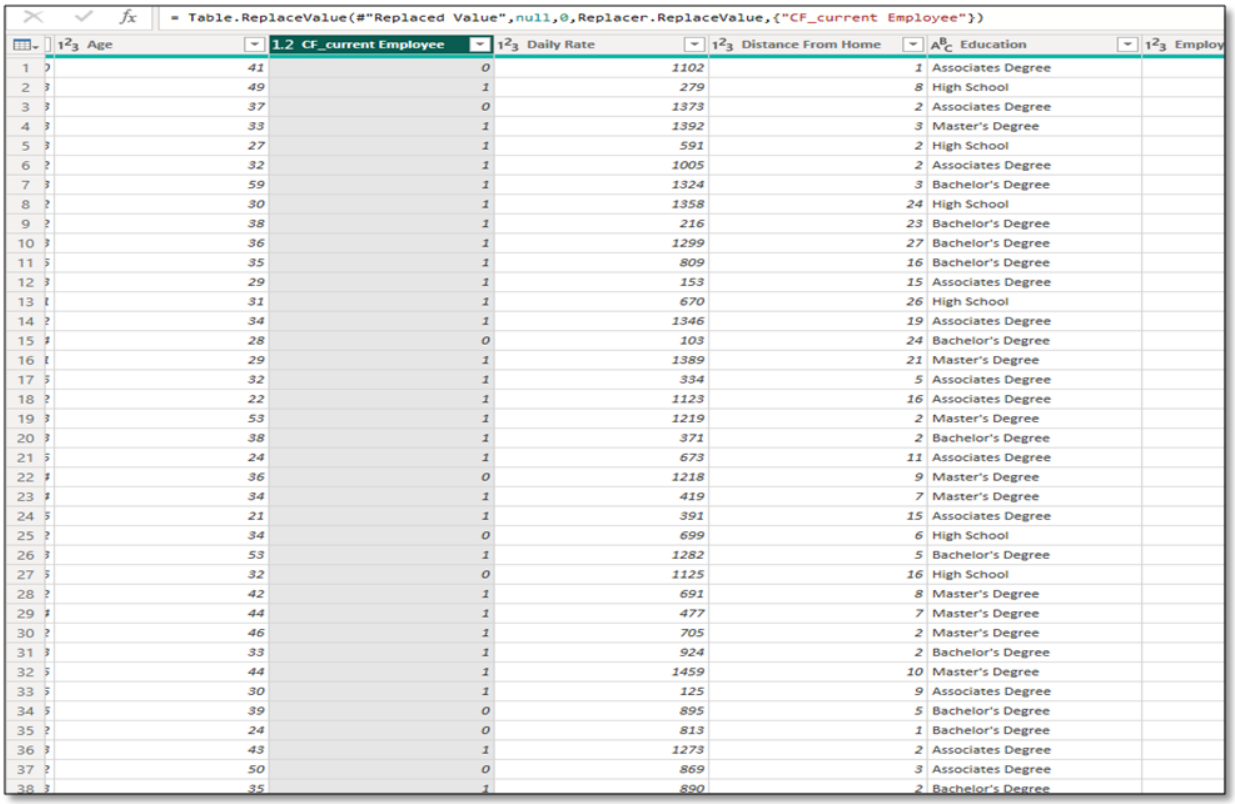


mes Last Year	Age	CF_current Employee	Daily Rate	Distance From Home	Education	Employee Count
0	41	null	1102	1	Associates Degree	
3	49	1	279	8	High School	
3	37	null	1373	2	Associates Degree	
3	33	1	1392	3	Master's Degree	
3	27	1	591	2	High School	
2	32	1	1005	2	Associates Degree	
3	59	1	1324	3	Bachelor's Degree	
2	30	1	1358	24	High School	
2	38	1	216	23	Bachelor's Degree	
3	36	1	1299	27	Bachelor's Degree	
5	35	1	809	16	Bachelor's Degree	
3	29	1	153	15	Associates Degree	
1	31	1	670	26	High School	
2	34	1	1346	19	Associates Degree	
4	28	null	103	24	Bachelor's Degree	
1	29	1	1389	21	Master's Degree	
5	32	1	334	5	Associates Degree	
2	22	1	1123	16	Associates Degree	
3	53	1	1219	2	Master's Degree	
3	38	1	371	2	Bachelor's Degree	
5	24	1	673	11	Associates Degree	
4	36	null	1218	9	Master's Degree	
4	34	1	419	7	Master's Degree	
6	21	1	391	15	Associates Degree	
2	34	null	699	6	High School	
3	53	1	1282	5	Bachelor's Degree	
5	32	null	1125	16	High School	
2	42	1	691	8	Master's Degree	
4	44	1	477	7	Master's Degree	
2	46	1	705	2	Master's Degree	
3	33	1	924	2	Bachelor's Degree	
5	44	1	1459	10	Master's Degree	
5	30	1	125	9	Associates Degree	
6	39	null	895	5	Bachelor's Degree	
2	24	null	813	1	Bachelor's Degree	
3	43	1	1273	2	Associates Degree	
2	50	null	869	3	Associates Degree	
3	35	1	890	2	Bachelor's Degree	

- By choosing the “Replace Values” option from ribbon menu.


Untitled - Power Query Editor
Home
Transform
Add Column
View
Tools
Help
Transpose
Reverse Rows
Count Rows
First Row Headers
Table
Data Type: Whole Number
Detect Data Type
Rename
Replace Values
Fill
Pivot Column
Unpivot Columns
Move
Convert to List
Any Column
Split Column
Format
Merge Columns
Extract
Parse
Text Column
Statistics
Standard
Scientific
Trigonometry
Rounding
Information
Number Column
= Table.ReplaceValue(#"Changed Type",0,null,Replacer.ReplaceValue,{"CF_current Employee"})
Age
CF_current Employee
Daily Rate
Distance From Home
Education
1 41 null 1102 1 Associates Degree
2 49 1 279 8 High School
3 37 null 1373 2 Associates Degree
4 33 1 1392 3 Master's Degree
5 27 1 591 2 High School
6 32 1 1005 2 Associates Degree
7 59 1 1324 3 Bachelor's Degree
8 30 1 1358 24 High School
9 38 1 216 23 Bachelor's Degree
10 36 1 1299 27 Bachelor's Degree
11 35 1 809 16 Bachelor's Degree
12 29 1 153 15 Associates Degree
13 31 1 670 26 High School
14 34 1 1346 19 Associates Degree
15 28 null 103 24 Bachelor's Degree
16 29 1 1389 21 Master's Degree
17 32 1 334 5 Associates Degree
18 22 1 1123 16 Associates Degree
19 53 1 1219 2 Master's Degree
20 38 1 371 2 Bachelor's Degree
21 24 1 673 11 Associates Degree
22 36 null 1218 9 Master's Degree
23 34 1 419 7 Master's Degree
24 21 1 391 15 Associates Degree
25 34 null 699 6 High School
26 53 1 1282 5 Bachelor's Degree
27 32 null 1125 16 High School
28 42 1 691 8 Master's Degree
29 44 1 477 7 Master's Degree
30 46 1 705 2 Master's Degree
31 33 1 924 2 Bachelor's Degree
32 44 1 1459 10 Master's Degree
33 30 1 125 9 Associates Degree
34 39 null 895 5 Bachelor's Degree
35 24 null 813 1 Bachelor's Degree
36 43 1 1273 2 Associates Degree


Replace Values
Replace one value with another in the selected columns.
Value To Find
null
Replace With
0
OK
Cancel



	Age	CF_current Employee	Daily Rate	Distance From Home	Education	Employ
1	41	0	1102	1	Associates Degree	
2	49	1	279	8	High School	
3	37	0	1373	2	Associates Degree	
4	33	1	1392	3	Master's Degree	
5	27	1	591	2	High School	
6	32	1	1005	2	Associates Degree	
7	59	1	1324	3	Bachelor's Degree	
8	30	1	1358	24	High School	
9	38	1	216	23	Bachelor's Degree	
10	36	1	1299	27	Bachelor's Degree	
11	35	1	809	16	Bachelor's Degree	
12	29	1	153	15	Associates Degree	
13	31	1	670	26	High School	
14	34	1	1346	19	Associates Degree	
15	28	0	103	24	Bachelor's Degree	
16	29	1	1389	21	Master's Degree	
17	32	1	334	5	Associates Degree	
18	22	1	1123	16	Associates Degree	
19	53	1	1219	2	Master's Degree	
20	38	1	371	2	Bachelor's Degree	
21	24	1	673	11	Associates Degree	
22	36	0	1218	9	Master's Degree	
23	34	1	419	7	Master's Degree	
24	21	1	391	15	Associates Degree	
25	34	0	699	6	High School	
26	53	1	1282	5	Bachelor's Degree	
27	32	0	1125	16	High School	
28	42	1	691	8	Master's Degree	
29	44	1	477	7	Master's Degree	
30	46	1	705	2	Master's Degree	
31	33	1	924	2	Bachelor's Degree	
32	44	1	1459	10	Master's Degree	
33	30	1	125	9	Associates Degree	
34	39	0	895	5	Bachelor's Degree	
35	24	0	813	1	Bachelor's Degree	
36	43	1	1273	2	Associates Degree	
37	50	0	869	3	Associates Degree	
38	35	1	890	2	Bachelor's Degree	

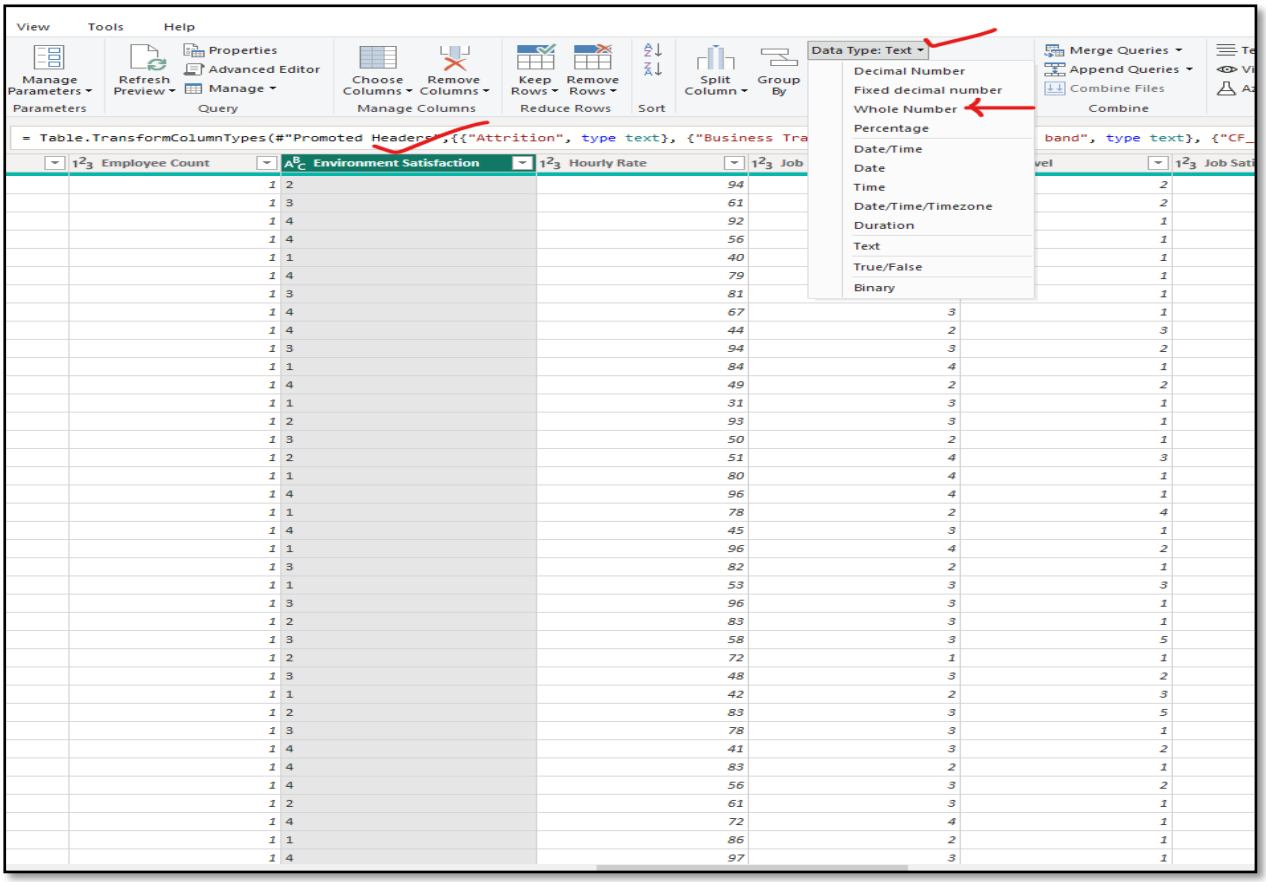
= Table.ReplaceValue(#"Replaced Value",null,0,Replacer.ReplaceValue,{"CF_current Employee"})

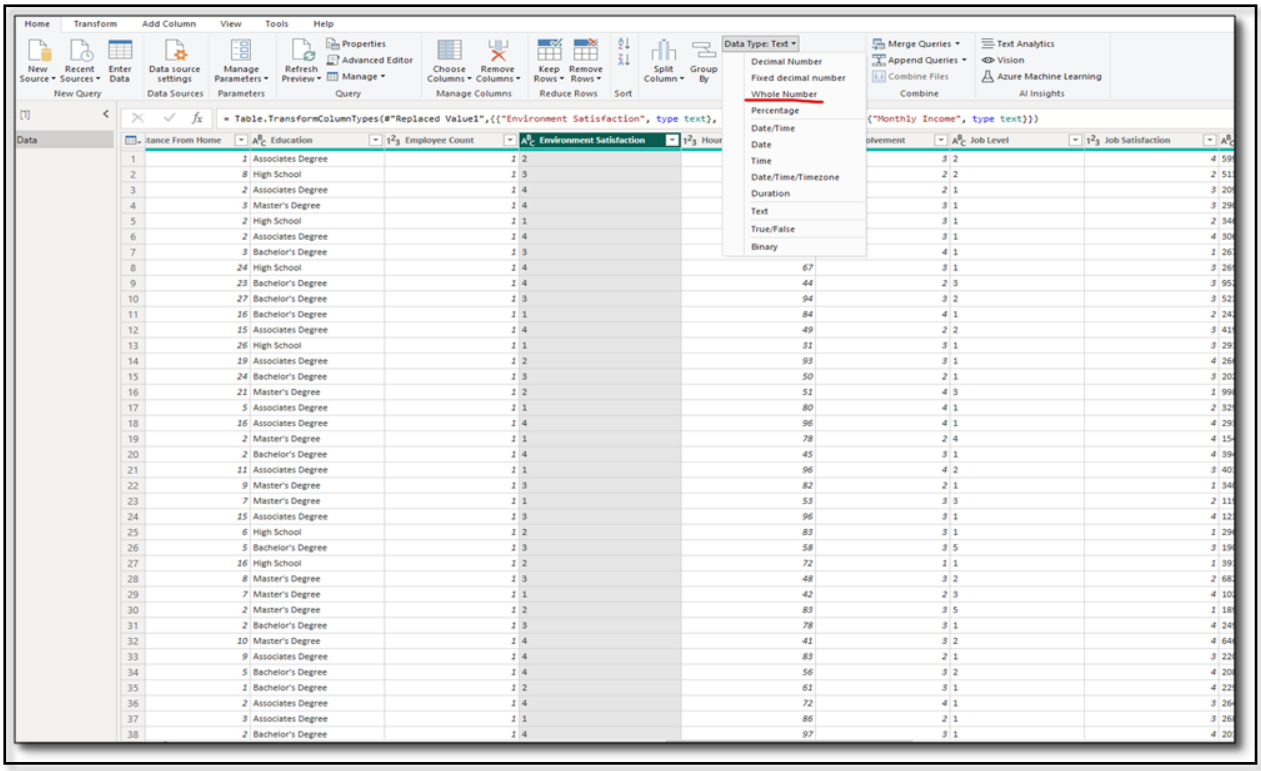
Changing data types of Columns:-

Environment satisfaction- Text → Whole number

Job Level- Text → Whole number

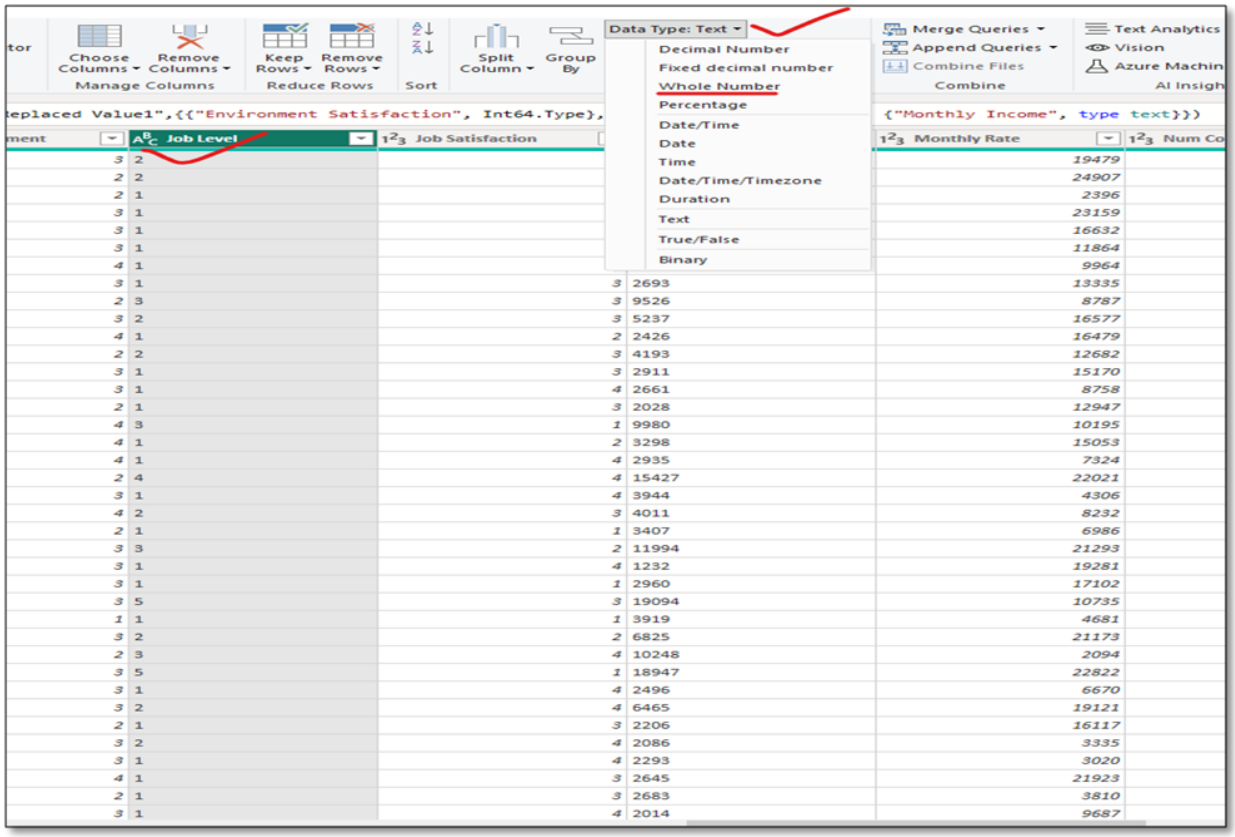
Monthly income- Text → Whole number



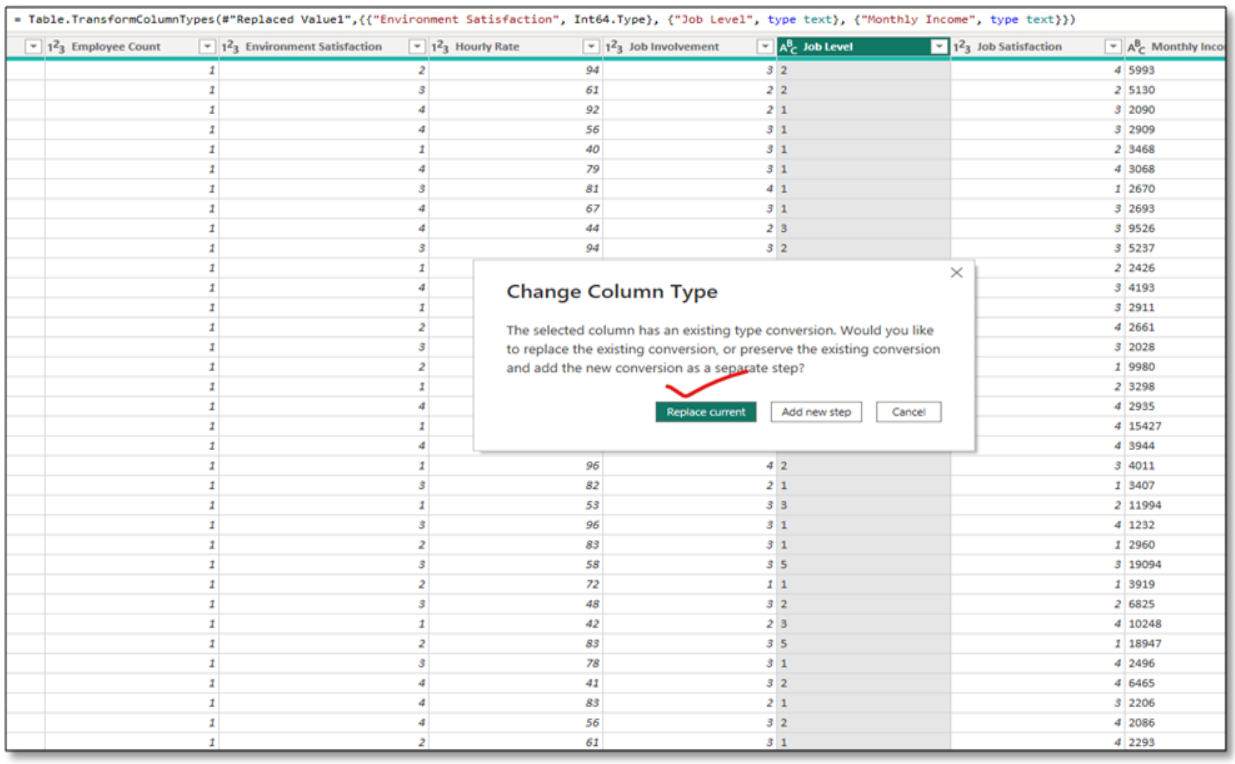


oyee Count	Environment Satisfaction	Hourly Rate	Job Involvement	Job Level
1	2	94	3	2
1	3	61	2	2
1	4	92	2	1
1	4	56	3	1
1	1	40	3	1
1	4	79	3	1
1	3	81	4	1
1	4	67	3	1
1	4	44	2	3
1	3	94	3	2
1	1			
1	4			
1	1			
1	2			
1	3			
1	2			
1	1			
1	4			
1	1			
1	4			
1	1	96	4	2
1	3	82	2	1
1	1	53	3	3
1	3	96	3	1
1	2	83	3	1
1	3	58	3	5
1	2	72	1	1
1	3	48	3	2
1	1	42	2	3
1	2	83	3	5

ication	Employee Count	Environment Satisfaction	Hourly Rate	Job Involve
tes Degree	1	2	94	
hool	1	3	61	
tes Degree	1	4	92	
's Degree	1	4	56	
hool	1	1	40	
tes Degree	1	4	79	
or's Degree	1	3	81	
hool	1	4	67	
or's Degree	1	4	44	
or's Degree	1	3	94	
or's Degree	1	1	84	
tes Degree	1	4	49	
hool	1	1	31	
tes Degree	1	2	93	
or's Degree	1	3	50	
's Degree	1	2	51	
tes Degree	1	1	80	
tes Degree	1	4	96	
's Degree	1	1	78	
or's Degree	1	4	45	
tes Degree	1	1	96	
's Degree	1	3	82	
's Degree	1	1	53	
tes Degree	1	3	96	
hool	1	2	83	
or's Degree	1	3	58	
hool	1	2	72	
's Degree	1	3	48	
's Degree	1	1	42	
's Degree	1	2	83	
or's Degree	1	3	78	
's Degree	1	4	41	
tes Degree	1	4	83	
or's Degree	1	4	56	
or's Degree	1	2	61	
tes Degree	1	4	72	
tes Degree	1	1	86	



3	2		3	2693	19479
2	2		3	9526	24907
2	1		3	5237	2396
3	1		2	2426	23159
3	1		3	4193	16632
3	1		3	2911	11864
4	1		4	2661	9964
3	1		3	2028	13335
2	3		1	9980	8787
3	2		2	3298	16577
4	1		4	2935	16479
2	2		4	15427	12682
3	1		4	3944	15170
3	1		3	4011	8758
2	1		1	3407	12947
4	3		2	11994	10195
4	1		4	1232	15053
4	1		1	2960	7324
2	4		3	19094	22021
3	1		1	3919	4306
4	2		2	6825	8232
2	1		4	10248	6986
3	3		1	18947	21293
3	1		4	2496	19281
3	1		4	6465	17102
3	5		3	2206	10735
1	1		4	2086	4681
3	2		4	2293	21173
2	3		3	2645	2094
3	5		3	2683	22822
3	1		4	2014	6670
3	2				19121
2	1				16117
3	2				3335
3	1				3020
4	1				21923
2	1				3810
3	1				9687



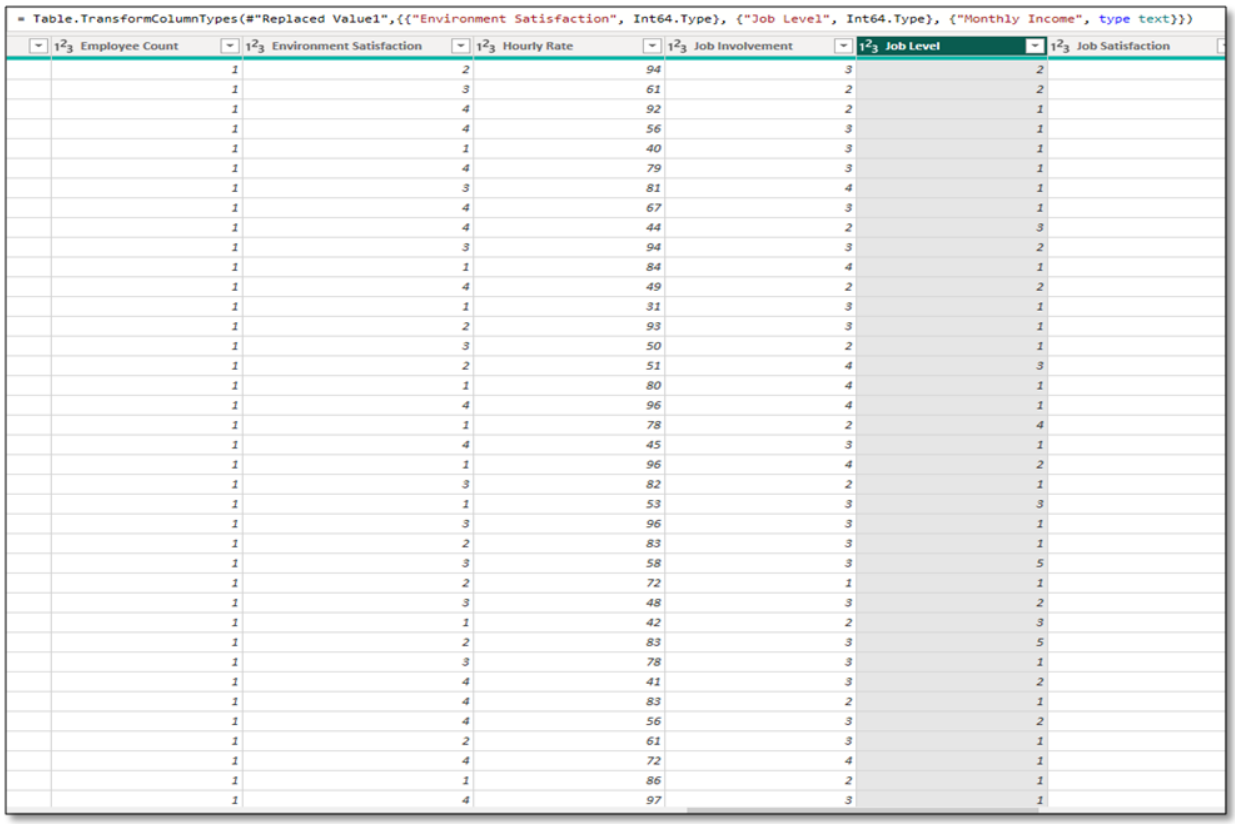
```
= Table.TransformColumnTypes(#"Replaced Value1",{{"Environment Satisfaction", Int64.Type}, {"Job Level", type text}, {"Monthly Income", type text}})
```

Employee Count	Environment Satisfaction	Hourly Rate	Job Involvement	Job Level	Job Satisfaction	Monthly Inco
1	2	94	3	2	4	5993
1	3	61	2	2	2	5130
1	4	92	2	1	3	2090
1	4	56	3	1	3	2909
1	1	40	3	1	2	3468
1	4	79	3	1	4	3068
1	3	81	4	1	1	2670
1	4	67	3	1	3	2693
1	4	44	2	3	3	9526
1	3	94	3	2	3	5237
1	1				2	2426
1	4				3	4193
1	1				3	2911
1	2				4	2661
1	3				3	2028
1	2				1	9980
1	1				2	3298
1	4				4	2935
1	1				4	15427
1	4				4	3944
1	1	96	4	2	3	4011
1	3	82	2	1	1	3407
1	1	53	3	3	2	11994
1	3	96	3	1	4	1232
1	2	83	3	1	1	2960
1	3	58	3	5	3	19094
1	2	72	1	1	1	3919
1	3	48	3	2	2	6825
1	1	42	2	3	4	10248
1	2	83	3	5	1	18947
1	3	78	3	1	4	2496
1	4	41	3	2	4	6465
1	4	83	2	1	3	2206
1	4	56	3	2	4	2086
1	2	61	3	1	4	2293

Change Column Type

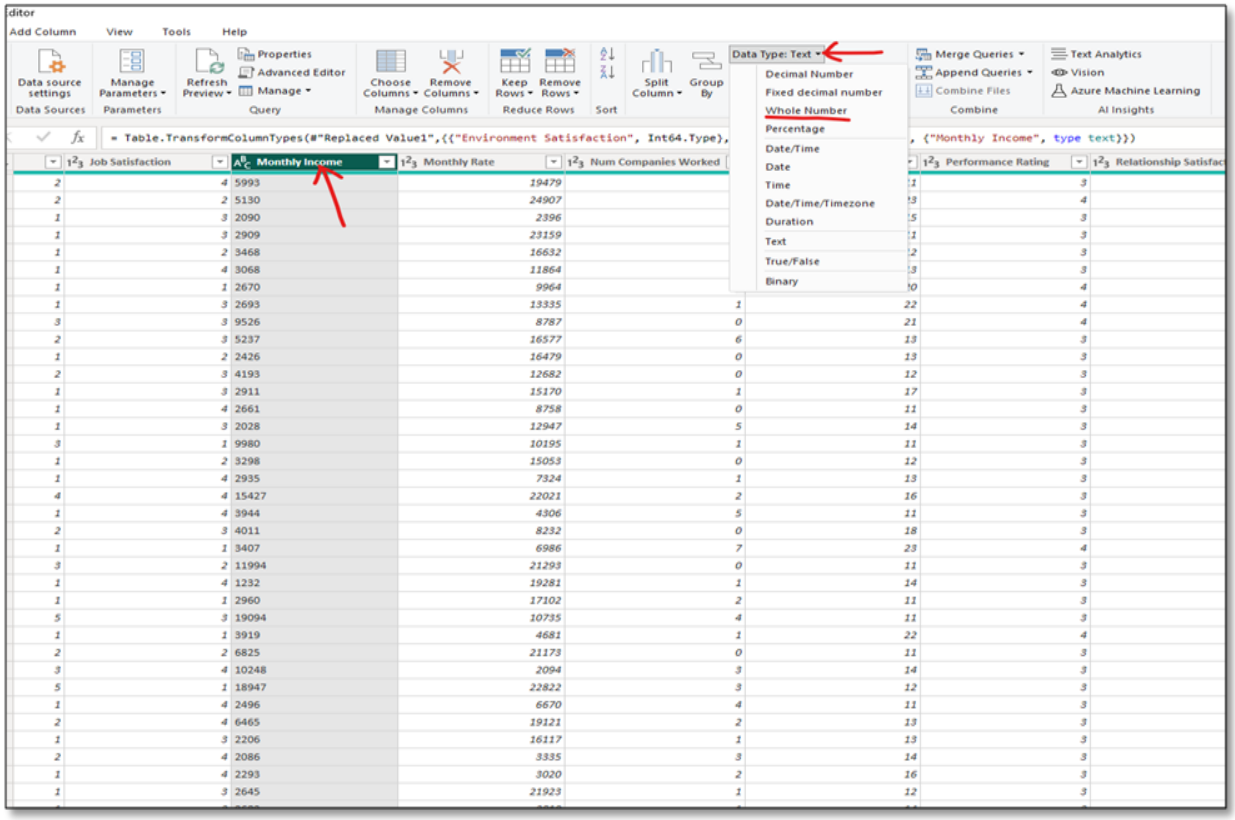
The selected column has an existing type conversion. Would you like to replace the existing conversion, or preserve the existing conversion and add the new conversion as a separate step?

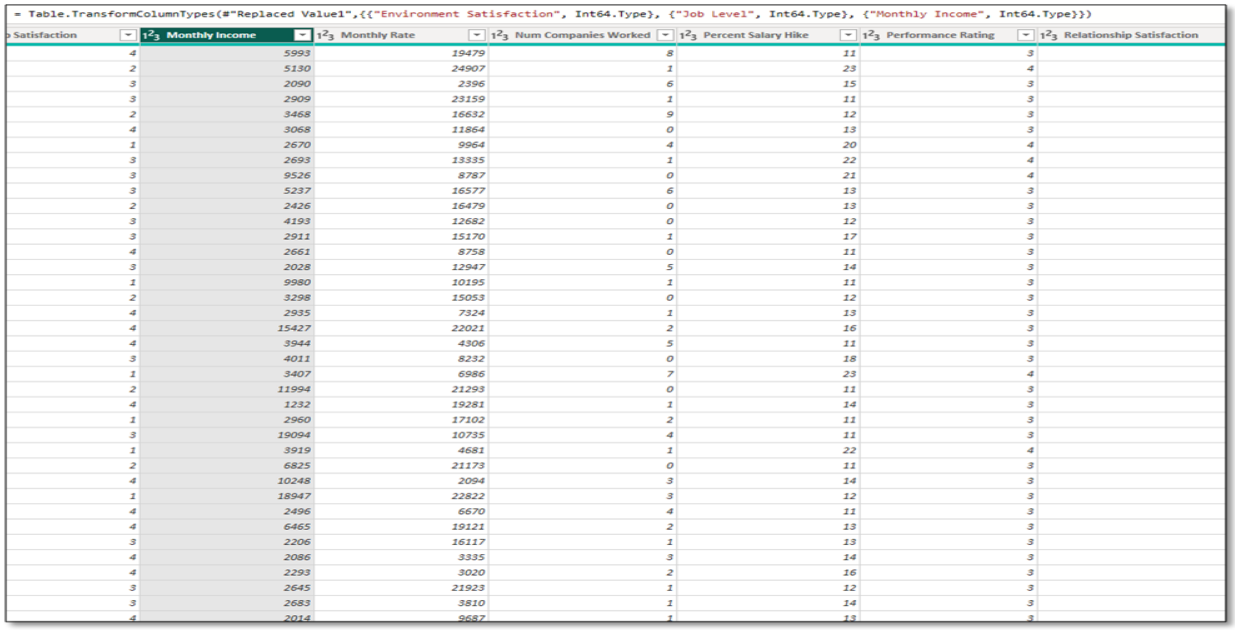
Replace current | Add new step | Cancel



```
= Table.TransformColumnTypes(#"Replaced Value1",{{"Environment Satisfaction", Int64.Type}, {"Job Level", Int64.Type}, {"Monthly Income", type text}})
```

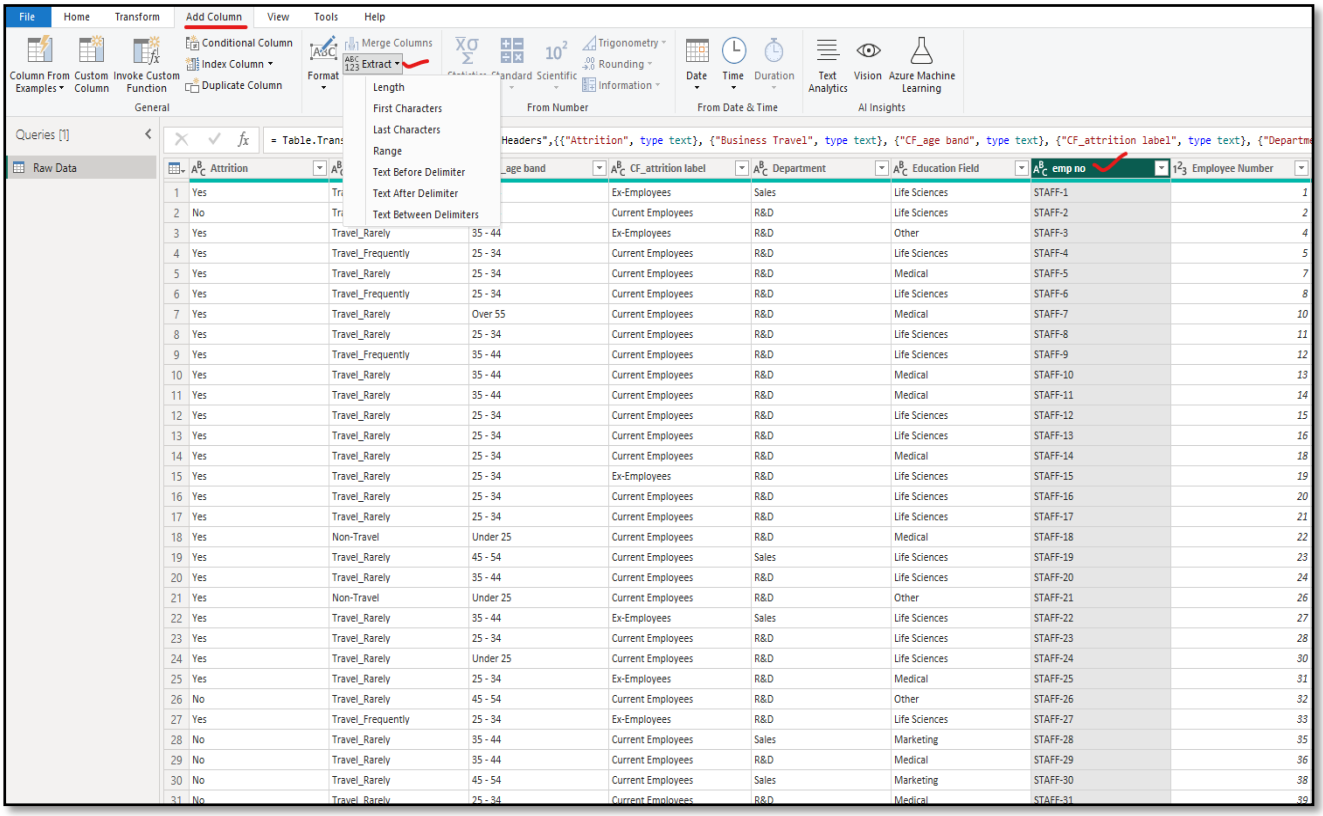
Employee Count	Environment Satisfaction	Hourly Rate	Job Involvement	Job Level	Job Satisfaction
1	2	94	3	2	
1	3	61	2	2	
1	4	92	2	1	
1	4	56	3	1	
1	1	40	3	1	
1	4	79	3	1	
1	3	81	4	1	
1	4	67	3	1	
1	4	44	2	3	
1	3	94	3	2	
1	1	84	4	1	
1	4	49	2	2	
1	1	31	3	1	
1	2	93	3	1	
1	3	50	2	1	
1	2	51	4	3	
1	1	80	4	1	
1	4	96	4	1	
1	1	78	2	4	
1	4	45	3	1	
1	1	96	4	2	
1	3	82	2	1	
1	1	53	3	3	
1	3	96	3	1	
1	2	83	3	1	
1	3	58	3	5	
1	2	72	1	1	
1	3	48	3	2	
1	1	42	2	3	
1	2	83	3	5	
1	3	78	3	1	
1	4	41	3	2	
1	4	83	2	1	
1	4	56	3	2	
1	2	61	3	1	
1	4	72	4	1	
1	1	86	2	1	
1	4	97	3	1	

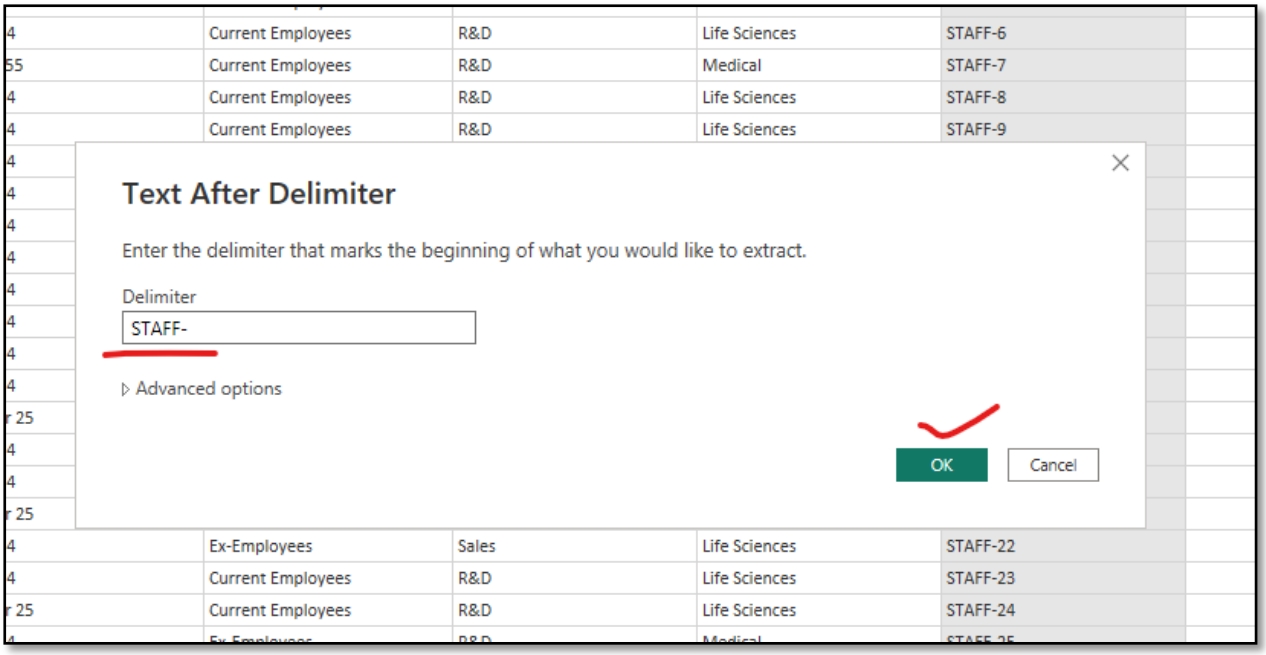

Add Column
View
Tools
Help
Data source settings
Manage Parameters
Refresh Preview
Properties
Advanced Editor
Manage
Choose Columns
Remove Columns
Keep Rows
Remove Rows
Split Column
Group By
Data Type: Text
Merge Queries
Append Queries
Combine Files
Text Analytics
Vision
Azure Machine Learning
Data Sources
Parameters
Query
Manage Columns
Reduce Rows
Sort
Combine
AI Insights
Decimal Number
Fixed decimal number
Whole Number
Percentage
Date/Time
Date
Time
Date/Time/Timezone
Duration
Text
True/False
Binary
= Table.TransformColumnTypes(#"Replaced Value1",{{"Environment Satisfaction", Int64.Type},
, {"Monthly Income", type text}})
Job Satisfaction
Monthly Income
Monthly Rate
Num Companies Worked
Performance Rating
Relationship Satisfac


= Table.TransformColumnTypes(#"Replaced Value1",{{"Environment Satisfaction", Int64.Type}, {"Job Level", Int64.Type}, {"Monthly Income", Int64.Type}})
Satisfaction
Monthly Income
Monthly Rate
Num Companies Worked
Percent Salary Hike
Performance Rating
Relationship Satisfaction

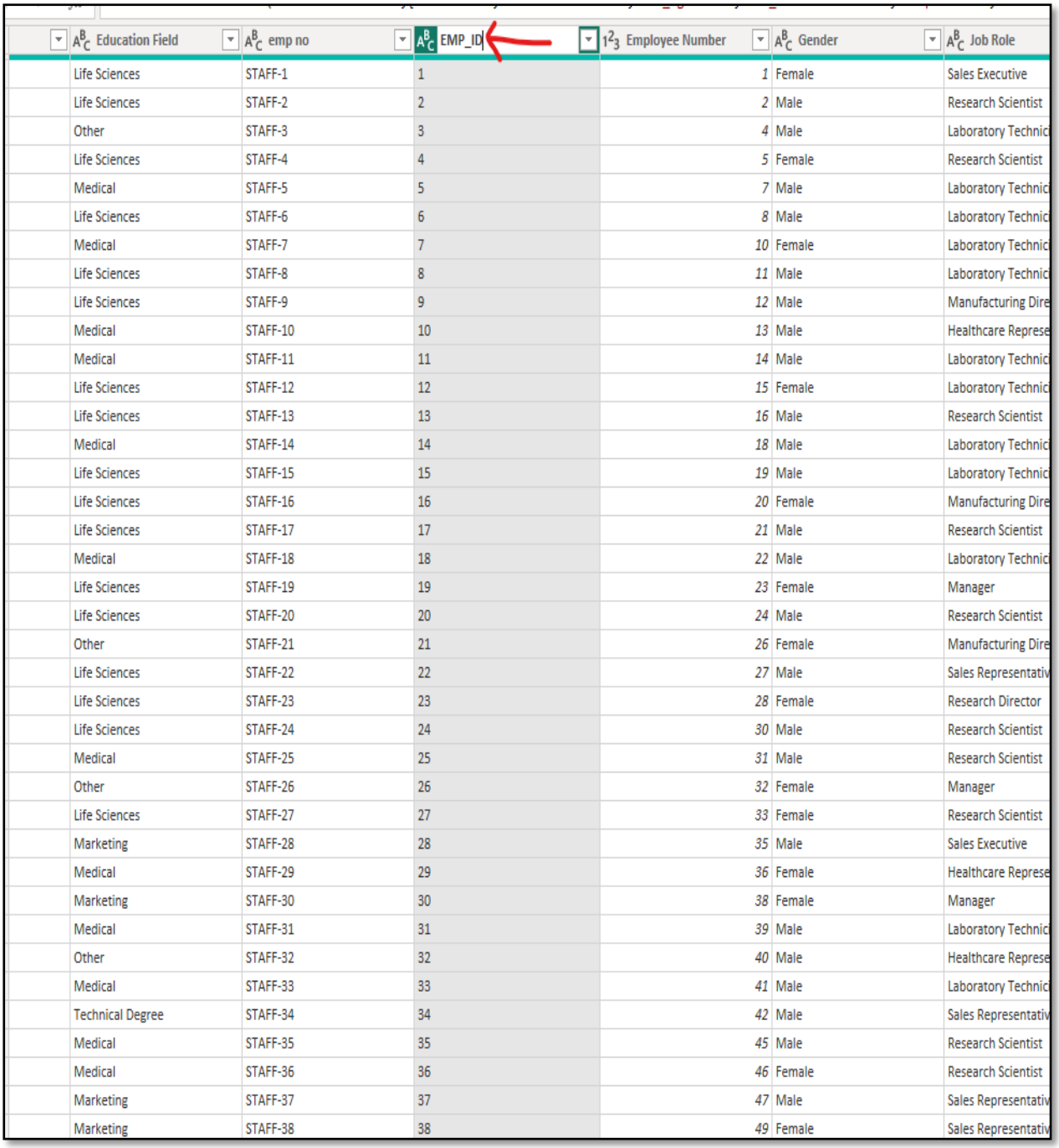
Creating Fact and Dimension in Datasheet:-

- The fact and dimension plays important role in order to visualize the data.
- For this purpose, each dimension and fact has a unique key, just like here the unique key is “Emp_ID”, which is extracted from “Emp_no” column.





Education Field	emp no	Text After Delimiter	Employee Number	Gender	Job Role	Marital Status	Over Time
Life Sciences	STAFF-1	1	1	Female	Sales Executive	Single	Yes
Life Sciences	STAFF-2	2	2	Male	Research Scientist	Married	No
Other	STAFF-3	3	4	Male	Laboratory Technician	Single	Yes
Life Sciences	STAFF-4	4	5	Female	Research Scientist	Married	Yes
Medical	STAFF-5	5	7	Male	Laboratory Technician	Married	No
Life Sciences	STAFF-6	6	8	Male	Laboratory Technician	Single	No
Medical	STAFF-7	7	10	Female	Laboratory Technician	Married	Yes
Life Sciences	STAFF-8	8	11	Male	Laboratory Technician	Divorced	No
Life Sciences	STAFF-9	9	12	Male	Manufacturing Director	Single	No
Medical	STAFF-10	10	13	Male	Healthcare Representative	Married	No
Medical	STAFF-11	11	14	Male	Laboratory Technician	Married	No
Life Sciences	STAFF-12	12	15	Female	Laboratory Technician	Single	Yes
Life Sciences	STAFF-13	13	16	Male	Research Scientist	Divorced	No
Medical	STAFF-14	14	18	Male	Laboratory Technician	Divorced	No
Life Sciences	STAFF-15	15	19	Male	Laboratory Technician	Single	Yes
Life Sciences	STAFF-16	16	20	Female	Manufacturing Director	Divorced	No
Life Sciences	STAFF-17	17	21	Male	Research Scientist	Divorced	Yes
Medical	STAFF-18	18	22	Male	Laboratory Technician	Divorced	Yes
Life Sciences	STAFF-19	19	23	Female	Manager	Married	No
Life Sciences	STAFF-20	20	24	Male	Research Scientist	Single	Yes
Other	STAFF-21	21	26	Female	Manufacturing Director	Divorced	No
Life Sciences	STAFF-22	22	27	Male	Sales Representative	Single	No
Life Sciences	STAFF-23	23	28	Female	Research Director	Single	No
Life Sciences	STAFF-24	24	30	Male	Research Scientist	Single	No
Medical	STAFF-25	25	31	Male	Research Scientist	Single	No
Other	STAFF-26	26	32	Female	Manager	Divorced	No
Life Sciences	STAFF-27	27	33	Female	Research Scientist	Single	Yes
Marketing	STAFF-28	28	35	Male	Sales Executive	Married	No
Medical	STAFF-29	29	36	Female	Healthcare Representative	Married	No
Marketing	STAFF-30	30	38	Female	Manager	Single	No
Medical	STAFF-31	31	39	Male	Laboratory Technician	Single	No
Other	STAFF-32	32	40	Male	Healthcare Representative	Married	Yes
Medical	STAFF-33	33	41	Male	Laboratory Technician	Single	No
Technical Degree	STAFF-34	34	42	Male	Sales Representative	Married	No
Medical	STAFF-35	35	45	Male	Research Scientist	Married	Yes
Medical	STAFF-36	36	46	Female	Research Scientist	Divorced	No
Marketing	STAFF-37	37	47	Male	Sales Representative	Married	Yes
Marketing	STAFF-38	38	49	Female	Sales Representative	Married	No

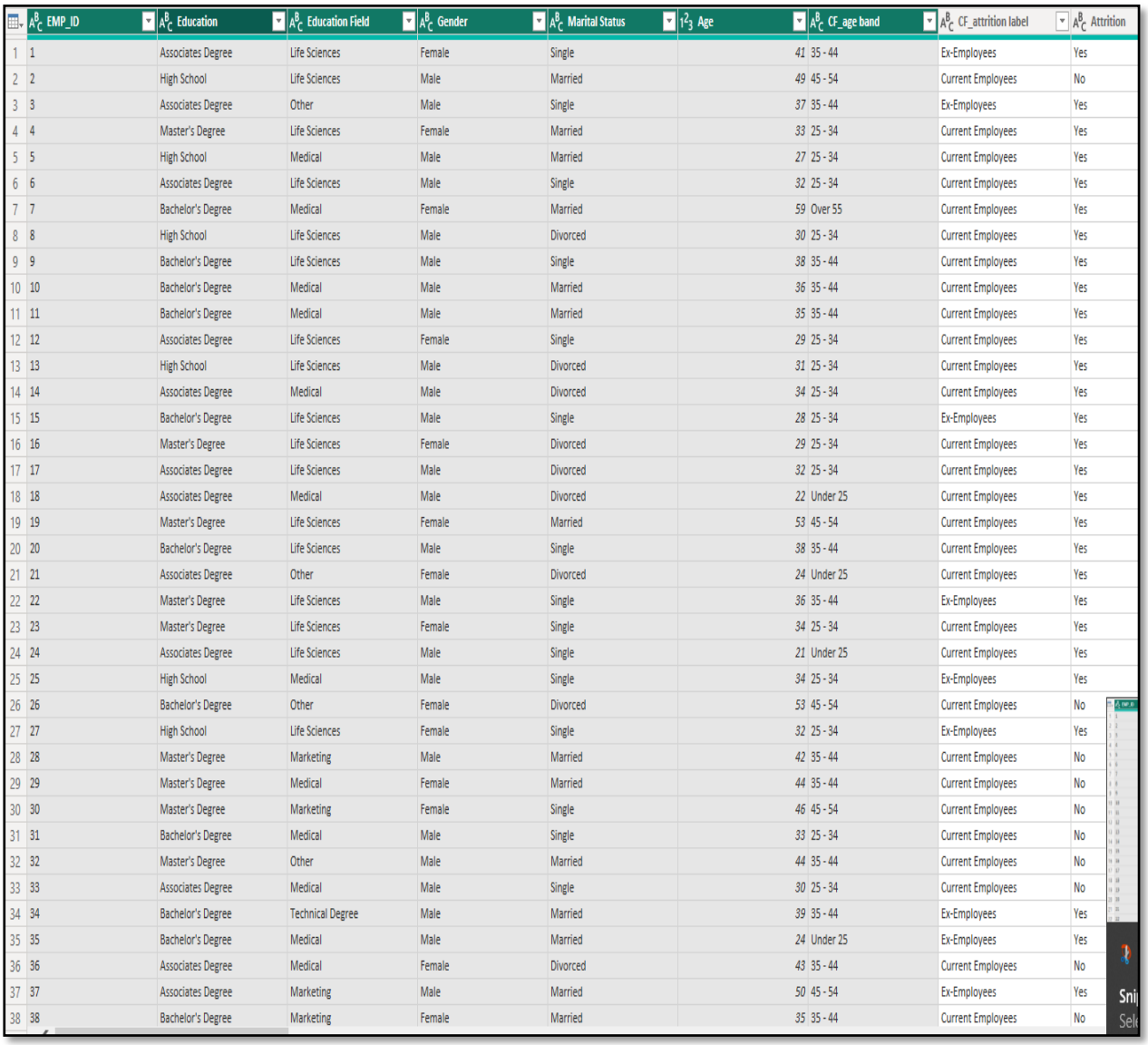


Education Field	emp no	EMP_ID	Employee Number	Gender	Job Role
Life Sciences	STAFF-1	1	1	Female	Sales Executive
Life Sciences	STAFF-2	2	2	Male	Research Scientist
Other	STAFF-3	3	4	Male	Laboratory Technici
Life Sciences	STAFF-4	4	5	Female	Research Scientist
Medical	STAFF-5	5	7	Male	Laboratory Technici
Life Sciences	STAFF-6	6	8	Male	Laboratory Technici
Medical	STAFF-7	7	10	Female	Laboratory Technici
Life Sciences	STAFF-8	8	11	Male	Laboratory Technici
Life Sciences	STAFF-9	9	12	Male	Manufacturing Dire
Medical	STAFF-10	10	13	Male	Healthcare Represe
Medical	STAFF-11	11	14	Male	Laboratory Technici
Life Sciences	STAFF-12	12	15	Female	Laboratory Technici
Life Sciences	STAFF-13	13	16	Male	Research Scientist
Medical	STAFF-14	14	18	Male	Laboratory Technici
Life Sciences	STAFF-15	15	19	Male	Laboratory Technici
Life Sciences	STAFF-16	16	20	Female	Manufacturing Dire
Life Sciences	STAFF-17	17	21	Male	Research Scientist
Medical	STAFF-18	18	22	Male	Laboratory Technici
Life Sciences	STAFF-19	19	23	Female	Manager
Life Sciences	STAFF-20	20	24	Male	Research Scientist
Other	STAFF-21	21	26	Female	Manufacturing Dire
Life Sciences	STAFF-22	22	27	Male	Sales Representativ
Life Sciences	STAFF-23	23	28	Female	Research Director
Life Sciences	STAFF-24	24	30	Male	Research Scientist
Medical	STAFF-25	25	31	Male	Research Scientist
Other	STAFF-26	26	32	Female	Manager
Life Sciences	STAFF-27	27	33	Female	Research Scientist
Marketing	STAFF-28	28	35	Male	Sales Executive
Medical	STAFF-29	29	36	Female	Healthcare Represe
Marketing	STAFF-30	30	38	Female	Manager
Medical	STAFF-31	31	39	Male	Laboratory Technici
Other	STAFF-32	32	40	Male	Healthcare Represe
Medical	STAFF-33	33	41	Male	Laboratory Technici
Technical Degree	STAFF-34	34	42	Male	Sales Representativ
Medical	STAFF-35	35	45	Male	Research Scientist
Medical	STAFF-36	36	46	Female	Research Scientist
Marketing	STAFF-37	37	47	Male	Sales Representativ
Marketing	STAFF-38	38	49	Female	Sales Representativ

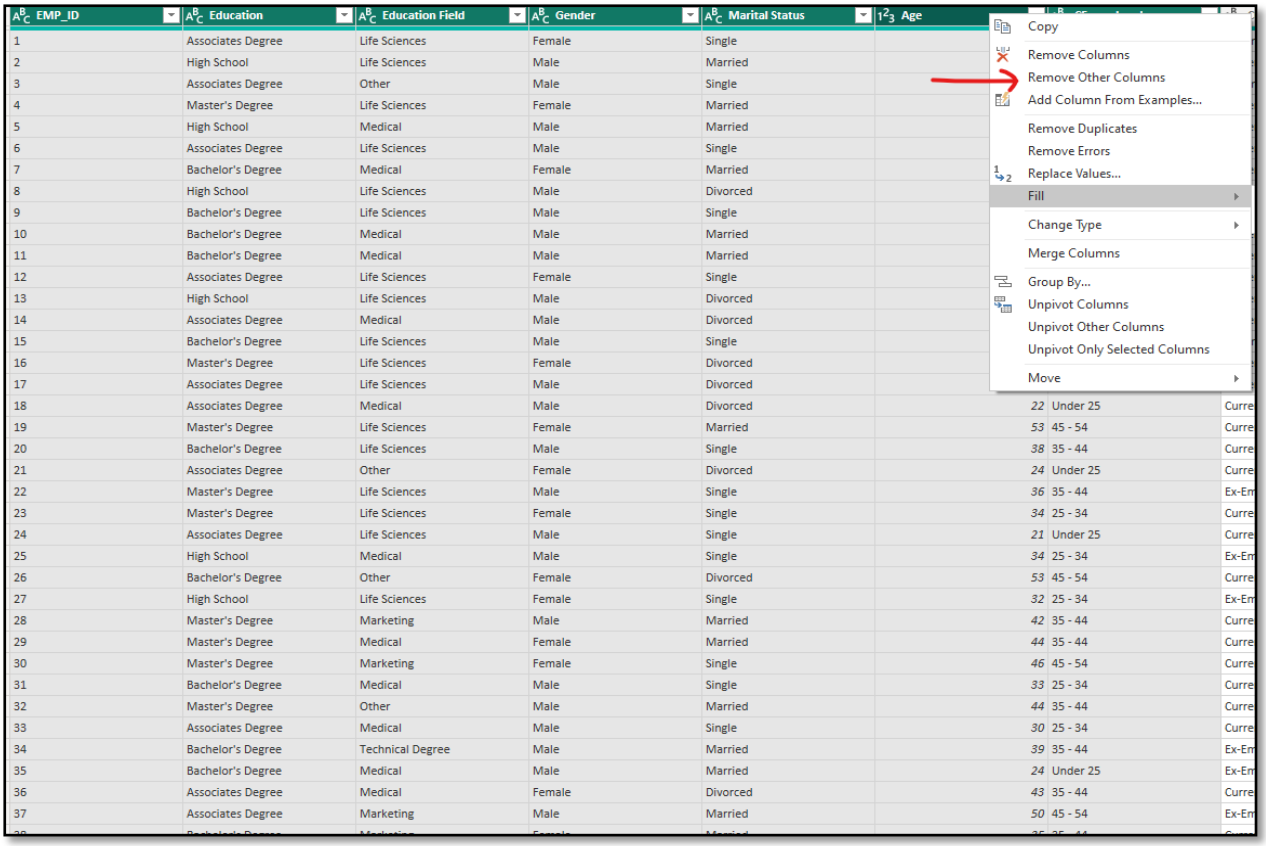
Dimension Dim_Emp_Info

- The “Dim_Emp_Info” table contains the following columns-

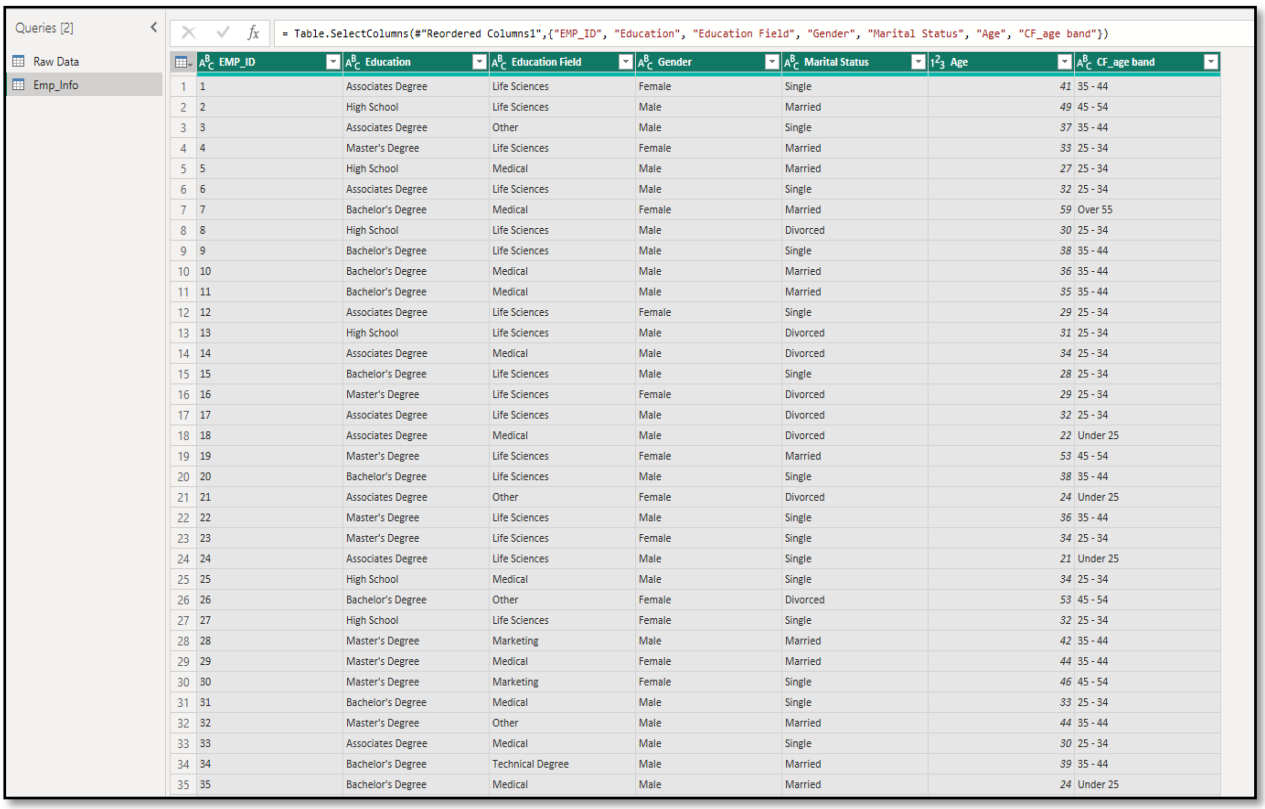
a) Emp_ID as Unique Key
b) Education
c) Education field
d) Gender
e) Marital Status
f) Age
g) CF_age band



	EMP_ID	Education	Education Field	Gender	Marital Status	Age	CF_age band	CF_attrition label	Attrition
1	1	Associates Degree	Life Sciences	Female	Single	41	35 - 44	Ex-Employees	Yes
2	2	High School	Life Sciences	Male	Married	49	45 - 54	Current Employees	No
3	3	Associates Degree	Other	Male	Single	37	35 - 44	Ex-Employees	Yes
4	4	Master's Degree	Life Sciences	Female	Married	33	25 - 34	Current Employees	Yes
5	5	High School	Medical	Male	Married	27	25 - 34	Current Employees	Yes
6	6	Associates Degree	Life Sciences	Male	Single	32	25 - 34	Current Employees	Yes
7	7	Bachelor's Degree	Medical	Female	Married	59	Over 55	Current Employees	Yes
8	8	High School	Life Sciences	Male	Divorced	30	25 - 34	Current Employees	Yes
9	9	Bachelor's Degree	Life Sciences	Male	Single	38	35 - 44	Current Employees	Yes
10	10	Bachelor's Degree	Medical	Male	Married	36	35 - 44	Current Employees	Yes
11	11	Bachelor's Degree	Medical	Male	Married	35	35 - 44	Current Employees	Yes
12	12	Associates Degree	Life Sciences	Female	Single	29	25 - 34	Current Employees	Yes
13	13	High School	Life Sciences	Male	Divorced	31	25 - 34	Current Employees	Yes
14	14	Associates Degree	Medical	Male	Divorced	34	25 - 34	Current Employees	Yes
15	15	Bachelor's Degree	Life Sciences	Male	Single	28	25 - 34	Ex-Employees	Yes
16	16	Master's Degree	Life Sciences	Female	Divorced	29	25 - 34	Current Employees	Yes
17	17	Associates Degree	Life Sciences	Male	Divorced	32	25 - 34	Current Employees	Yes
18	18	Associates Degree	Medical	Male	Divorced	22	Under 25	Current Employees	Yes
19	19	Master's Degree	Life Sciences	Female	Married	53	45 - 54	Current Employees	Yes
20	20	Bachelor's Degree	Life Sciences	Male	Single	38	35 - 44	Current Employees	Yes
21	21	Associates Degree	Other	Female	Divorced	24	Under 25	Current Employees	Yes
22	22	Master's Degree	Life Sciences	Male	Single	36	35 - 44	Ex-Employees	Yes
23	23	Master's Degree	Life Sciences	Female	Single	34	25 - 34	Current Employees	Yes
24	24	Associates Degree	Life Sciences	Male	Single	21	Under 25	Current Employees	Yes
25	25	High School	Medical	Male	Single	34	25 - 34	Ex-Employees	Yes
26	26	Bachelor's Degree	Other	Female	Divorced	53	45 - 54	Current Employees	No
27	27	High School	Life Sciences	Female	Single	32	25 - 34	Ex-Employees	Yes
28	28	Master's Degree	Marketing	Male	Married	42	35 - 44	Current Employees	No
29	29	Master's Degree	Medical	Female	Married	44	35 - 44	Current Employees	No
30	30	Master's Degree	Marketing	Female	Single	46	45 - 54	Current Employees	No
31	31	Bachelor's Degree	Medical	Male	Single	33	25 - 34	Current Employees	No
32	32	Master's Degree	Other	Male	Married	44	35 - 44	Current Employees	No
33	33	Associates Degree	Medical	Male	Single	30	25 - 34	Current Employees	No
34	34	Bachelor's Degree	Technical Degree	Male	Married	39	35 - 44	Ex-Employees	Yes
35	35	Bachelor's Degree	Medical	Male	Married	24	Under 25	Ex-Employees	Yes
36	36	Associates Degree	Medical	Female	Divorced	43	35 - 44	Current Employees	No
37	37	Associates Degree	Marketing	Male	Married	50	45 - 54	Ex-Employees	Yes
38	38	Bachelor's Degree	Marketing	Female	Married	35	35 - 44	Current Employees	No



EMP_ID	Education	Education Field	Gender	Marital Status	Age	CF_age band	
1	Associates Degree	Life Sciences	Female	Single	41	35 - 44	Curre
2	High School	Life Sciences	Male	Married	49	45 - 54	Curre
3	Associates Degree	Other	Male	Single	37	35 - 44	Curre
4	Master's Degree	Life Sciences	Female	Married	33	25 - 34	Curre
5	High School	Medical	Male	Married	27	25 - 34	Curre
6	Associates Degree	Life Sciences	Male	Single	32	25 - 34	Curre
7	Bachelor's Degree	Medical	Female	Married	59	Over 55	Curre
8	High School	Life Sciences	Male	Divorced	30	25 - 34	Curre
9	Bachelor's Degree	Life Sciences	Male	Single	38	35 - 44	Curre
10	Bachelor's Degree	Medical	Male	Married	36	35 - 44	Curre
11	Bachelor's Degree	Medical	Male	Married	35	35 - 44	Curre
12	Associates Degree	Life Sciences	Female	Single	29	25 - 34	Curre
13	High School	Life Sciences	Male	Divorced	31	25 - 34	Curre
14	Associates Degree	Medical	Male	Divorced	34	25 - 34	Curre
15	Bachelor's Degree	Life Sciences	Male	Single	28	25 - 34	Curre
16	Master's Degree	Life Sciences	Female	Divorced	29	25 - 34	Curre
17	Associates Degree	Life Sciences	Male	Divorced	32	25 - 34	Curre
18	Associates Degree	Medical	Male	Divorced	22	Under 25	Curre
19	Master's Degree	Life Sciences	Female	Married	53	45 - 54	Curre
20	Bachelor's Degree	Life Sciences	Male	Single	38	35 - 44	Curre
21	Associates Degree	Other	Female	Divorced	24	Under 25	Curre
22	Master's Degree	Life Sciences	Male	Single	36	35 - 44	Ex-Em
23	Master's Degree	Life Sciences	Female	Single	34	25 - 34	Curre
24	Associates Degree	Life Sciences	Male	Single	21	Under 25	Curre
25	High School	Medical	Male	Single	34	25 - 34	Ex-Em
26	Bachelor's Degree	Other	Female	Divorced	53	45 - 54	Curre
27	High School	Life Sciences	Female	Single	32	25 - 34	Ex-Em
28	Master's Degree	Marketing	Male	Married	42	35 - 44	Curre
29	Master's Degree	Medical	Female	Married	44	35 - 44	Curre
30	Master's Degree	Marketing	Female	Single	46	45 - 54	Curre
31	Bachelor's Degree	Medical	Male	Single	33	25 - 34	Curre
32	Master's Degree	Other	Male	Married	44	35 - 44	Curre
33	Associates Degree	Medical	Male	Single	30	25 - 34	Curre
34	Bachelor's Degree	Technical Degree	Male	Married	39	35 - 44	Ex-Em
35	Bachelor's Degree	Medical	Male	Married	24	Under 25	Ex-Em
36	Associates Degree	Medical	Female	Divorced	43	35 - 44	Curre
37	Associates Degree	Marketing	Male	Married	50	45 - 54	Ex-Em

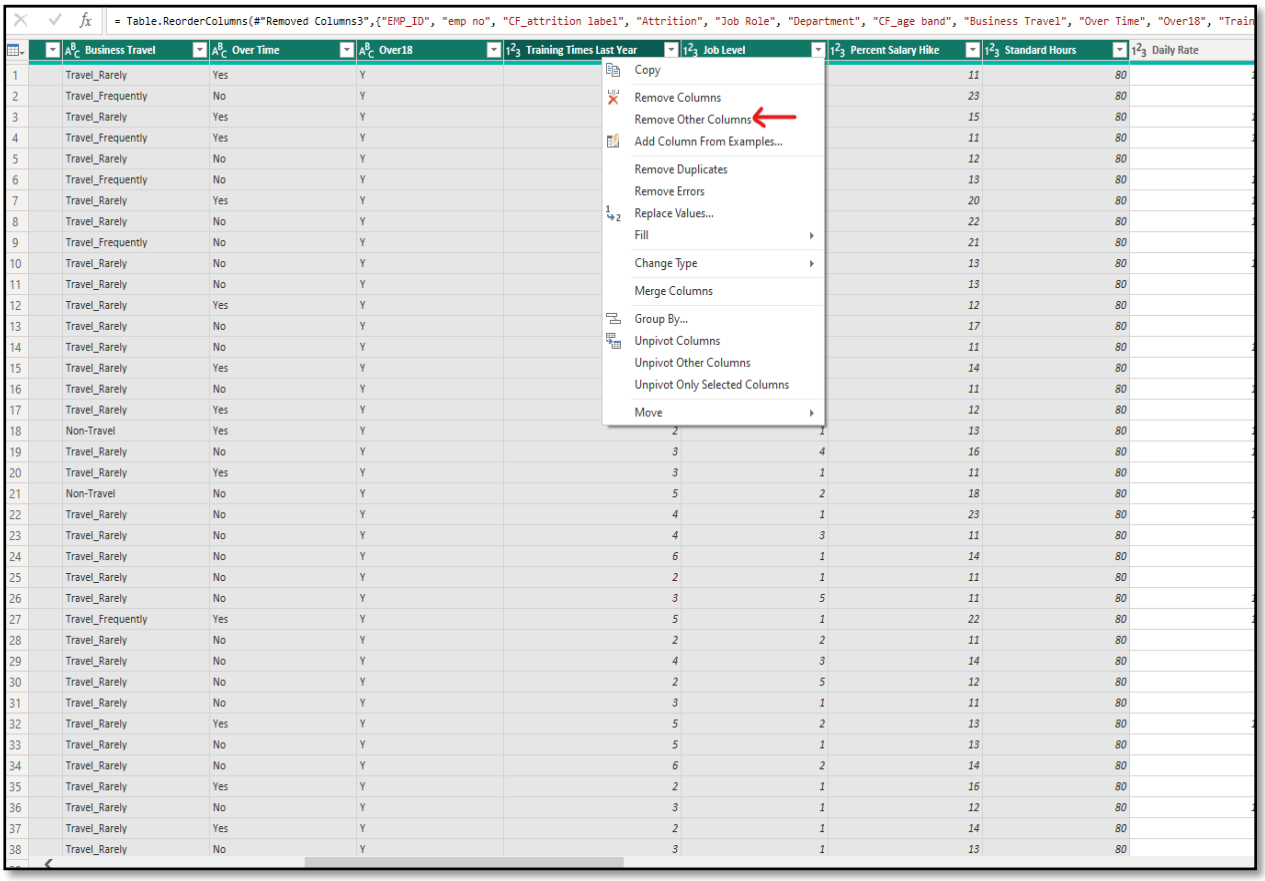


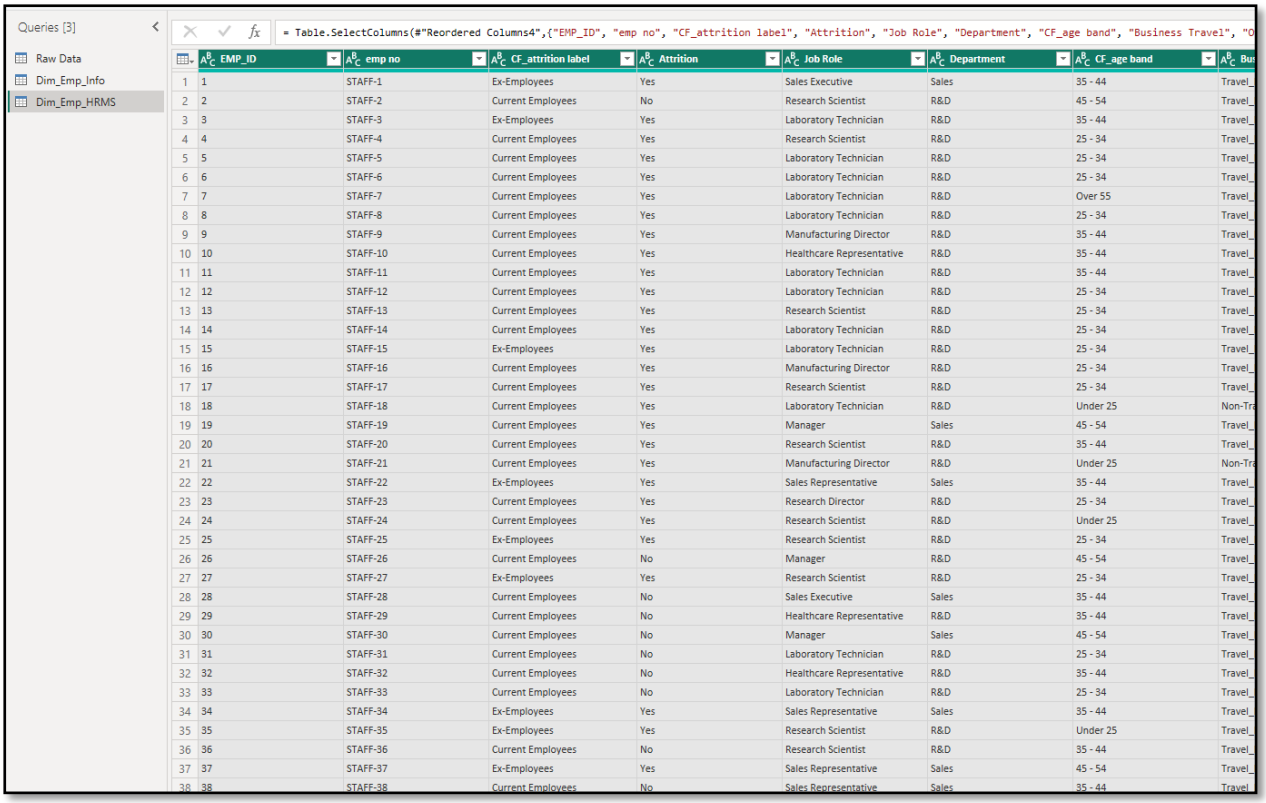
	EMP_ID	Education	Education Field	Gender	Marital Status	Age	CF_age band
1	1	Associates Degree	Life Sciences	Female	Single	41	35 - 44
2	2	High School	Life Sciences	Male	Married	49	45 - 54
3	3	Associates Degree	Other	Male	Single	37	35 - 44
4	4	Master's Degree	Life Sciences	Female	Married	33	25 - 34
5	5	High School	Medical	Male	Married	27	25 - 34
6	6	Associates Degree	Life Sciences	Male	Single	32	25 - 34
7	7	Bachelor's Degree	Medical	Female	Married	59	Over 55
8	8	High School	Life Sciences	Male	Divorced	30	25 - 34
9	9	Bachelor's Degree	Life Sciences	Male	Single	38	35 - 44
10	10	Bachelor's Degree	Medical	Male	Married	36	35 - 44
11	11	Bachelor's Degree	Medical	Male	Married	35	35 - 44
12	12	Associates Degree	Life Sciences	Female	Single	29	25 - 34
13	13	High School	Life Sciences	Male	Divorced	31	25 - 34
14	14	Associates Degree	Medical	Male	Divorced	34	25 - 34
15	15	Bachelor's Degree	Life Sciences	Male	Single	28	25 - 34
16	16	Master's Degree	Life Sciences	Female	Divorced	29	25 - 34
17	17	Associates Degree	Life Sciences	Male	Divorced	32	25 - 34
18	18	Associates Degree	Medical	Male	Divorced	22	Under 25
19	19	Master's Degree	Life Sciences	Female	Married	53	45 - 54
20	20	Bachelor's Degree	Life Sciences	Male	Single	38	35 - 44
21	21	Associates Degree	Other	Female	Divorced	24	Under 25
22	22	Master's Degree	Life Sciences	Male	Single	36	35 - 44
23	23	Master's Degree	Life Sciences	Female	Single	34	25 - 34
24	24	Associates Degree	Life Sciences	Male	Single	21	Under 25
25	25	High School	Medical	Male	Single	34	25 - 34
26	26	Bachelor's Degree	Other	Female	Divorced	53	45 - 54
27	27	High School	Life Sciences	Female	Single	32	25 - 34
28	28	Master's Degree	Marketing	Male	Married	42	35 - 44
29	29	Master's Degree	Medical	Female	Married	44	35 - 44
30	30	Master's Degree	Marketing	Female	Single	46	45 - 54
31	31	Bachelor's Degree	Medical	Male	Single	33	25 - 34
32	32	Master's Degree	Other	Male	Married	44	35 - 44
33	33	Associates Degree	Medical	Male	Single	30	25 - 34
34	34	Bachelor's Degree	Technical Degree	Male	Married	39	35 - 44
35	35	Bachelor's Degree	Medical	Male	Married	24	Under 25

= Table.SelectColumns(#"Reordered Columns1",{"EMP_ID", "Education", "Education Field", "Gender", "Marital Status", "Age", "CF_age band"})

Dimension Emp_HRMS

- The “Dim_HRMS” table contains the following columns-
  a) Emp_ID
  b) emp no
  c) CF_attrition label
  d) Attrition
  e) Job Role
  f) Department
  g) CF_age band
  h) Business Travel
  i) Over Time
  j) Over18
  k) Training Times Last Year
  l) Job Level
  m) Percent Salary Hike
  n) Standard Hours



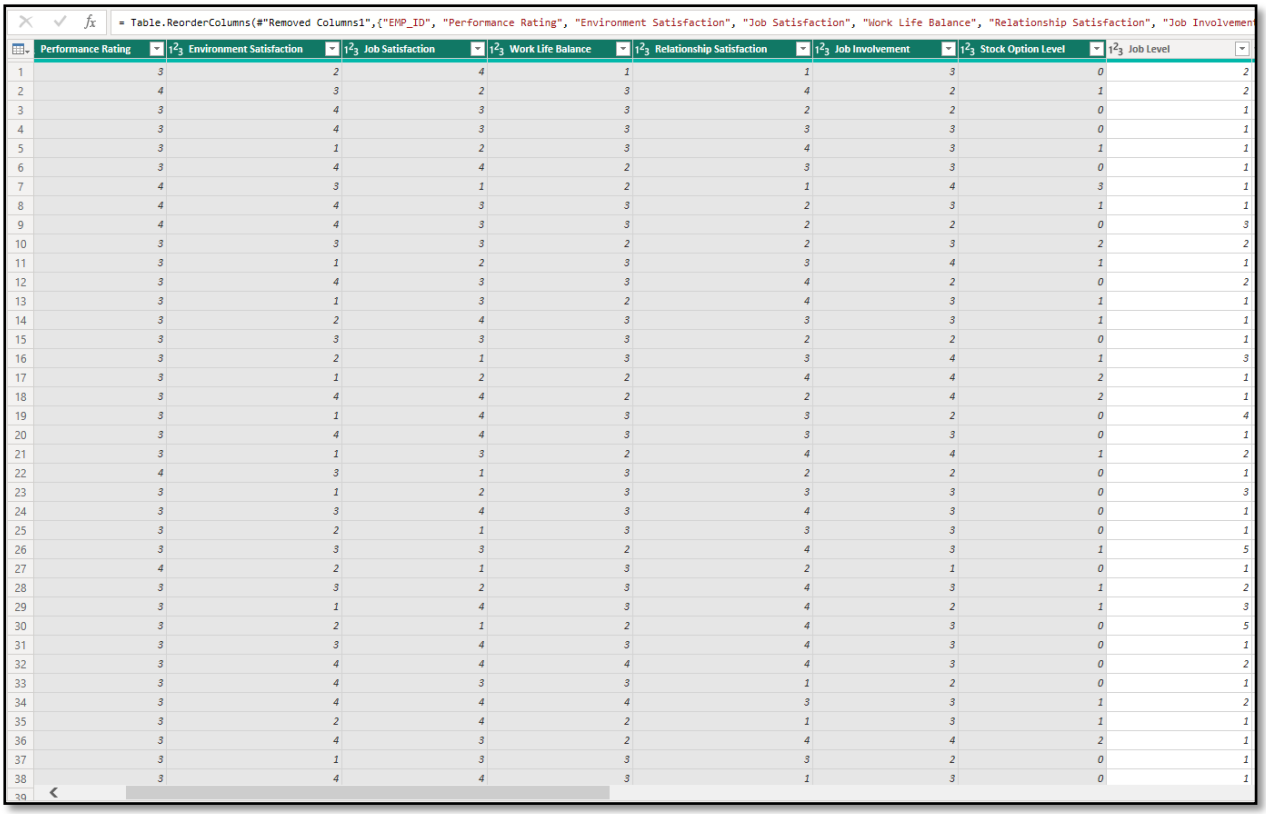


	EMP_ID	emp no	CF_attrition label	Attrition	Job Role	Department	CF_age band	Bu
1	1	STAFF-1	Ex-Employees	Yes	Sales Executive	Sales	35 - 44	Travel_
2	2	STAFF-2	Current Employees	No	Research Scientist	R&D	45 - 54	Travel_
3	3	STAFF-3	Ex-Employees	Yes	Laboratory Technician	R&D	35 - 44	Travel_
4	4	STAFF-4	Current Employees	Yes	Research Scientist	R&D	25 - 34	Travel_
5	5	STAFF-5	Current Employees	Yes	Laboratory Technician	R&D	25 - 34	Travel_
6	6	STAFF-6	Current Employees	Yes	Laboratory Technician	R&D	25 - 34	Travel_
7	7	STAFF-7	Current Employees	Yes	Laboratory Technician	R&D	Over 55	Travel_
8	8	STAFF-8	Current Employees	Yes	Laboratory Technician	R&D	25 - 34	Travel_
9	9	STAFF-9	Current Employees	Yes	Manufacturing Director	R&D	35 - 44	Travel_
10	10	STAFF-10	Current Employees	Yes	Healthcare Representative	R&D	35 - 44	Travel_
11	11	STAFF-11	Current Employees	Yes	Laboratory Technician	R&D	35 - 44	Travel_
12	12	STAFF-12	Current Employees	Yes	Laboratory Technician	R&D	25 - 34	Travel_
13	13	STAFF-13	Current Employees	Yes	Research Scientist	R&D	25 - 34	Travel_
14	14	STAFF-14	Current Employees	Yes	Laboratory Technician	R&D	25 - 34	Travel_
15	15	STAFF-15	Ex-Employees	Yes	Laboratory Technician	R&D	25 - 34	Travel_
16	16	STAFF-16	Current Employees	Yes	Manufacturing Director	R&D	25 - 34	Travel_
17	17	STAFF-17	Current Employees	Yes	Research Scientist	R&D	25 - 34	Travel_
18	18	STAFF-18	Current Employees	Yes	Laboratory Technician	R&D	Under 25	Non-Tra
19	19	STAFF-19	Current Employees	Yes	Manager	Sales	45 - 54	Travel_
20	20	STAFF-20	Current Employees	Yes	Research Scientist	R&D	35 - 44	Travel_
21	21	STAFF-21	Current Employees	Yes	Manufacturing Director	R&D	Under 25	Non-Tra
22	22	STAFF-22	Ex-Employees	Yes	Sales Representative	Sales	35 - 44	Travel_
23	23	STAFF-23	Current Employees	Yes	Research Director	R&D	25 - 34	Travel_
24	24	STAFF-24	Current Employees	Yes	Research Scientist	R&D	Under 25	Travel_
25	25	STAFF-25	Ex-Employees	Yes	Research Scientist	R&D	25 - 34	Travel_
26	26	STAFF-26	Current Employees	No	Manager	R&D	45 - 54	Travel_
27	27	STAFF-27	Ex-Employees	Yes	Research Scientist	R&D	25 - 34	Travel_
28	28	STAFF-28	Current Employees	No	Sales Executive	Sales	35 - 44	Travel_
29	29	STAFF-29	Current Employees	No	Healthcare Representative	R&D	35 - 44	Travel_
30	30	STAFF-30	Current Employees	No	Manager	Sales	45 - 54	Travel_
31	31	STAFF-31	Current Employees	No	Laboratory Technician	R&D	25 - 34	Travel_
32	32	STAFF-32	Current Employees	No	Healthcare Representative	R&D	35 - 44	Travel_
33	33	STAFF-33	Current Employees	No	Laboratory Technician	R&D	25 - 34	Travel_
34	34	STAFF-34	Ex-Employees	Yes	Sales Representative	Sales	35 - 44	Travel_
35	35	STAFF-35	Ex-Employees	Yes	Research Scientist	R&D	Under 25	Travel_
36	36	STAFF-36	Current Employees	No	Research Scientist	R&D	35 - 44	Travel_
37	37	STAFF-37	Ex-Employees	Yes	Sales Representative	Sales	45 - 54	Travel_
38	38	STAFF-38	Current Employees	No	Sales Representative	Sales	35 - 44	Travel_

=Table.SelectColumns(#"Reordered Columns4",{"EMP_ID", "emp no", "CF_attrition label", "Attrition", "Job Role", "Department", "CF_age band", "Business Travel", "Over Time", "Over18", "Training Times Last Year", "Job Level", "Percent Salary Hike", "Standard Hours"})

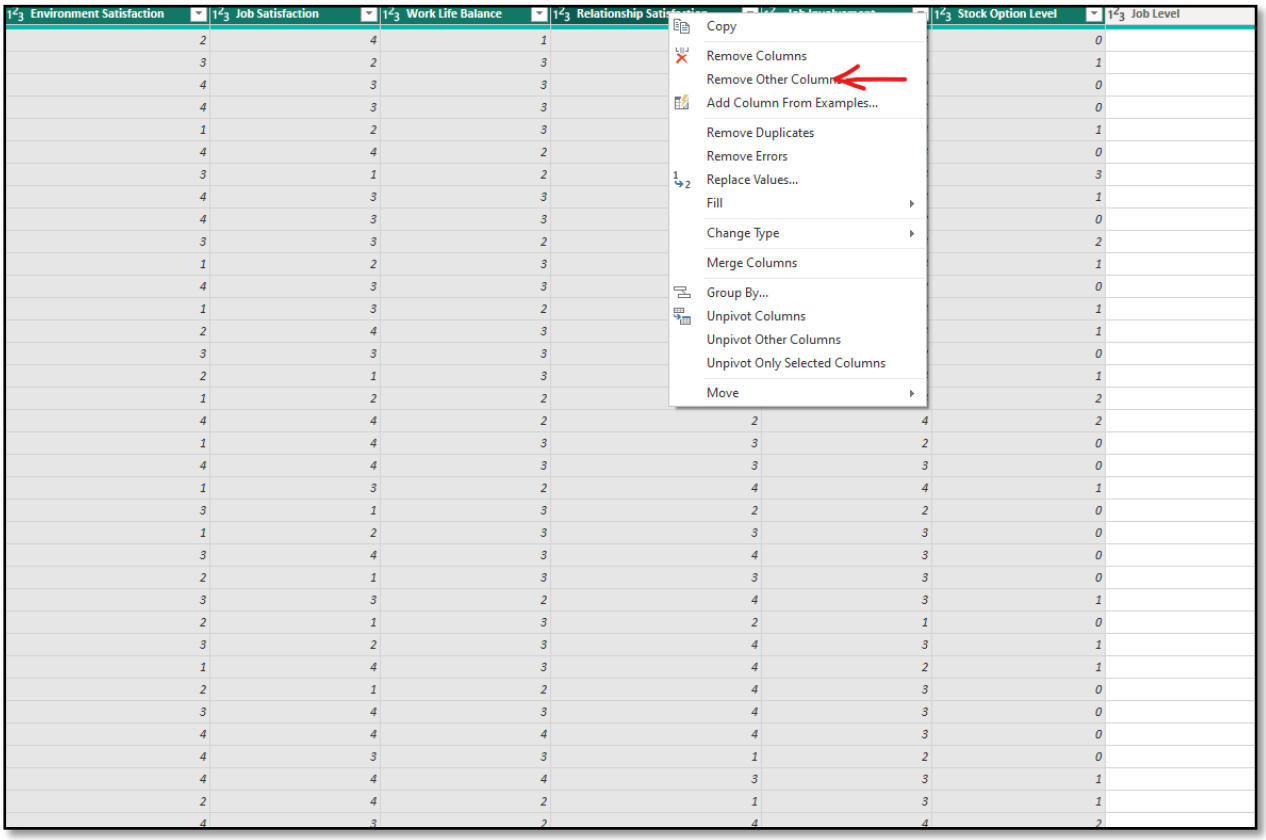
Dimension Dim_Emp_Rating

- The “Dim_Emp_Rating” table contains the following columns-
  a) EMP_ID
  b) Performance Rating
  c) Environment Satisfaction
  d) Job Satisfaction
  e) Work Life Balance
  f) Relationship Satisfaction
  g) Job Involvement
  h) Stock Option Level

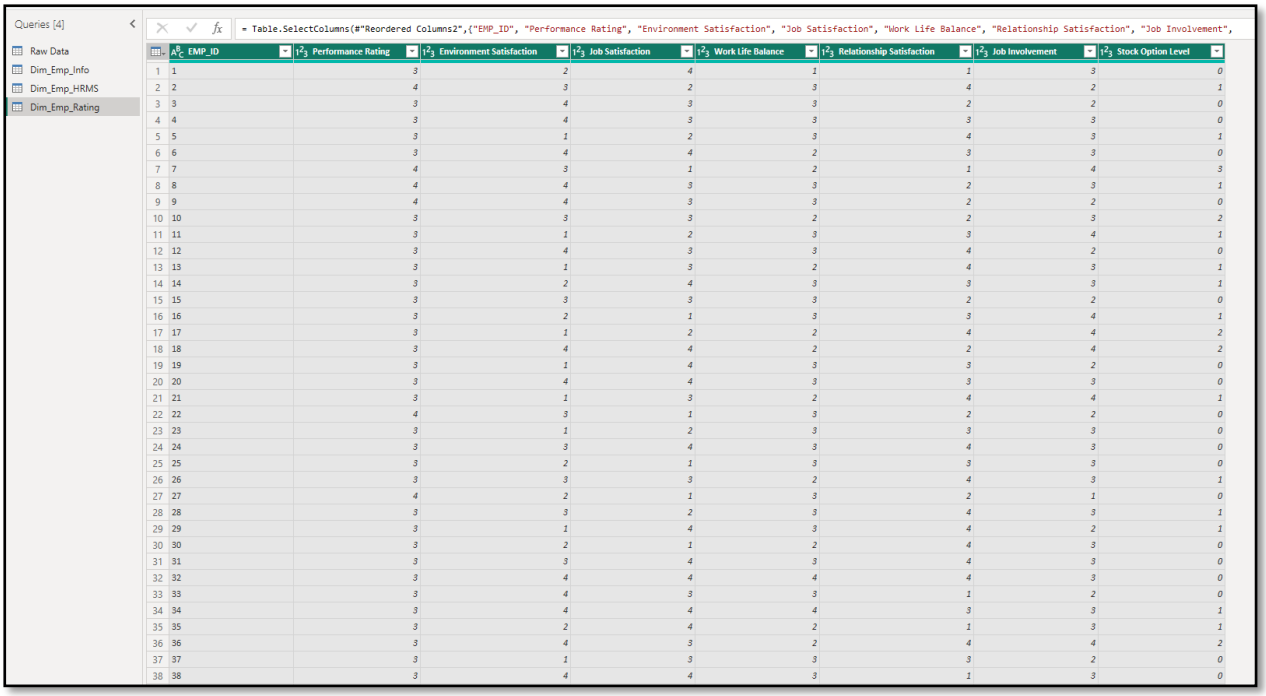


```
= Table.ReorderColumns(#"Removed Columns1",{"EMP_ID", "Performance Rating", "Environment Satisfaction", "Job Satisfaction", "Work Life Balance", "Relationship Satisfaction", "Job Involvement
```

	Performance Rating	Environment Satisfaction	Job Satisfaction	Work Life Balance	Relationship Satisfaction	Job Involvement	Stock Option Level	Job Level
1	3	2	4	1	1	3	0	2
2	4	3	2	3	4	2	1	2
3	3	4	3	3	2	2	0	1
4	3	4	3	3	3	3	0	1
5	3	1	2	3	4	3	1	1
6	3	4	4	2	3	3	0	1
7	4	3	1	2	1	4	3	1
8	4	4	3	3	2	3	1	1
9	4	4	3	3	2	2	0	3
10	3	3	3	2	2	3	2	2
11	3	1	2	3	3	4	1	1
12	3	4	3	3	4	2	0	2
13	3	1	3	2	4	3	1	1
14	3	2	4	3	3	3	1	1
15	3	3	3	3	2	2	0	1
16	3	2	1	3	3	4	1	3
17	3	1	2	2	4	4	2	1
18	3	4	4	2	2	4	2	1
19	3	1	4	3	3	2	0	4
20	3	4	4	3	3	3	0	1
21	3	1	3	2	4	4	1	2
22	4	3	1	3	2	2	0	1
23	3	1	2	3	3	3	0	3
24	3	3	4	3	4	3	0	1
25	3	2	1	3	3	3	0	1
26	3	3	3	2	4	3	1	5
27	4	2	1	3	2	1	0	1
28	3	3	2	3	4	3	1	2
29	3	1	4	3	4	2	1	3
30	3	2	1	2	4	3	0	5
31	3	3	4	3	4	3	0	1
32	3	4	4	4	4	3	0	2
33	3	4	3	3	1	2	0	1
34	3	4	4	4	3	3	1	2
35	3	2	4	2	1	3	1	1
36	3	4	3	2	4	4	2	1
37	3	1	3	3	3	2	0	1
38	3	4	4	3	1	3	0	1



Environment Satisfaction	Job Satisfaction	Work Life Balance	Relationship Satisfaction	Job Involvement	Stock Option Level	Job Level
2	4	1			0	
3	2	3			1	
4	3	3			0	
4	3	3			0	
1	2	3			1	
4	4	2			0	
3	1	2			3	
4	3	3			1	
4	3	3			0	
3	3	2			2	
1	2	3			1	
4	3	3			0	
1	3	2			1	
2	4	3			1	
3	3	3			0	
2	1	3			1	
1	2	2			2	
4	4	2	2	4	2	
1	4	3	3	2	0	
4	4	3	3	3	0	
1	3	2	4	4	1	
3	1	3	2	2	0	
1	2	3	3	3	0	
3	4	3	4	3	0	
2	1	3	3	3	0	
3	3	2	4	3	1	
2	1	3	2	1	0	
3	2	3	4	3	1	
1	4	3	4	2	1	
2	1	2	4	3	0	
3	4	3	4	3	0	
4	4	4	4	3	0	
4	3	3	1	2	0	
4	4	4	3	3	1	
2	4	2	1	3	1	
4	3	2	4	4	2	

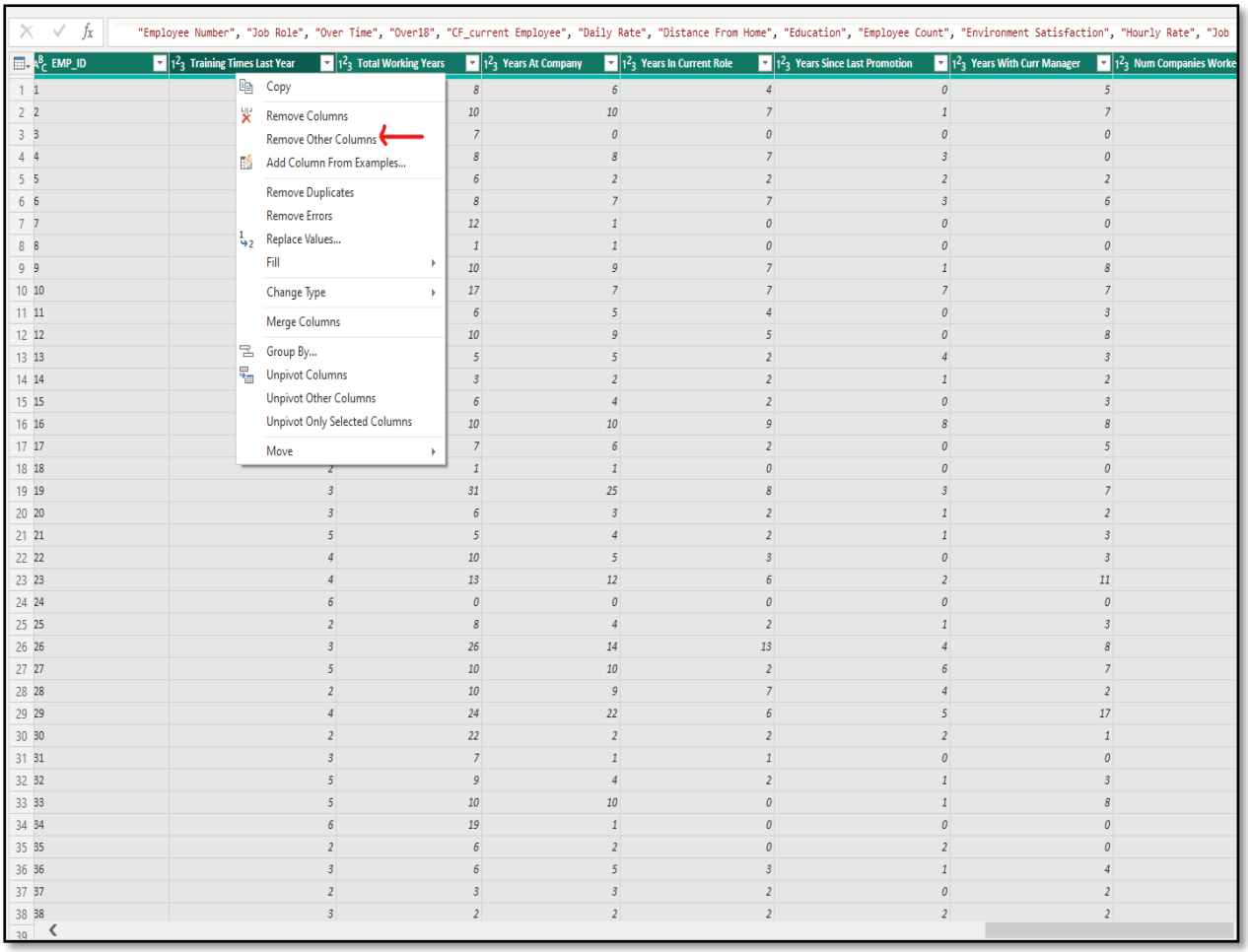


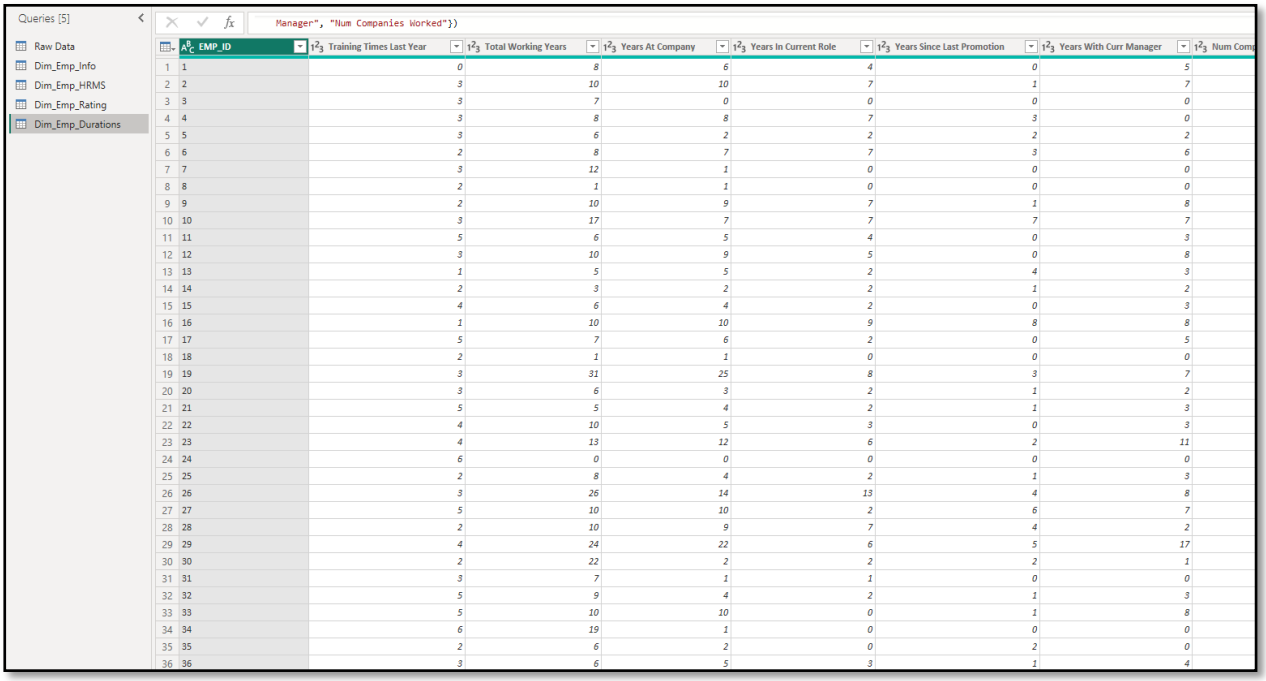
	EMP_ID	Performance Rating	Environment Satisfaction	Job Satisfaction	Work Life Balance	Relationship Satisfaction	Job Involvement	Stock Option Level
1	1	3	2	4	1	1	3	0
2	2	4	3	2	3	4	2	1
3	3	3	4	3	3	2	2	0
4	4	3	4	3	3	3	3	0
5	5	3	1	2	3	4	3	1
6	6	3	4	4	2	3	3	0
7	7	4	3	1	2	1	4	3
8	8	4	4	3	3	2	3	1
9	9	4	4	3	3	2	2	0
10	10	3	3	3	2	2	3	2
11	11	3	1	2	3	3	4	1
12	12	3	4	3	3	4	2	0
13	13	3	1	3	2	4	3	1
14	14	3	2	4	3	3	3	1
15	15	3	3	3	3	2	2	0
16	16	3	2	1	3	3	4	1
17	17	3	1	2	2	4	4	2
18	18	3	4	4	2	2	4	2
19	19	3	1	4	3	3	2	0
20	20	3	4	4	3	3	3	0
21	21	3	1	3	2	4	4	1
22	22	4	3	1	3	2	2	0
23	23	3	1	2	3	3	3	0
24	24	3	3	4	3	4	3	0
25	25	3	2	1	3	3	3	0
26	26	3	3	3	2	4	3	1
27	27	4	2	1	3	2	1	0
28	28	3	3	2	3	4	3	1
29	29	3	1	4	3	4	2	1
30	30	3	2	1	2	4	3	0
31	31	3	3	4	3	4	3	0
32	32	3	4	4	4	4	3	0
33	33	3	4	3	3	1	2	0
34	34	3	4	4	4	3	3	1
35	35	3	2	4	2	1	3	1
36	36	3	4	3	2	4	4	2
37	37	3	1	3	3	3	2	0
38	38	3	4	4	3	1	3	0

= Table.SelectColumns(#"Reordered Columns2",{"EMP_ID", "Performance Rating", "Environment Satisfaction", "Job Satisfaction", "Work Life Balance", "Relationship Satisfaction", "Job Involvement", "Stock Option Level"})

Dimension Dim_Emp_Durations

- The “Dim_Emp_Durations” table contains the following columns-
  a) EMP_ID
  b) Training Times Last Year
  c) Total Working Years
  d) Years At Company
  e) Years In Current Role
  f) Years Since Last Promotion
  g) Years With Curr Manager
  h) Num Companies Worked

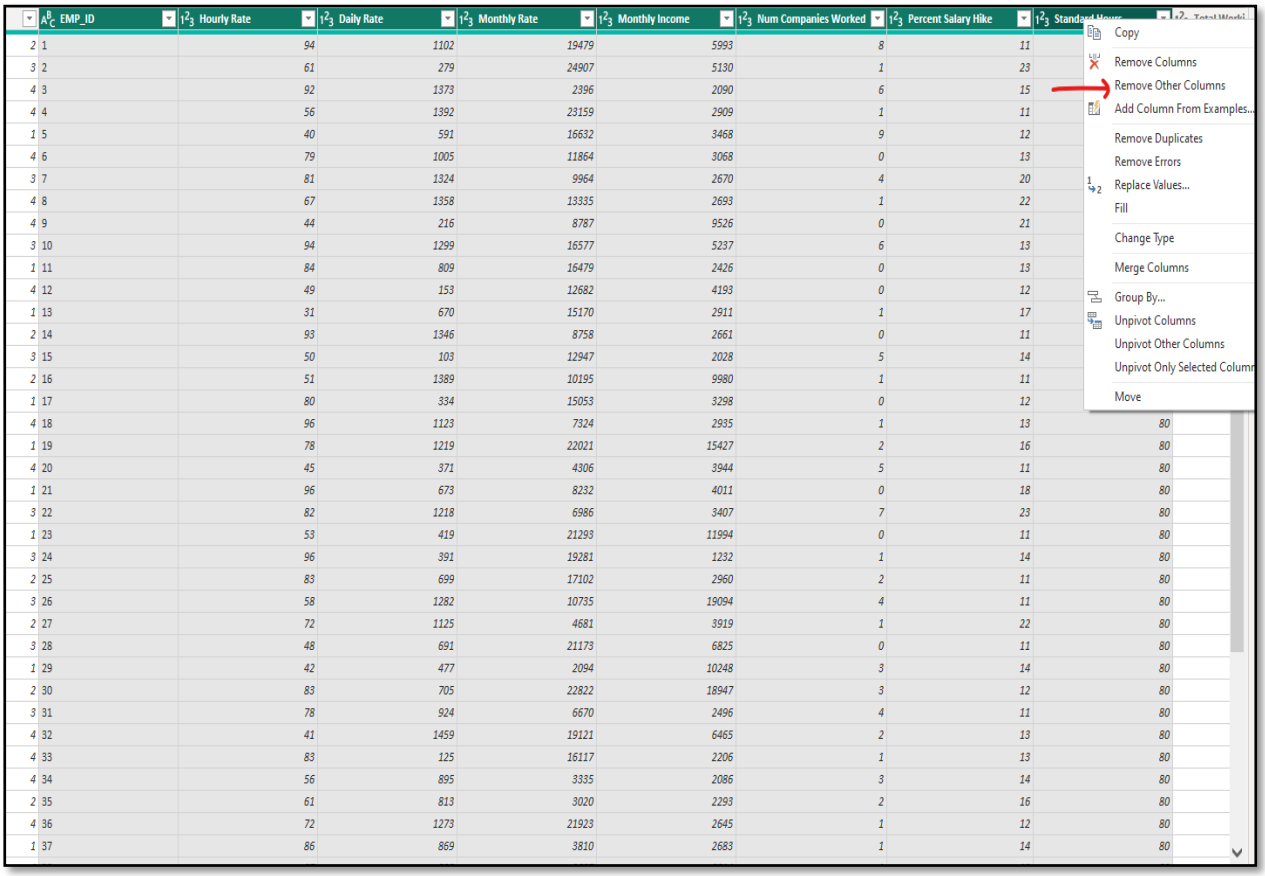

"Employee Number", "Job Role", "Over Time", "Over18", "CF_current Employee", "Daily Rate", "Distance From Home", "Education", "Employee Count", "Environment Satisfaction", "Hourly Rate", "Job
EMP_ID
Training Times Last Year
Total Working Years
Years At Company
Years In Current Role
Years Since Last Promotion
Years With Curr Manager
Num Companies Worke
Copy
Remove Columns
Remove Other Columns
Add Column From Examples...
Remove Duplicates
Remove Errors
Replace Values...
Fill
Change Type
Merge Columns
Group By...
Unpivot Columns
Unpivot Other Columns
Unpivot Only Selected Columns
Move

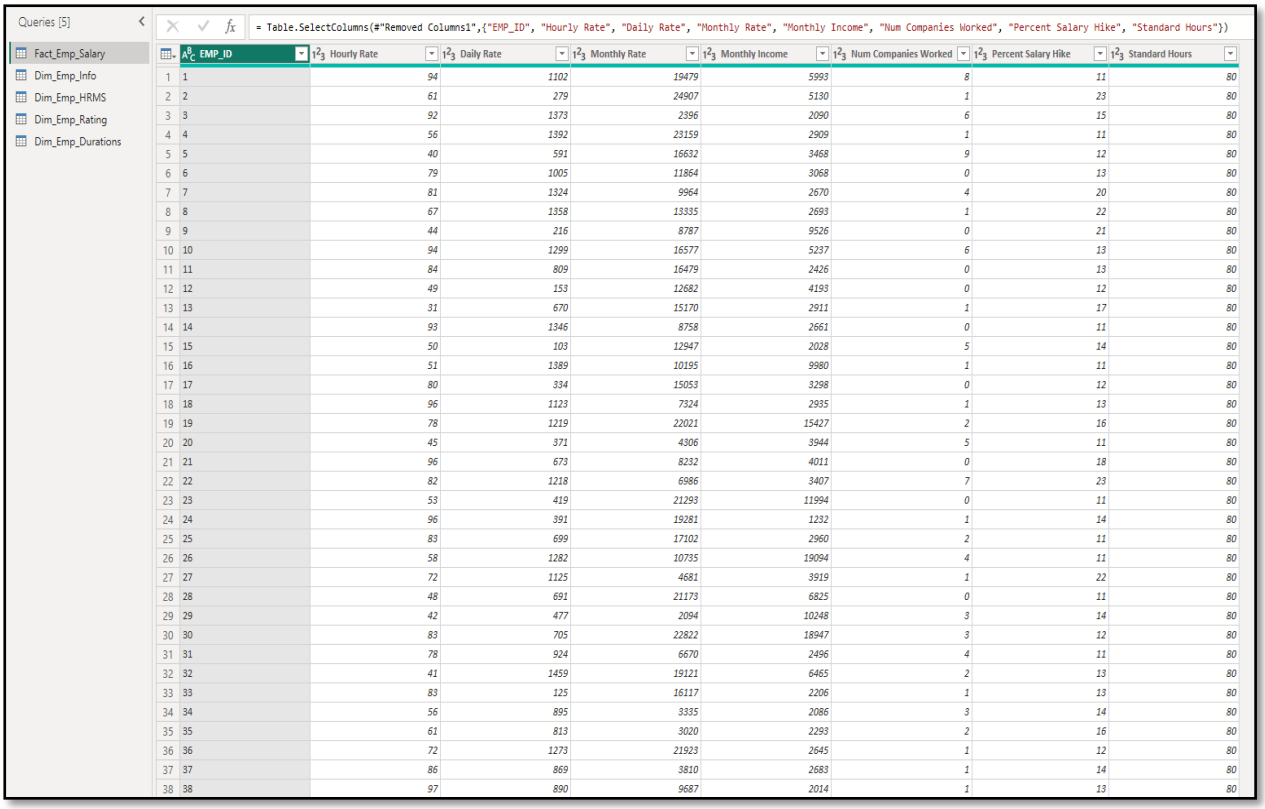

Queries [5]
Raw Data
Dim_Emp_Info
Dim_Emp_HRMS
Dim_Emp_Rating
Dim_Emp_Durations
Manager", "Num Companies Worked"})
EMP_ID
Training Times Last Year
Total Working Years
Years At Company
Years In Current Role
Years Since Last Promotion
Years With Curr Manager
Num Comp

= Table.SelectColumns(#"Reordered Columns1",{"EMP_ID", "Training Times Last Year", "Total Working Years", "Years At Company", "Years In Current Role", "Years Since Last Promotion", "Years With Curr Manager", "Num Companies Worked"})

Fact table Fact_Emp_Salary

- The "Fact_Emp_Salary" table contains the following columns-
    a) EMP_ID
    b) Daily Rate
    c) Hourly Rate
    d) Monthly Income
    e) Monthly Rate
    f) Num Companies Worked
    g) Percent Salary Hike
    h) Standard Hours

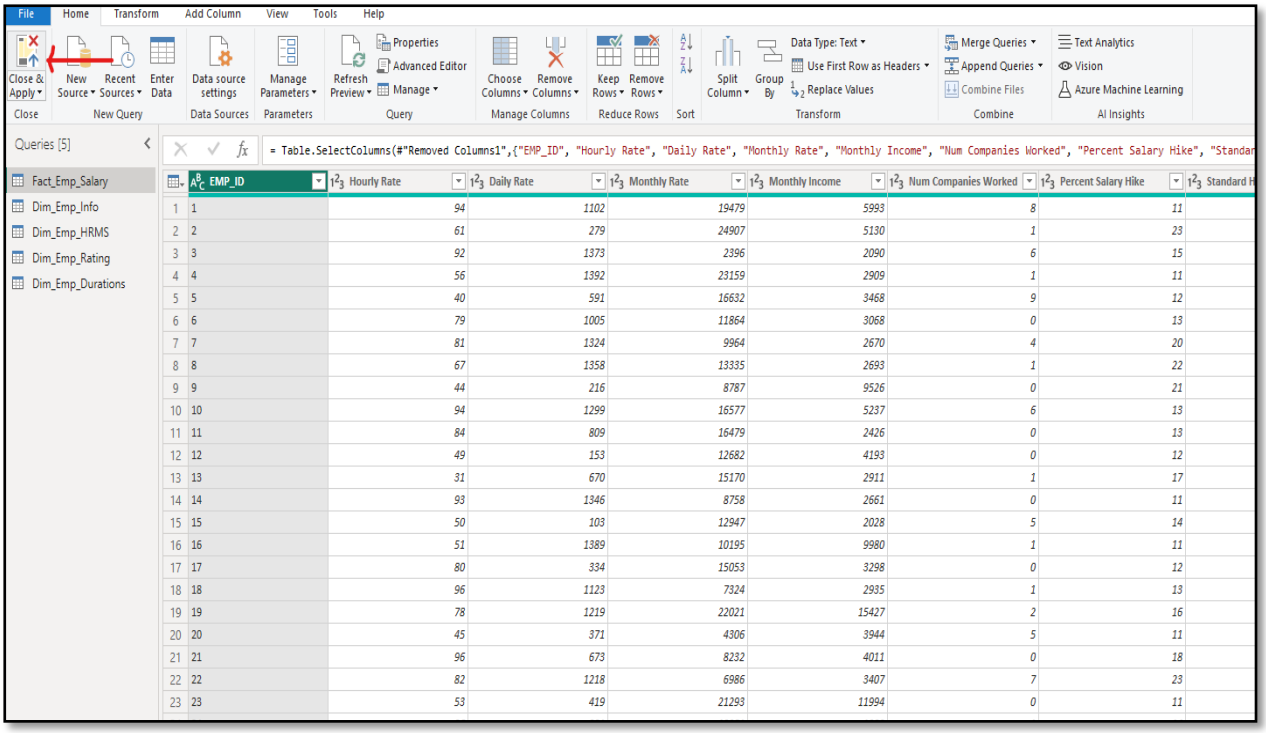


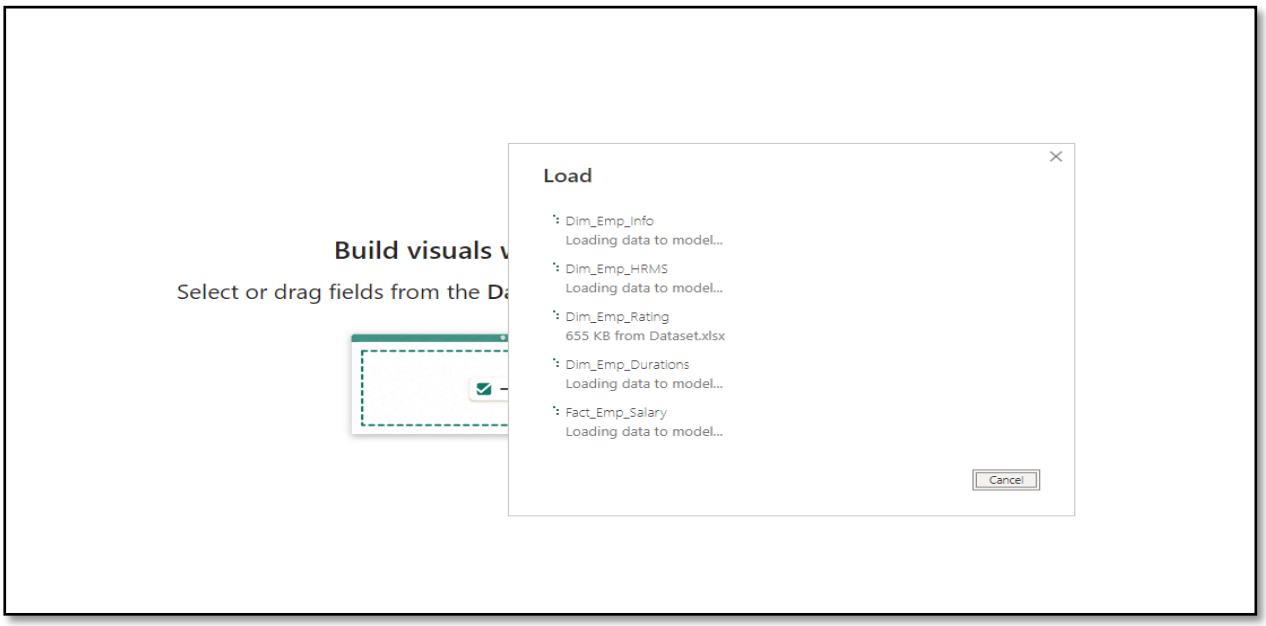


	EMP_ID	Hourly Rate	Daily Rate	Monthly Rate	Monthly Income	Num Companies Worked	Percent Salary Hike	Standard Hours
1	1	94	1102	19479	5993	8	11	80
2	2	61	279	24907	5130	1	23	80
3	3	92	1373	2396	2090	6	15	80
4	4	56	1392	23159	2909	1	11	80
5	5	40	591	16632	3468	9	12	80
6	6	79	1005	11864	3068	0	13	80
7	7	81	1324	9964	2670	4	20	80
8	8	67	1358	13335	2693	1	22	80
9	9	44	216	8787	9526	0	21	80
10	10	94	1299	16577	5237	6	13	80
11	11	84	809	16479	2426	0	13	80
12	12	49	153	12682	4193	0	12	80
13	13	31	670	15170	2911	1	17	80
14	14	93	1346	8758	2661	0	11	80
15	15	50	103	12947	2028	5	14	80
16	16	51	1389	10195	9980	1	11	80
17	17	80	334	15053	3298	0	12	80
18	18	96	1123	7324	2935	1	13	80
19	19	78	1219	22021	15427	2	16	80
20	20	45	371	4306	3944	5	11	80
21	21	96	673	8232	4011	0	18	80
22	22	82	1218	6986	3407	7	23	80
23	23	53	419	21293	11994	0	11	80
24	24	96	391	19281	1232	1	14	80
25	25	83	699	17102	2960	2	11	80
26	26	58	1282	10735	19094	4	11	80
27	27	72	1125	4681	3919	1	22	80
28	28	48	691	21173	6825	0	11	80
29	29	42	477	2094	10248	3	14	80
30	30	83	705	22822	18947	3	12	80
31	31	78	924	6670	2496	4	11	80
32	32	41	1459	19121	6465	2	13	80
33	33	83	125	16117	2206	1	13	80
34	34	56	895	3335	2086	3	14	80
35	35	61	813	3020	2293	2	16	80
36	36	72	1273	21923	2645	1	12	80
37	37	86	869	3810	2683	1	14	80
38	38	97	890	9687	2014	1	13	80

=Table.SelectColumns(#"Removed Columns1",{"EMP_ID", "Hourly Rate", "Daily Rate", "Monthly Rate", "Monthly Income", "Num Companies Worked", "Percent Salary Hike", "Standard Hours"})

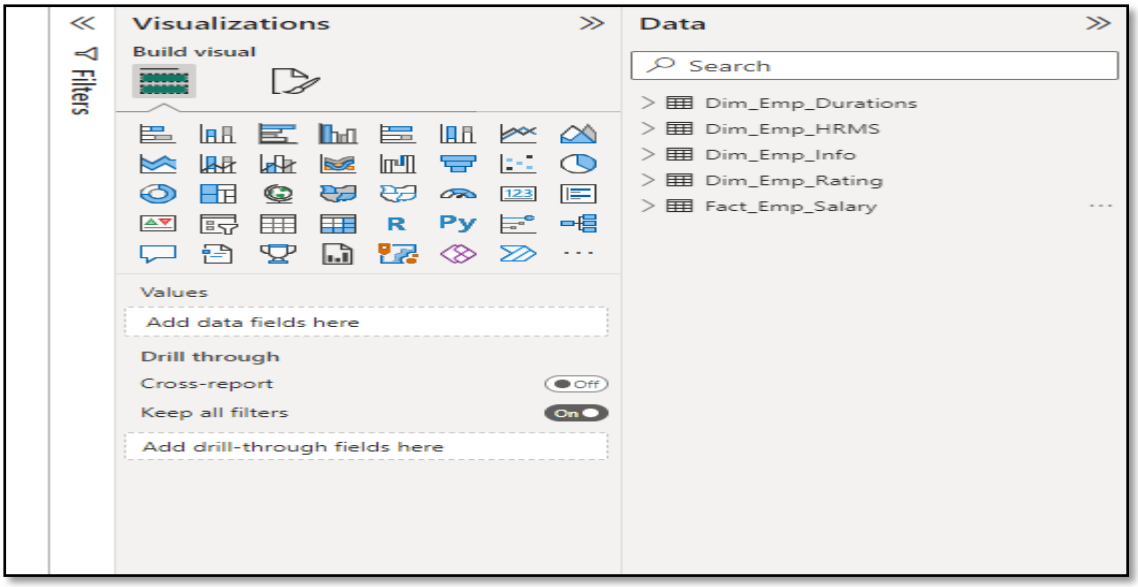
- Only fact and dimensions will be loaded into reporting tool after data is cleansed.





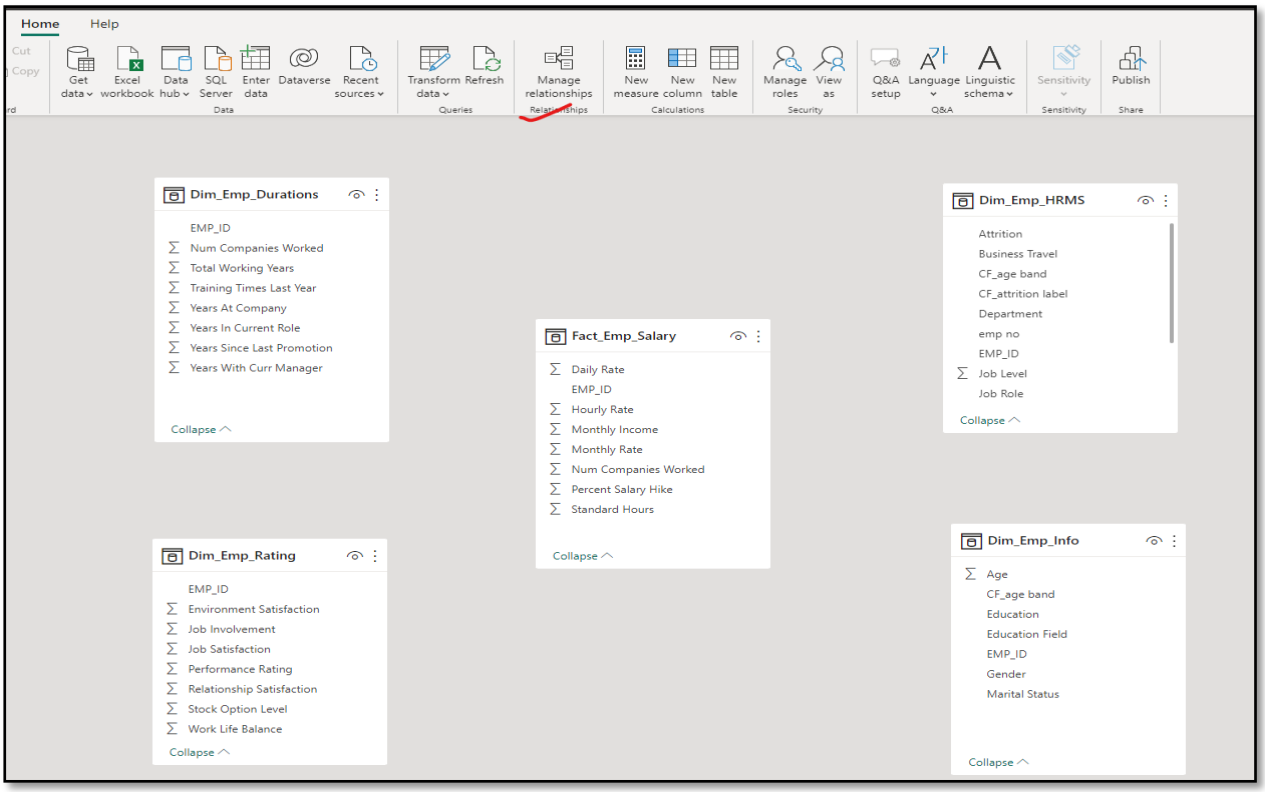
List of fact and dimensions:

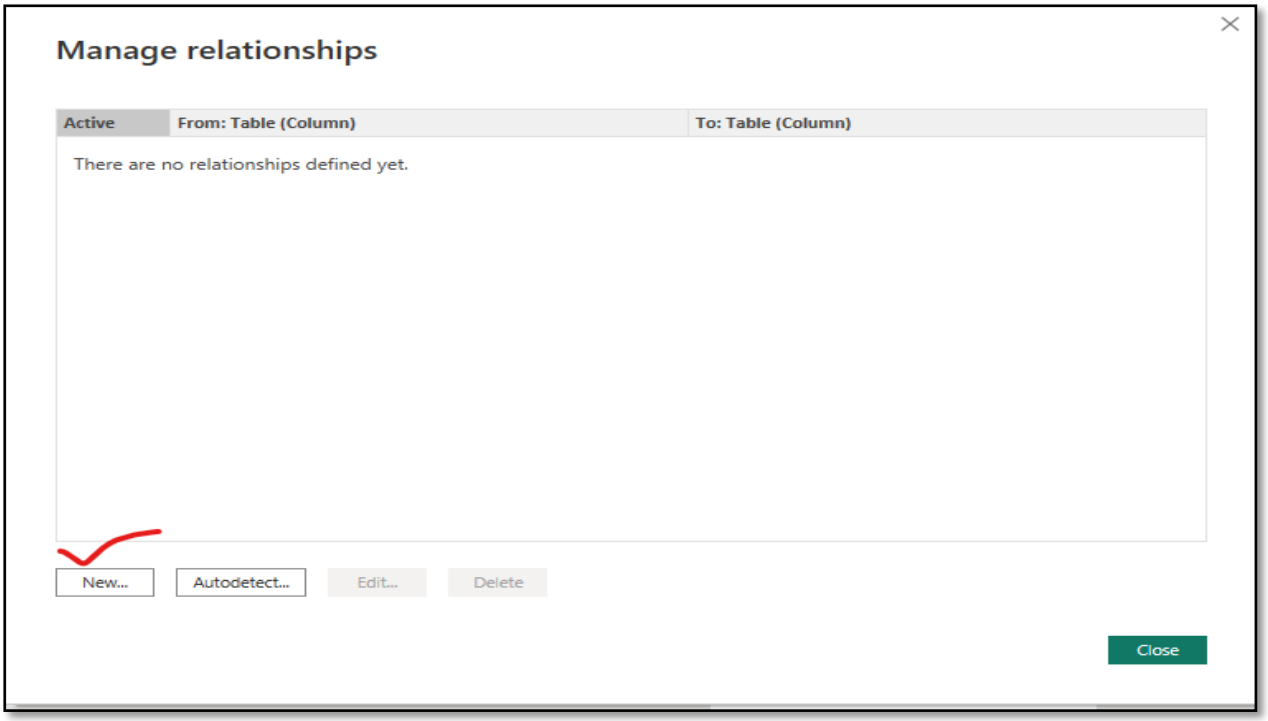
- The list of all fact and dimension tables can be seen in right-top side of the power-bi screen.
- Here in the following image, the list of fact and dimension can be seen.

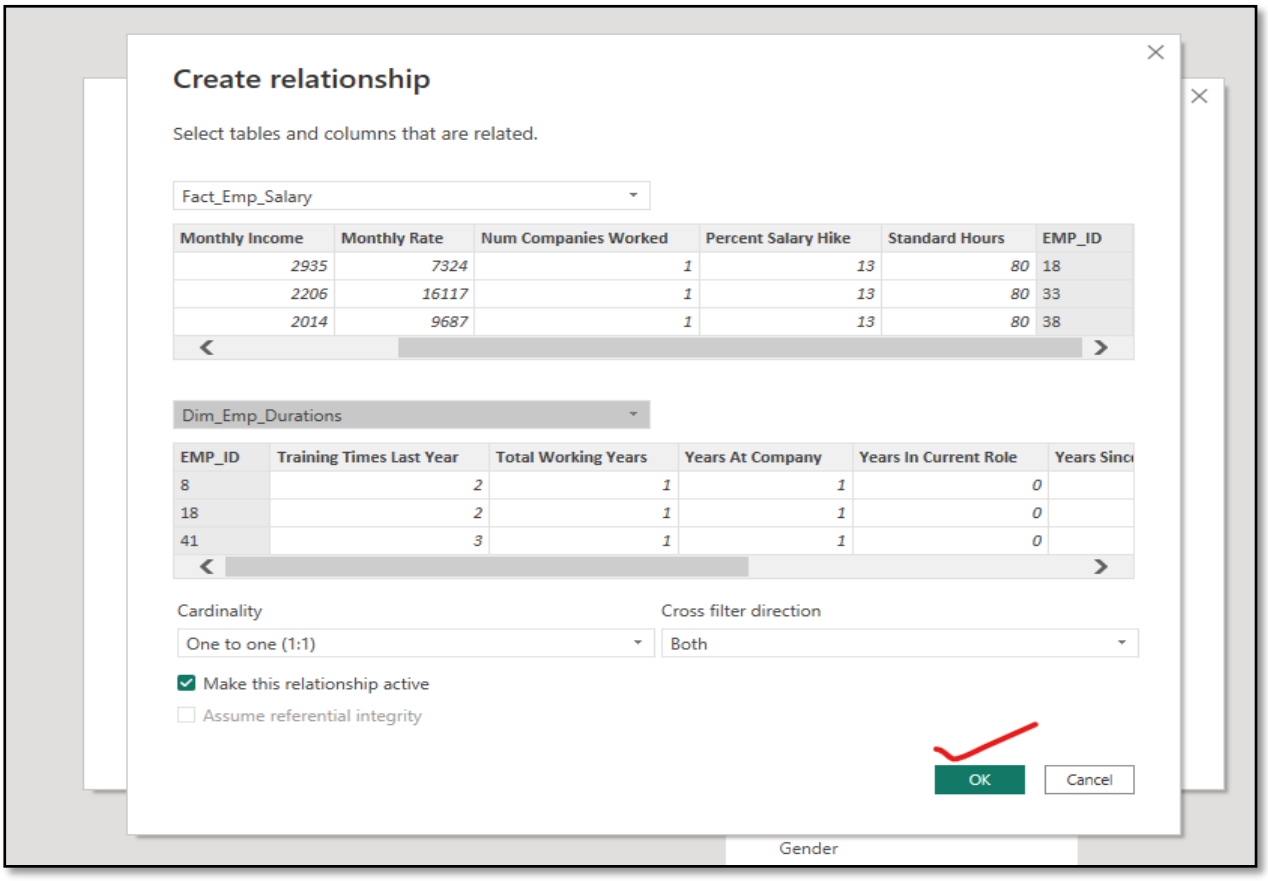


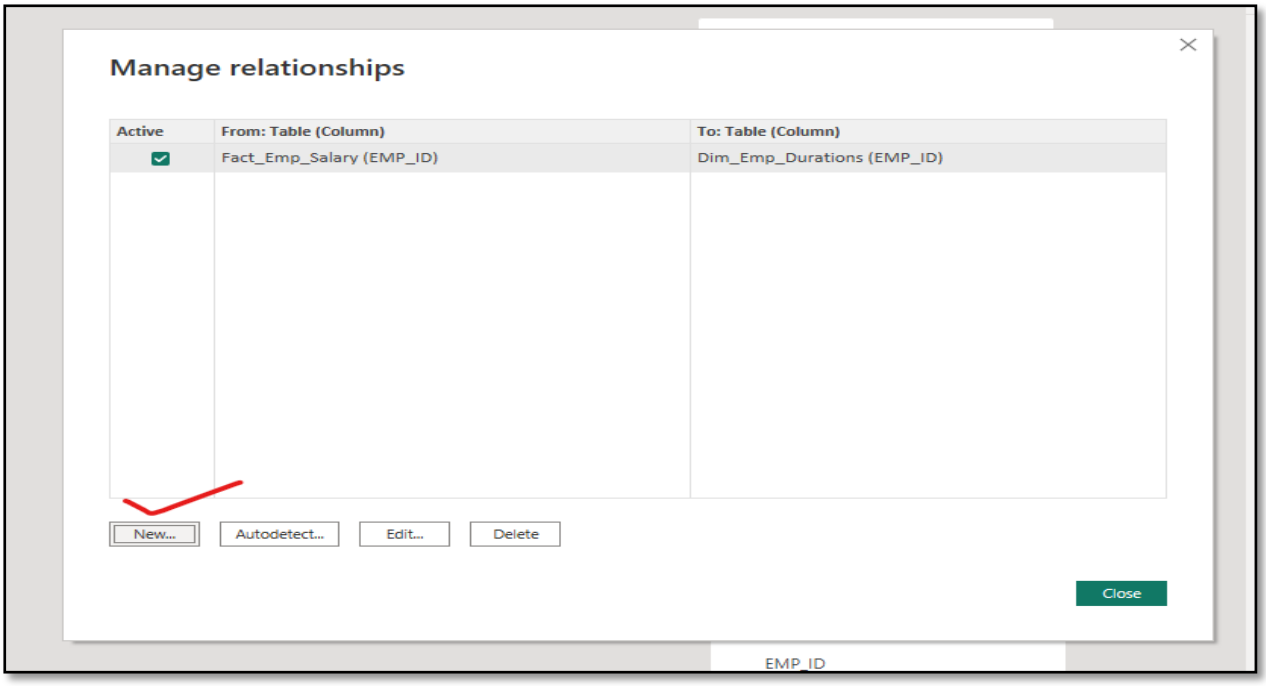
Data models and relationships:

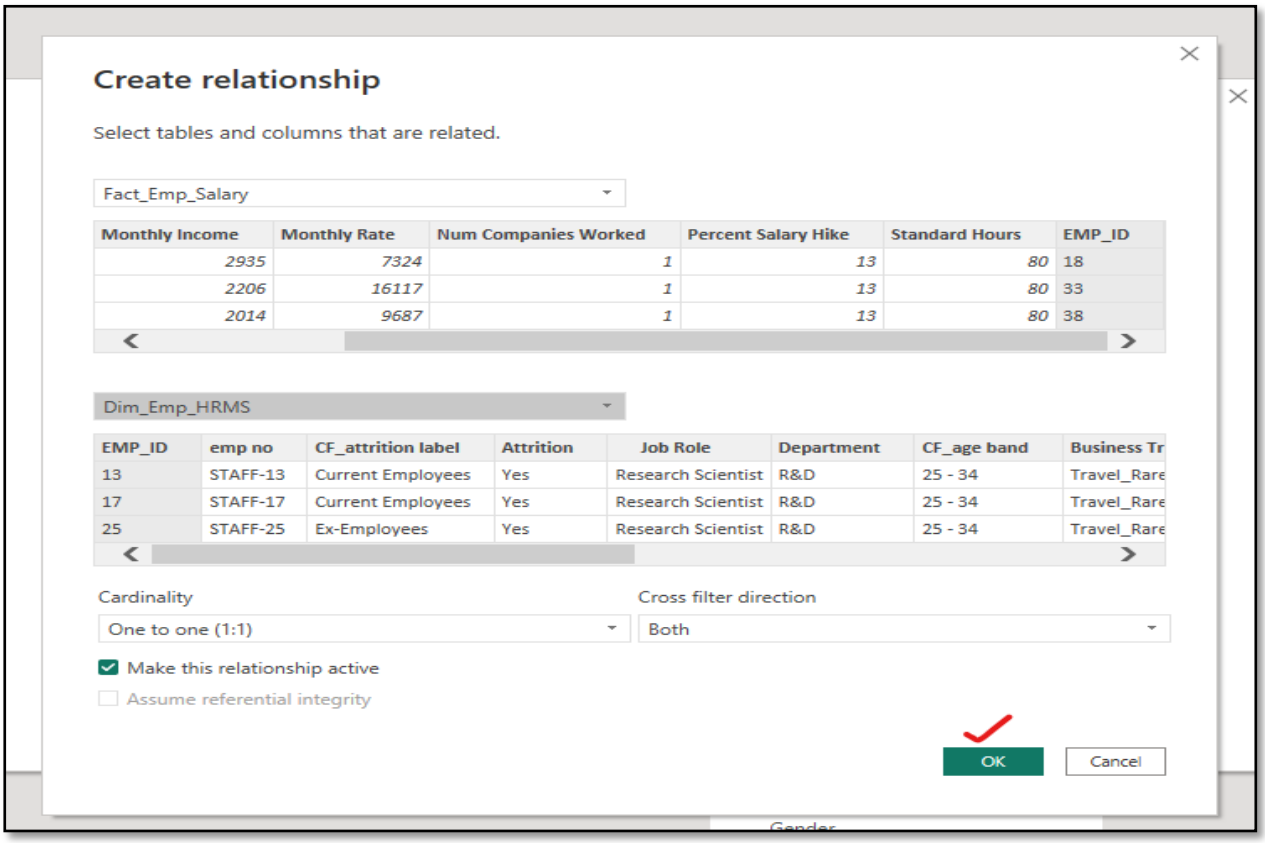
- To visualize the data in power-bi, first the relationship between the fact and dimension should be developed.
- The relationship developed here, is base on the “Star-schema”.

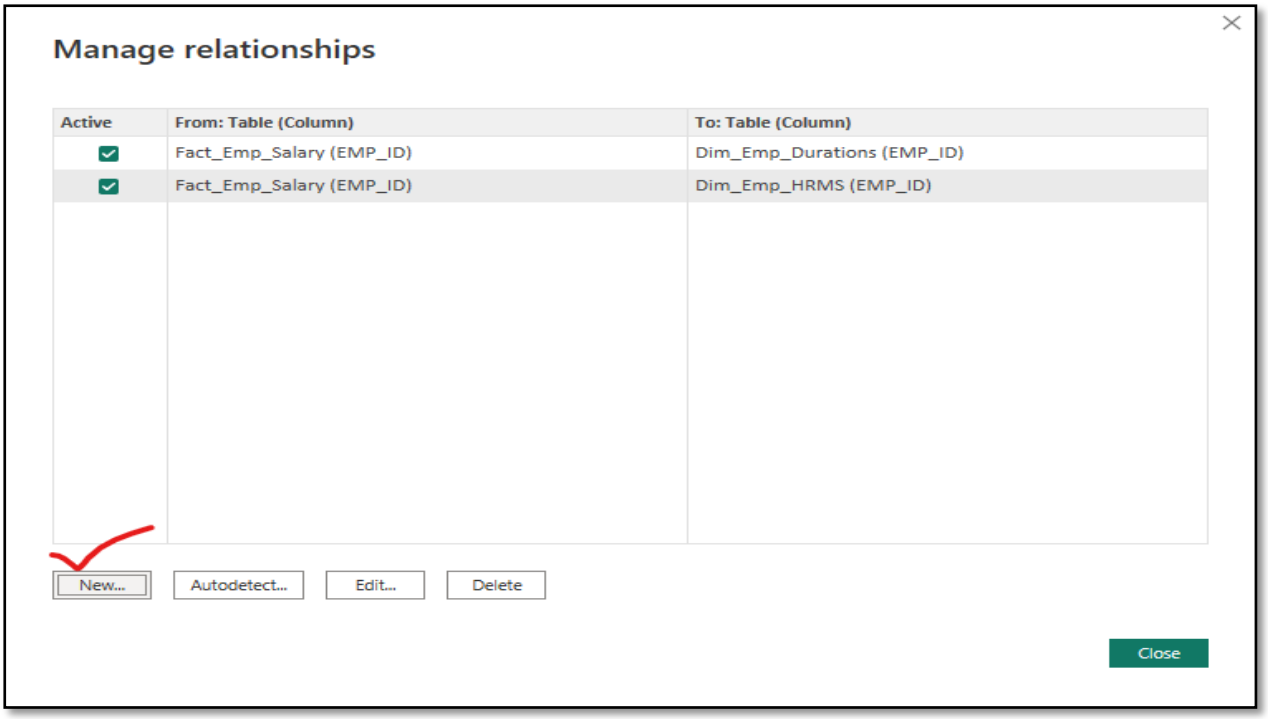


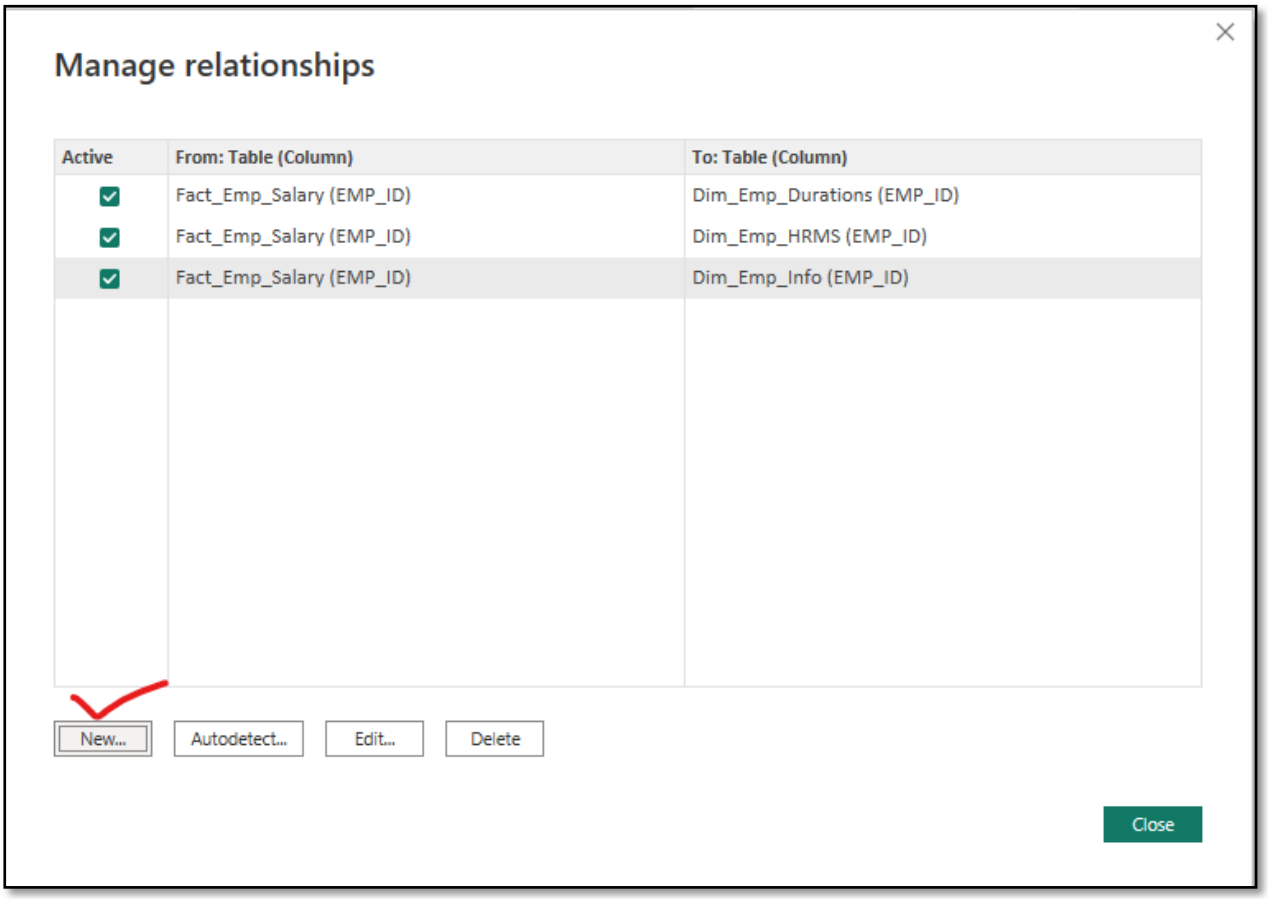

Manage relationships
Active
From: Table (Column)
To: Table (Column)
There are no relationships defined yet.
New...
Autodetect...
Edit...
Delete
Close

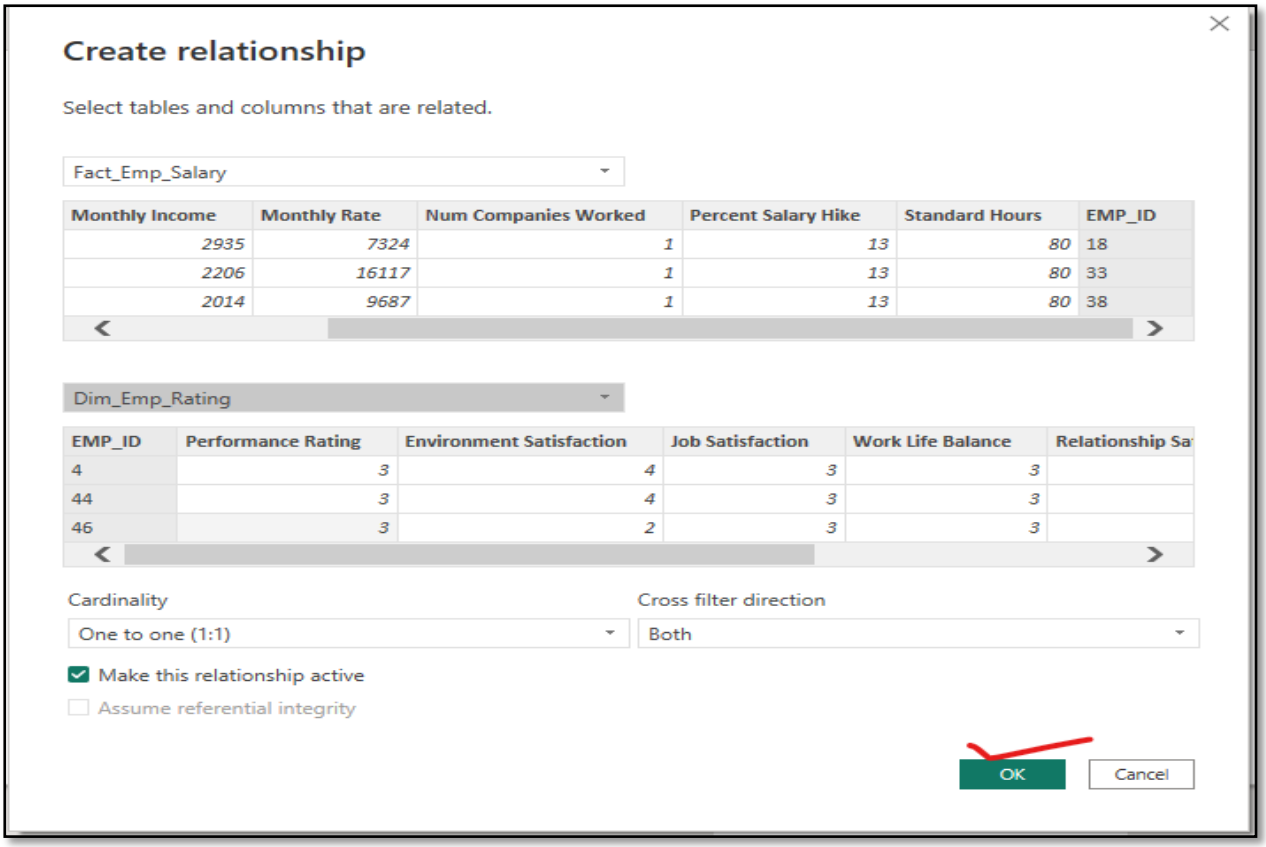

Create relationship
Select tables and columns that are related.
Fact_Emp_Salary
Monthly Income
Monthly Rate
Num Companies Worked
Percent Salary Hike
Standard Hours
EMP_ID
2935
7324
1
13
80
18
2206
16117
1
13
80
33
2014
9687
1
13
80
38
Dim_Emp_Durations
EMP_ID
Training Times Last Year
Total Working Years
Years At Company
Years In Current Role
8
2
1
1
0
18
2
1
1
0
41
3
1
1
0
Cardinality
One to one (1:1)
Cross filter direction
Both
Make this relationship active
Assume referential integrity
OK
Cancel
Gender

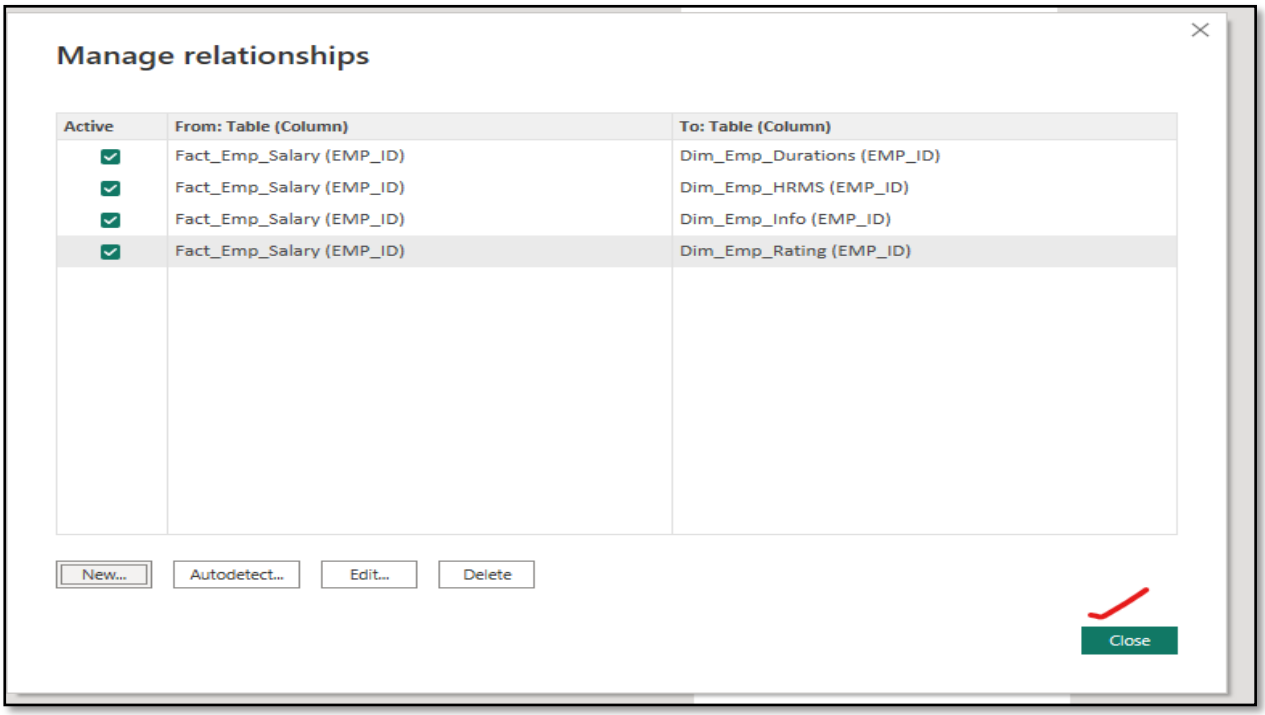

Manage relationships
Active
From: Table (Column)
To: Table (Column)
Fact_Emp_Salary (EMP_ID)
Dim_Emp_Durations (EMP_ID)
New...
Autodetect...
Edit...
Delete
Close
EMP_ID

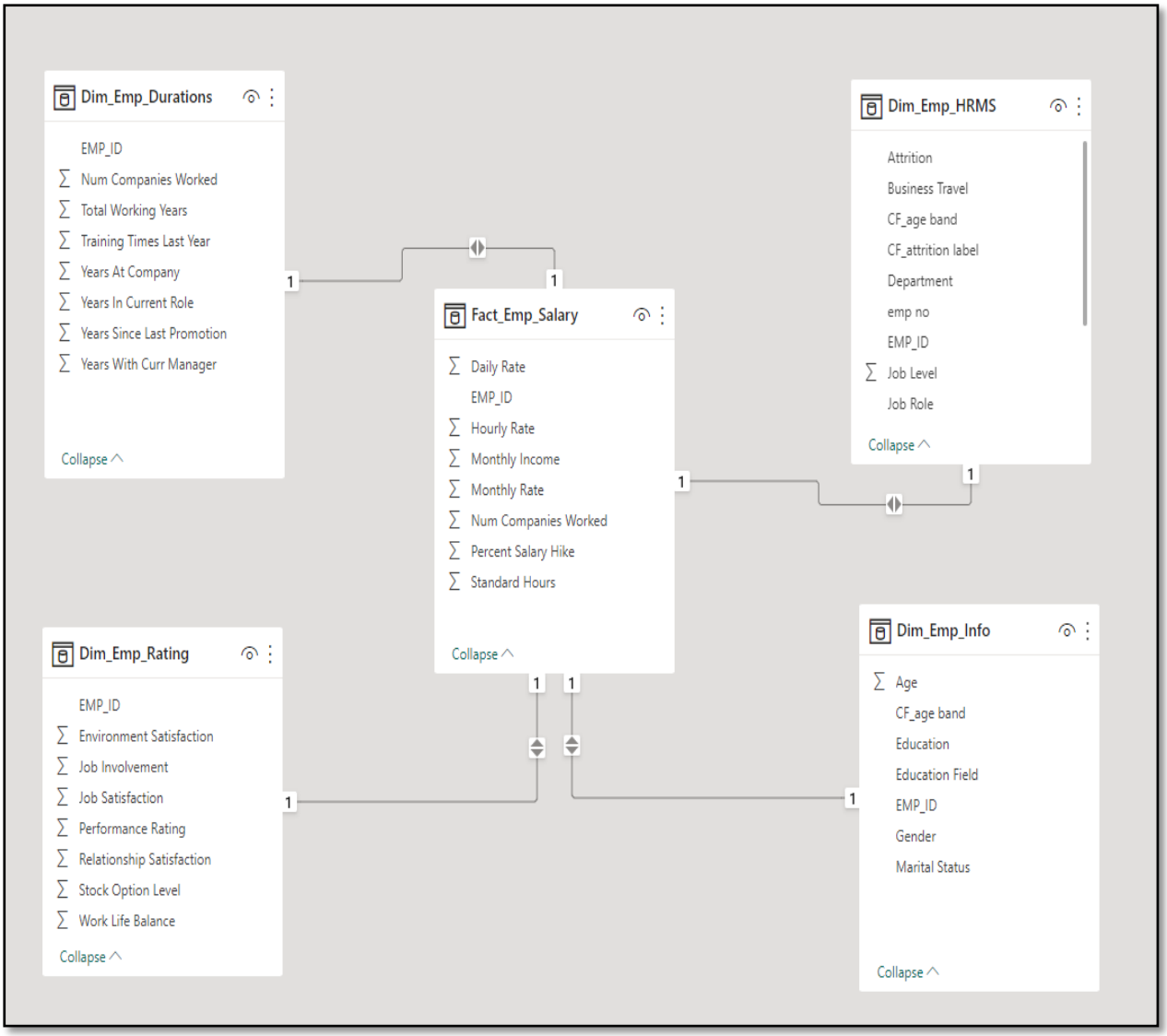

Create relationship
Select tables and columns that are related.
Fact_Emp_Salary
Monthly Income
Monthly Rate
Num Companies Worked
Percent Salary Hike
Standard Hours
EMP_ID
2935
7324
1
13
80
18
2206
16117
1
13
80
33
2014
9687
1
13
80
38
Dim_Emp_HRMS
EMP_ID
emp no
CF_attrition label
Attrition
Job Role
Department
CF_age band
Business Tr
13
STAFF-13
Current Employees
Yes
Research Scientist
R&D
25 - 34
Travel_Rare
17
STAFF-17
Current Employees
Yes
Research Scientist
R&D
25 - 34
Travel_Rare
25
STAFF-25
Ex-Employees
Yes
Research Scientist
R&D
25 - 34
Travel_Rare
Cardinality
One to one (1:1)
Cross filter direction
Both
Make this relationship active
Assume referential integrity
OK
Cancel
Gender


Manage relationships
Active
From: Table (Column)
To: Table (Column)
Fact_Emp_Salary (EMP_ID)
Dim_Emp_Durations (EMP_ID)
Fact_Emp_Salary (EMP_ID)
Dim_Emp_HRMS (EMP_ID)
New...
Autodetect...
Edit...
Delete
Close


Manage relationships
Active
From: Table (Column)
To: Table (Column)
Fact_Emp_Salary (EMP_ID)
Dim_Emp_Durations (EMP_ID)
Fact_Emp_Salary (EMP_ID)
Dim_Emp_HRMS (EMP_ID)
Fact_Emp_Salary (EMP_ID)
Dim_Emp_Info (EMP_ID)
New...
Autodetect...
Edit...
Delete
Close


Create relationship
Select tables and columns that are related.
Fact_Emp_Salary
Monthly Income
Monthly Rate
Num Companies Worked
Percent Salary Hike
Standard Hours
EMP_ID
2935
7324
1
13
80
18
2206
16117
1
13
80
33
2014
9687
1
13
80
38
Dim_Emp_Rating
EMP_ID
Performance Rating
Environment Satisfaction
Job Satisfaction
Work Life Balance
Relationship Sa
4
3
4
3
3
44
3
4
3
3
46
3
2
3
3
Cardinality
One to one (1:1)
Cross filter direction
Both
Make this relationship active
Assume referential integrity
OK
Cancel


Manage relationships
Active
From: Table (Column)
To: Table (Column)
Fact_Emp_Salary (EMP_ID)
Dim_Emp_Durations (EMP_ID)
Fact_Emp_Salary (EMP_ID)
Dim_Emp_HRMS (EMP_ID)
Fact_Emp_Salary (EMP_ID)
Dim_Emp_Info (EMP_ID)
Fact_Emp_Salary (EMP_ID)
Dim_Emp_Rating (EMP_ID)
New...
Autodetect...
Edit...
Delete
Close


Dim_Emp_Durations
EMP_ID
Num Companies Worked
Total Working Years
Training Times Last Year
Years At Company
Years In Current Role
Years Since Last Promotion
Years With Curr Manager
Collapse
Fact_Emp_Salary
Daily Rate
EMP_ID
Hourly Rate
Monthly Income
Monthly Rate
Num Companies Worked
Percent Salary Hike
Standard Hours
Collapse
Dim_Emp_HRMS
Attrition
Business Travel
CF_age band
CF_attrition label
Department
emp no
EMP_ID
Job Level
Job Role
Collapse
Dim_Emp_Rating
EMP_ID
Environment Satisfaction
Job Involvement
Job Satisfaction
Performance Rating
Relationship Satisfaction
Stock Option Level
Work Life Balance
Collapse
Dim_Emp_Info
Age
CF_age band
Education
Education Field
EMP_ID
Gender
Marital Status
Collapse
1
1
1
1
1
1
1
1

SECTION 2

Data Visualization:

We have answered business questions using below visuals:

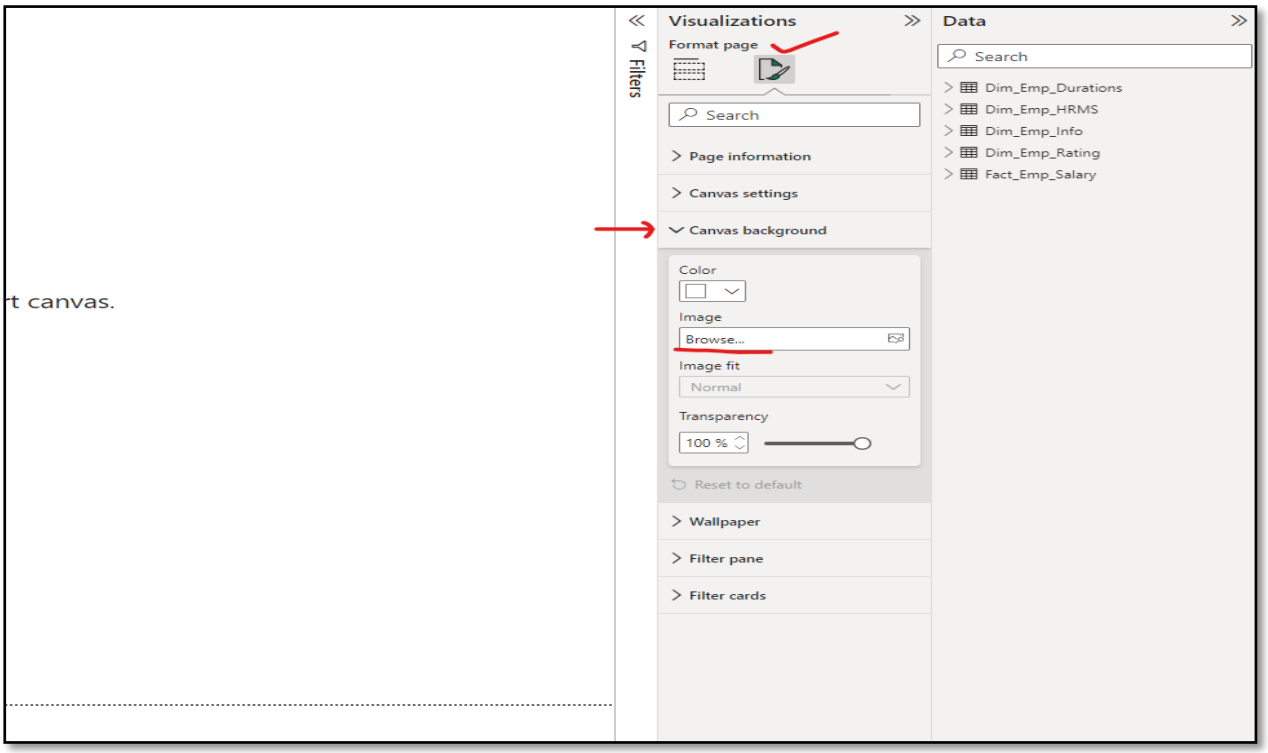
Measure:

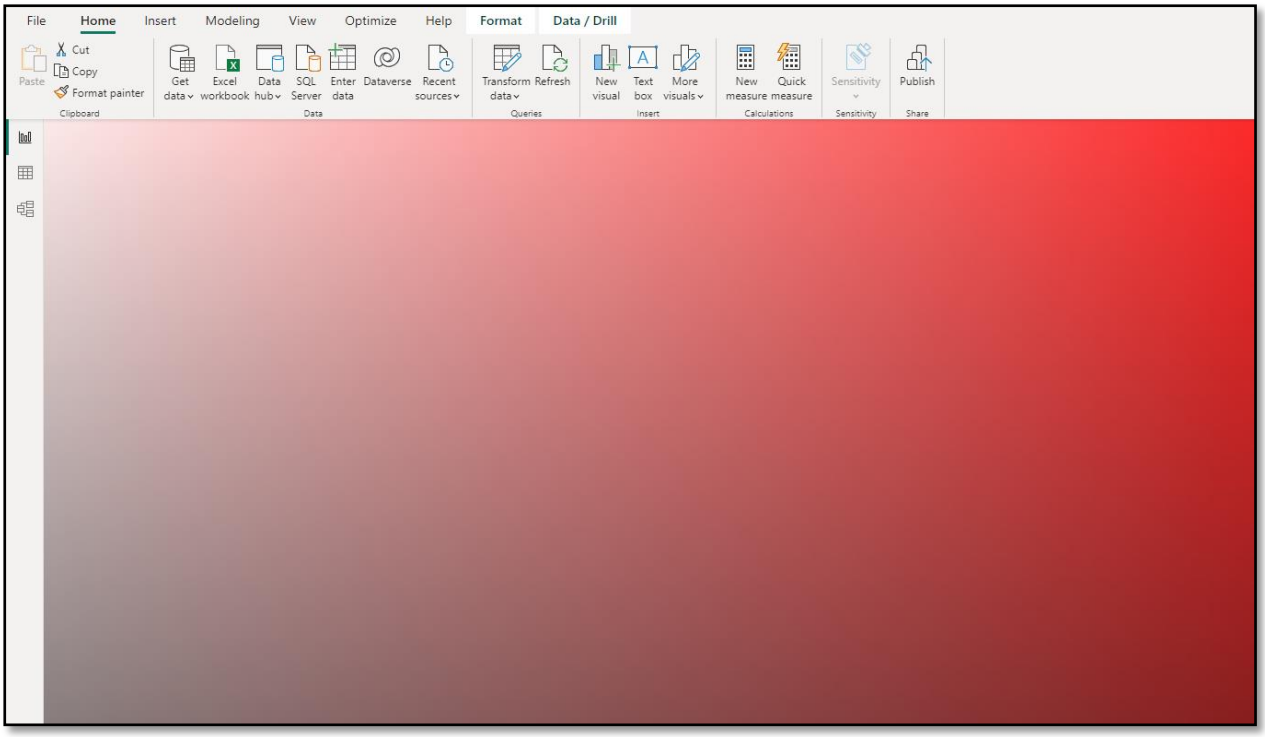
- The measure is a table created by the user according to their needs.

S.N.	Name of measure	DAX Command
1.	total current employee	total current employee = CALCULATE(COUNT('Dim_Emp_HRMS'[CF_attrition label]),CONTAINSSTRING('Dim_Emp_HRMS'[CF_attrition label],"current"))
2.	total env satisfied employee	total env satisfied employee = CALCULATE(COUNT('Dim_Emp_Rating'[Environment Satisfaction]) ,CONTAINSSTRING('Dim_Emp_Rating'[Environment Satisfaction],"4") || CONTAINSSTRING('Dim_Emp_Rating'[Environment Satisfaction],"3")||CONTAINSSTRING('Dim_Emp_Rating'[Environment Satisfaction],"5"))
3.	total female	total female = CALCULATE(COUNT('Dim_Emp_Info'[Gender]), CONTAINSSTRING('Dim_Emp_Info'[Gender],"Female"))
4.	total job satisfied employee	total job satisfied employee = CALCULATE(COUNT('Dim_Emp_Rating'[Job Satisfaction]), CONTAINSSTRING('Dim_Emp_Rating'[Job Satisfaction],"4") || CONTAINSSTRING('Dim_Emp_Rating'[Job Satisfaction],"3"))
5.	total last year promoted	total last year promoted = CALCULATE(COUNT('Dim_Emp_Durations'[Years Since Last Promotion]), CONTAINSSTRING('Dim_Emp_Durations'[Years Since Last Promotion],"1"))
6.	total maried employee	total maried employee = CALCULATE(COUNT('Dim_Emp_Info'[Marital Status]), CONTAINSSTRING('Dim_Emp_Info'[Marital Status],"married"))
7.		total work life balance employee = CALCULATE(COUNT('Dim_Emp_Rating'[Work Life Balance]), CONTAINSSTRING('Dim_Emp_Rating'[Work Life Balance],"4") ||

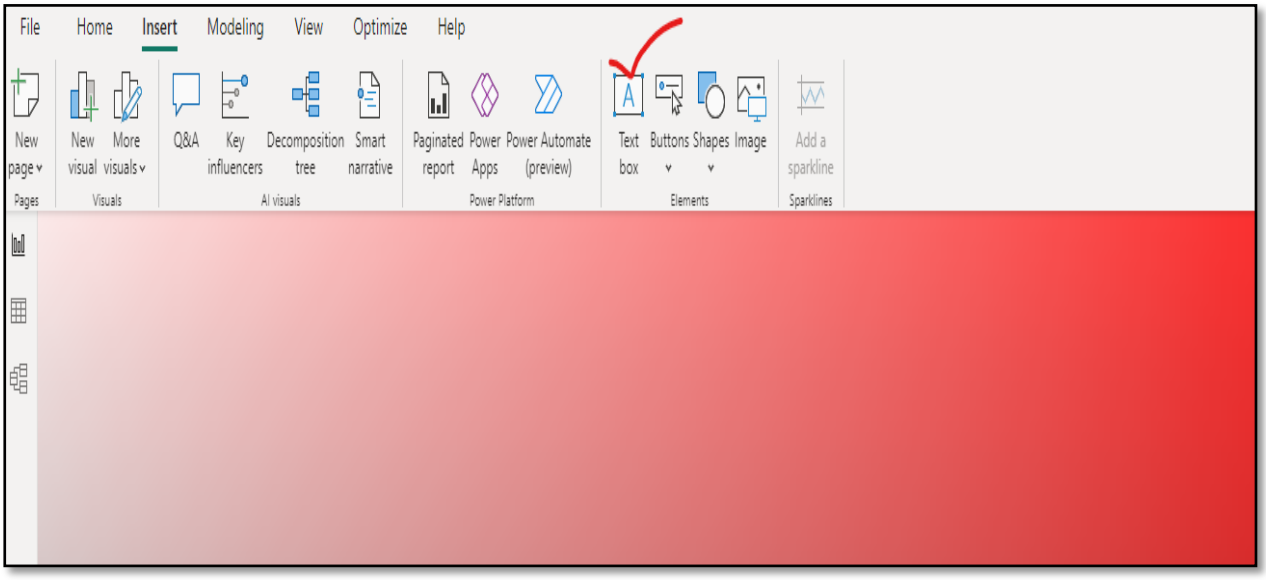
	total work life balance employee	CONTAINSSTRING('Dim_Emp_Rating'[Work Life Balance],"3"))

background:

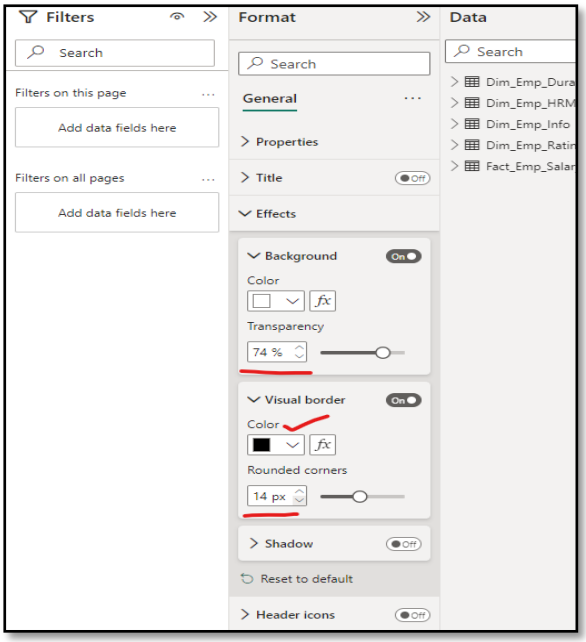


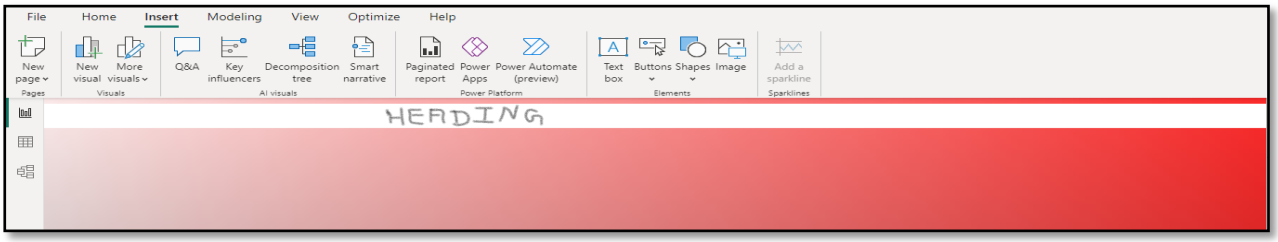

File
Home
Insert
Modeling
View
Optimize
Help
Format
Data / Drill
Paste
Cut
Copy
Format painter
Clipboard
Get data
Excel workbook
Data hub
SQL Server
Enter data
Dataverse
Recent sources
Data
Transform data
Refresh
Queries
New visual
Text box
More visuals
Insert
New measure
Quick measure
Calculations
Sensitivity
Publish
Share

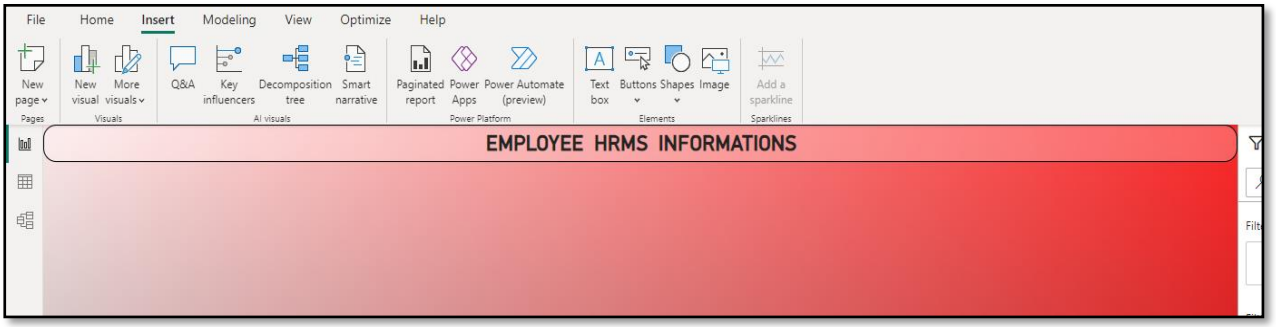
heading:


File
Home
Insert
Modeling
View
Optimize
Help
New page
Pages
New visual
More visuals
Visuals
Q&A
Key influencers
Decomposition tree
Smart narrative
AI visuals
Paginated report
Power Apps
Power Automate (preview)
Power Platform
Text box
Buttons
Shapes
Image
Elements
Add a sparkline
Sparklines

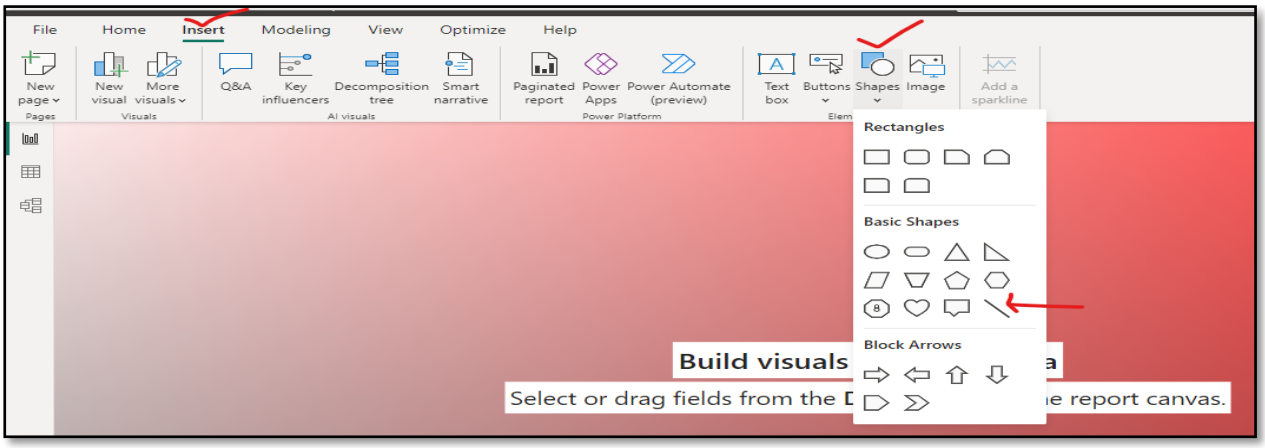
-

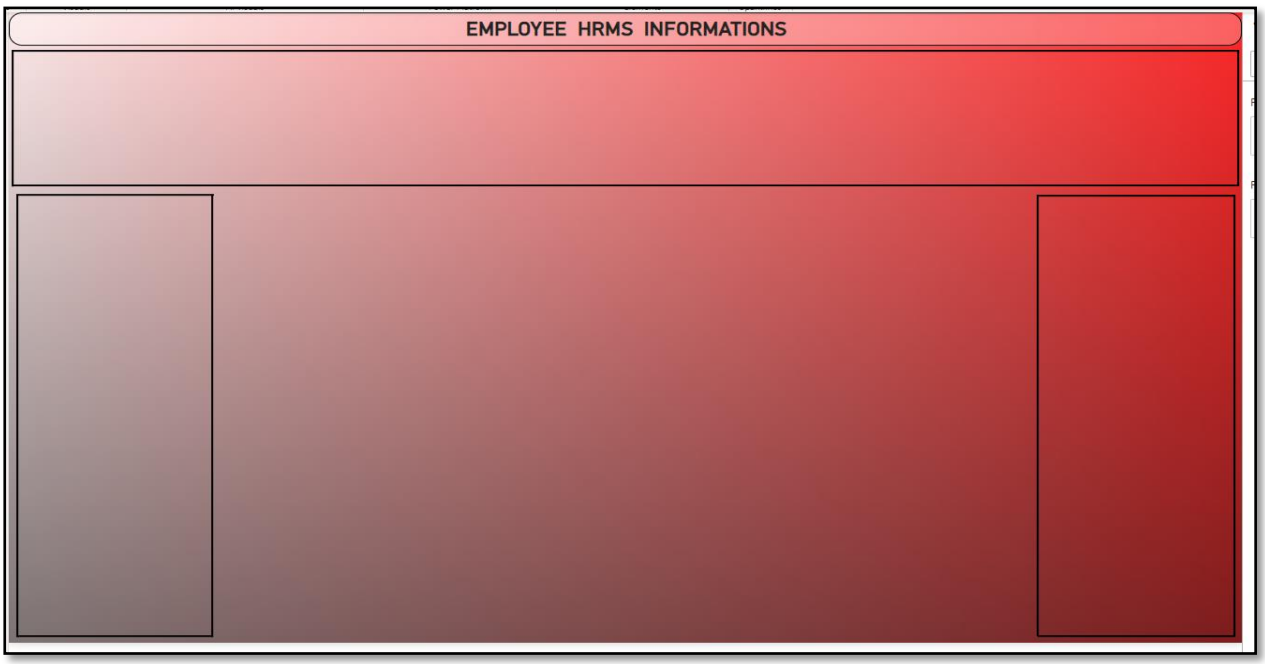

Filters
Search
Filters on this page
Add data fields here
Filters on all pages
Add data fields here
Format
Search
General
Properties
Title
Off
Effects
Background
On
Color
Transparency
74 %
Visual border
On
Color
Rounded corners
14 px
Shadow
Off
Reset to default
Header icons
Off
Data
Search
Dim_Emp_Dura
Dim_Emp_HRM
Dim_Emp_Info
Dim_Emp_Ratin
Fact_Emp_Salar

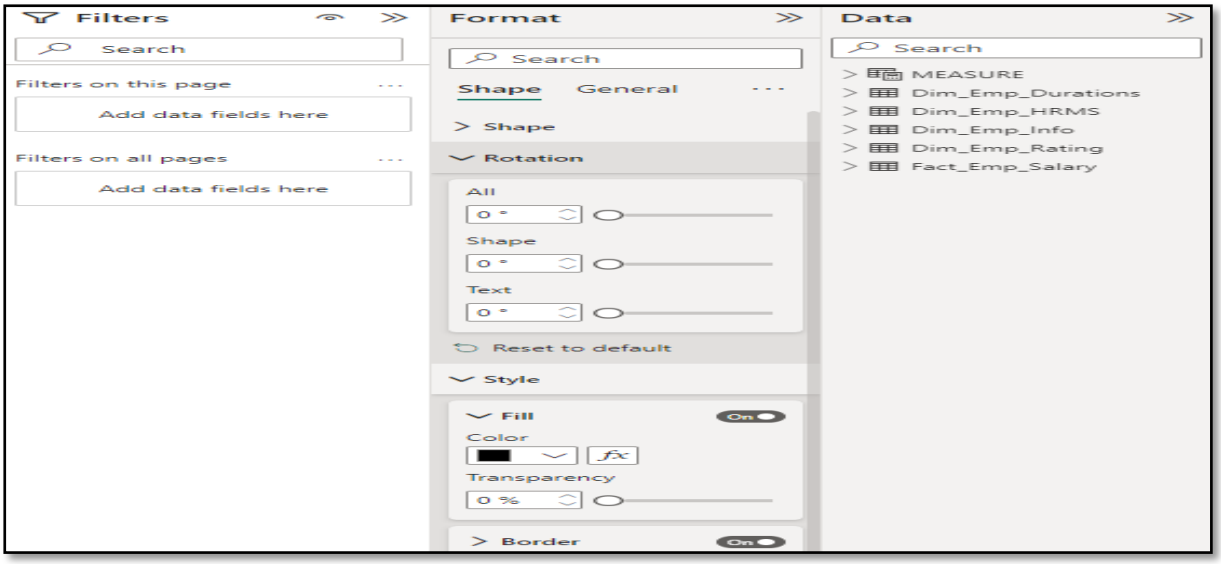

File
Home
Insert
Modeling
View
Optimize
Help
New page
New visual
More visuals
Q&A
Key influencers
Decomposition tree
Smart narrative
Paginated report
Power Apps
Power Automate (preview)
Text box
Buttons
Shapes
Image
Add a sparkline
Pages
Visuals
AI visuals
Power Platform
Elements
Sparklines
HEADING


File
Home
Insert
Modeling
View
Optimize
Help
New page
New visual
More visuals
Q&A
Key influencers
Decomposition tree
Smart narrative
Paginated report
Power Apps
Power Automate (preview)
Text box
Buttons
Shapes
Image
Add a sparkline
Pages
Visuals
AI visuals
Power Platform
Elements
Sparklines
EMPLOYEE HRMS INFORMATIONS

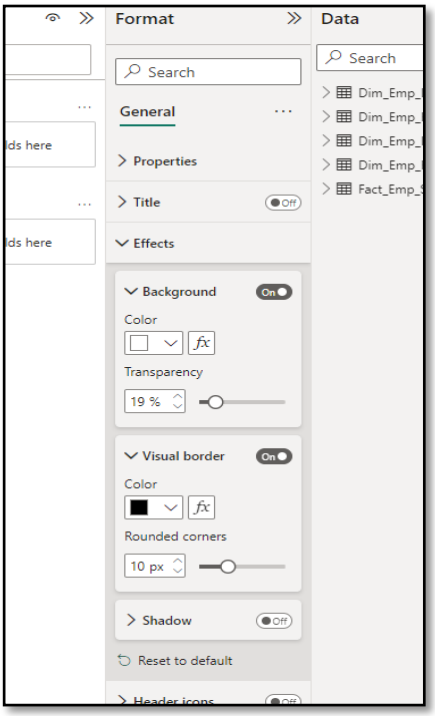
Adding Blocks:

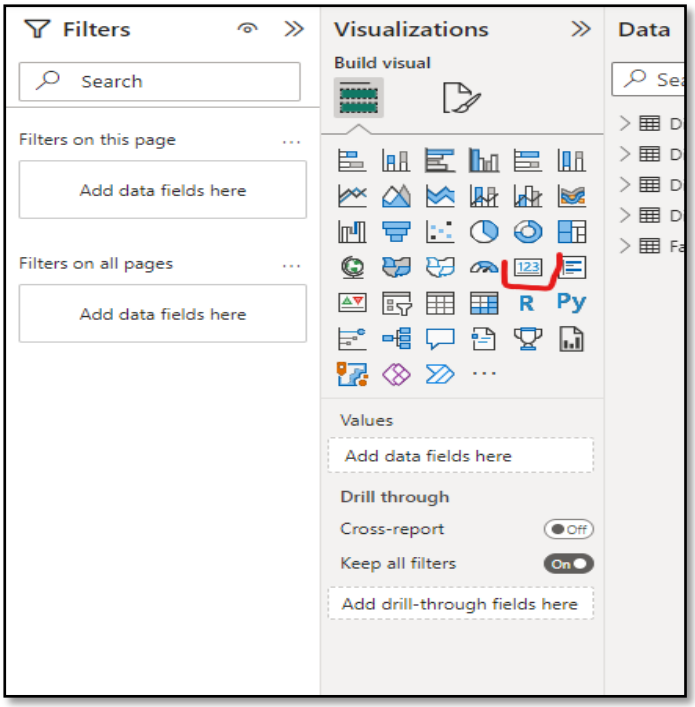


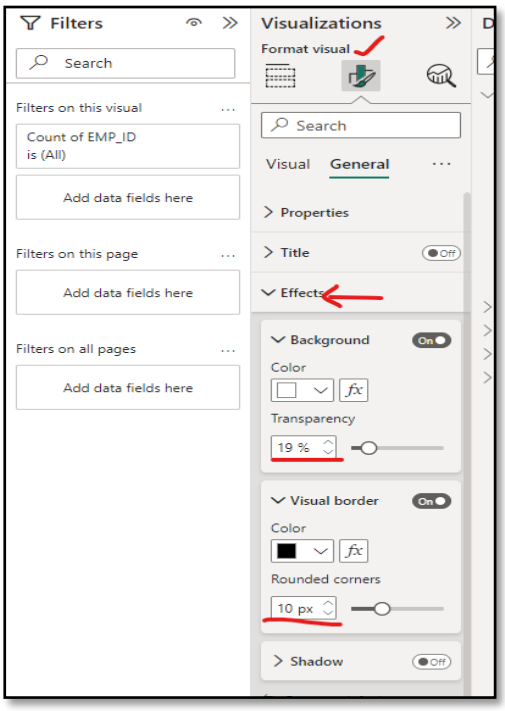




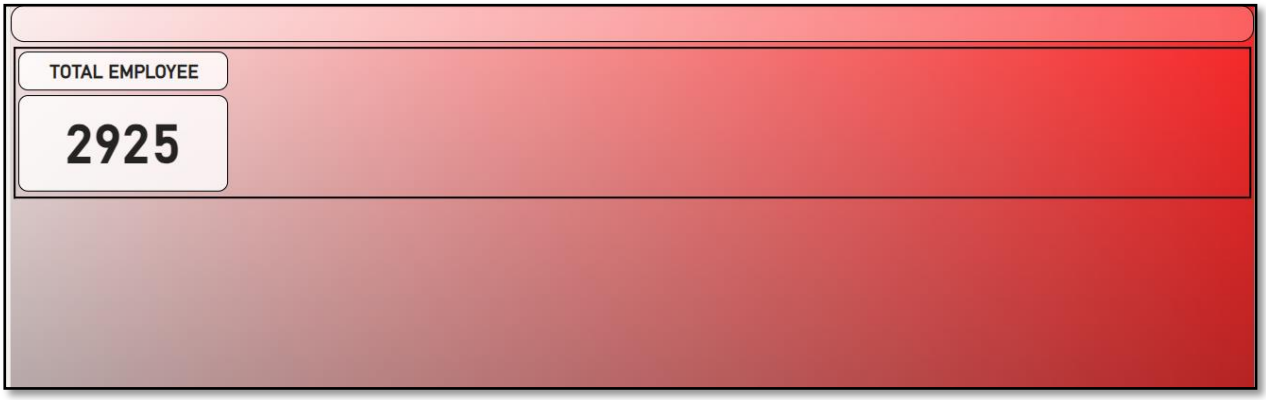
Insert label cards:



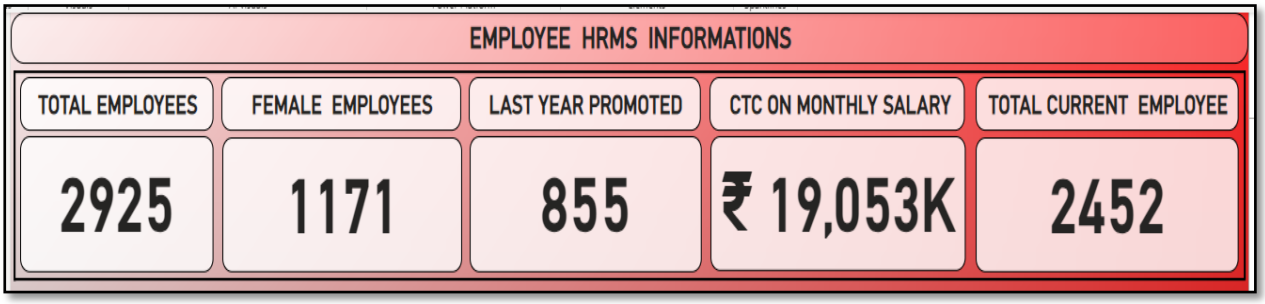

Filters
Search
Filters on this page
Add data fields here
Filters on all pages
Add data fields here
Visualizations
Build visual
Values
Add data fields here
Drill through
Cross-report
Off
Keep all filters
On
Add drill-through fields here
Data


Filters
Search
Filters on this visual
Count of EMP_ID
is (All)
Add data fields here
Filters on this page
Add data fields here
Filters on all pages
Add data fields here
Visualizations
Format visual
Search
Visual
General
Properties
Title
Off
Effects
Background
On
Color
Transparency
19 %
Visual border
On
Color
Rounded corners
10 px
Shadow
Off

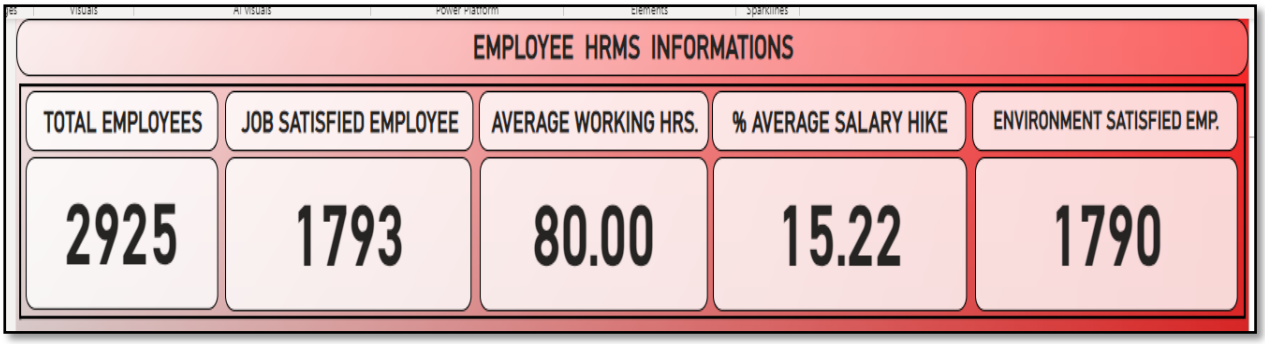
Below slide shows the number of total employee in company which is around 2925 -



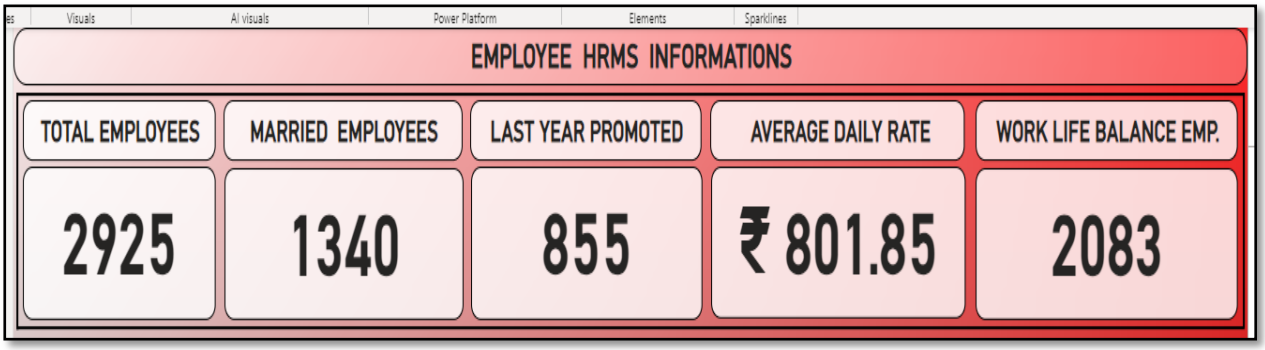
- multiple card
  Below slide shows number of cards having details about employee HRMS such as – total number of employee (2925), total number of female employee (1171), last year promoted employee(855), CTC on monthly salary(19,053K) and last one is total number of current employee which is 2452 -



In this representation number of total employee with number of employee satisfied (1793) is shown. Beside this total number of average working hrs.(80), percentage of salary hike(15.22%) and environment satisfied employee(1790) is shown -



In this slide total number of married employees, last year promoted employees, average daily rate and work life balance emp. Shown which is 2925, 1340, 855, 801.85 and 2083 respectively -



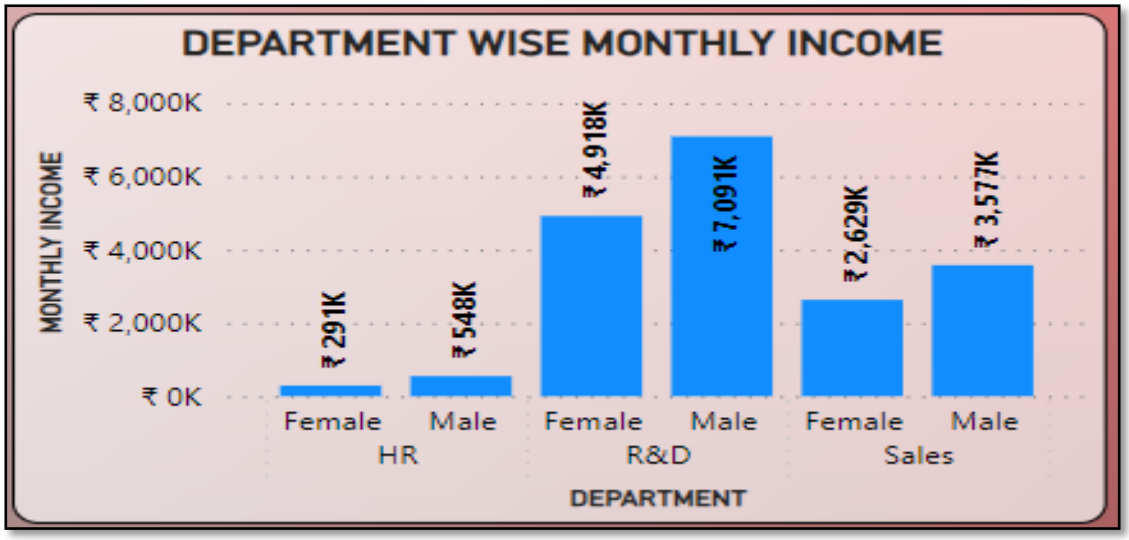
Visualization:

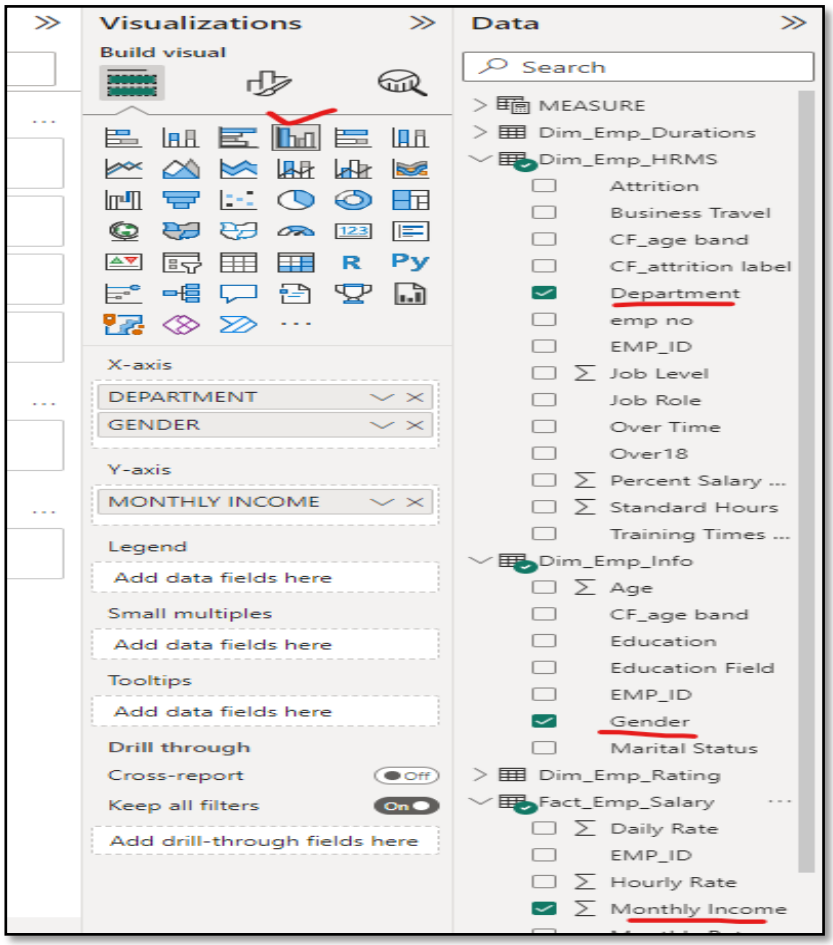
Clustered column chart-

- X-axis: department and gender
- Y-axis: monthly income

  In this clustered column chart department wise monthly income is shown. According to this chart in the R&D department the monthly income of female and male employees are – 4918 and 7091K respectively which is highest than other departments.

  X-axis shows the department gender and Y-axis shows the monthly income -



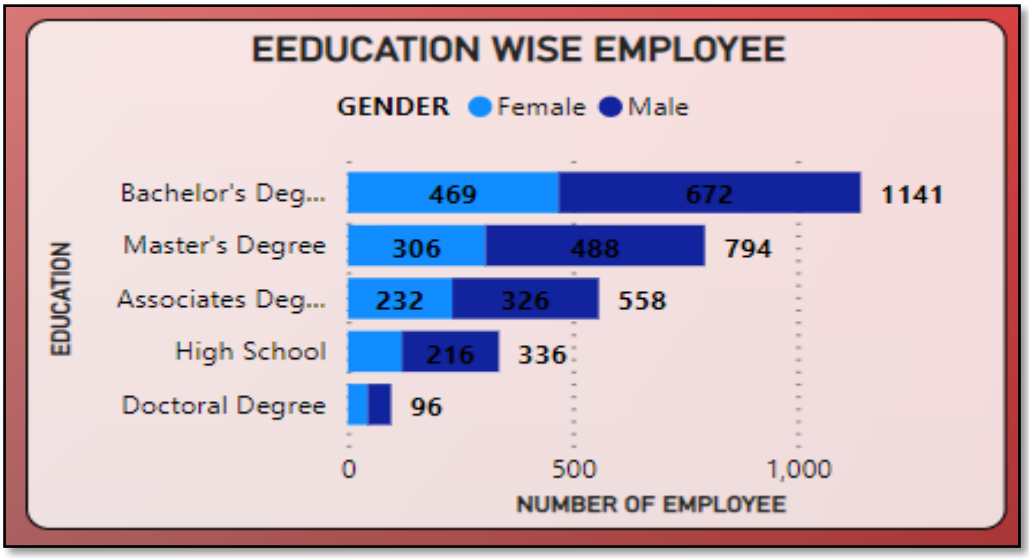


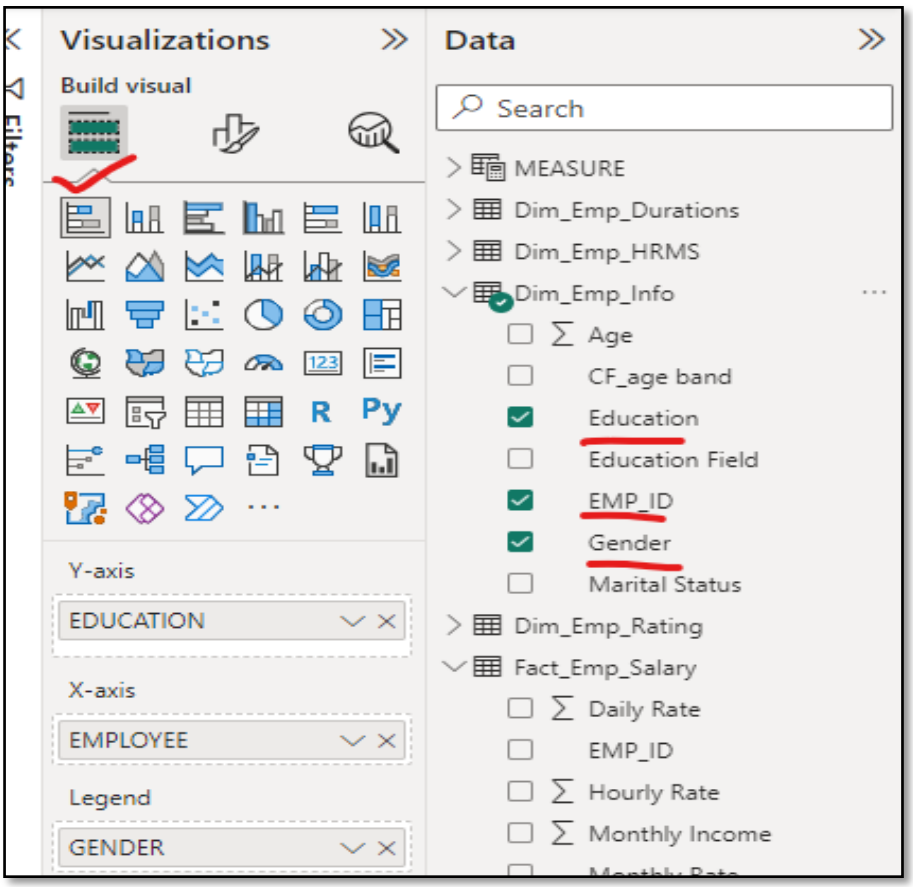
Stacked bar chart-

- X-axis: employee
- Y-axis: education
- Legend: gender

In the below stacked bar chart education wise employee number is shown

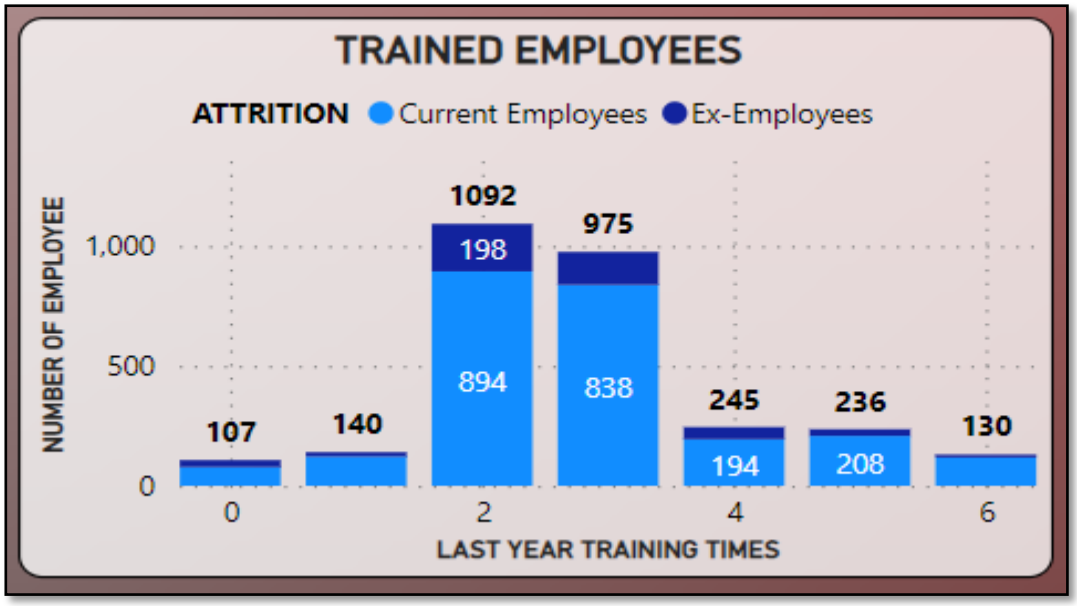
X-axis shows the employee number and Y-axis shows the education. According to this the number of employee having Bachelor's degree is highest than that of others -

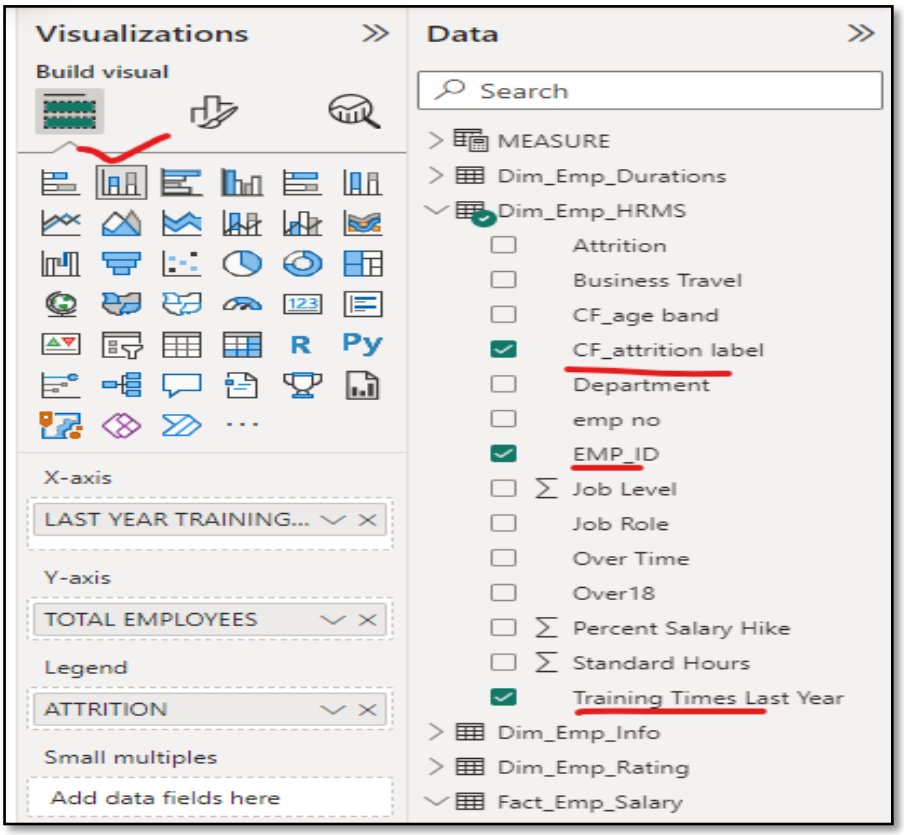




Stacked column chart:

In the below stacked column chart the number of trained employees is shown in which X-axis shows the last year training times and Y-axis shows the attrition -

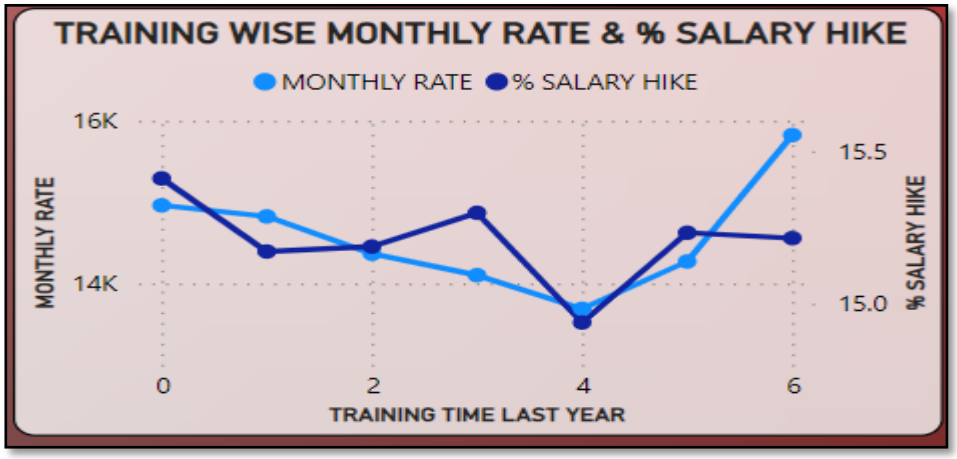


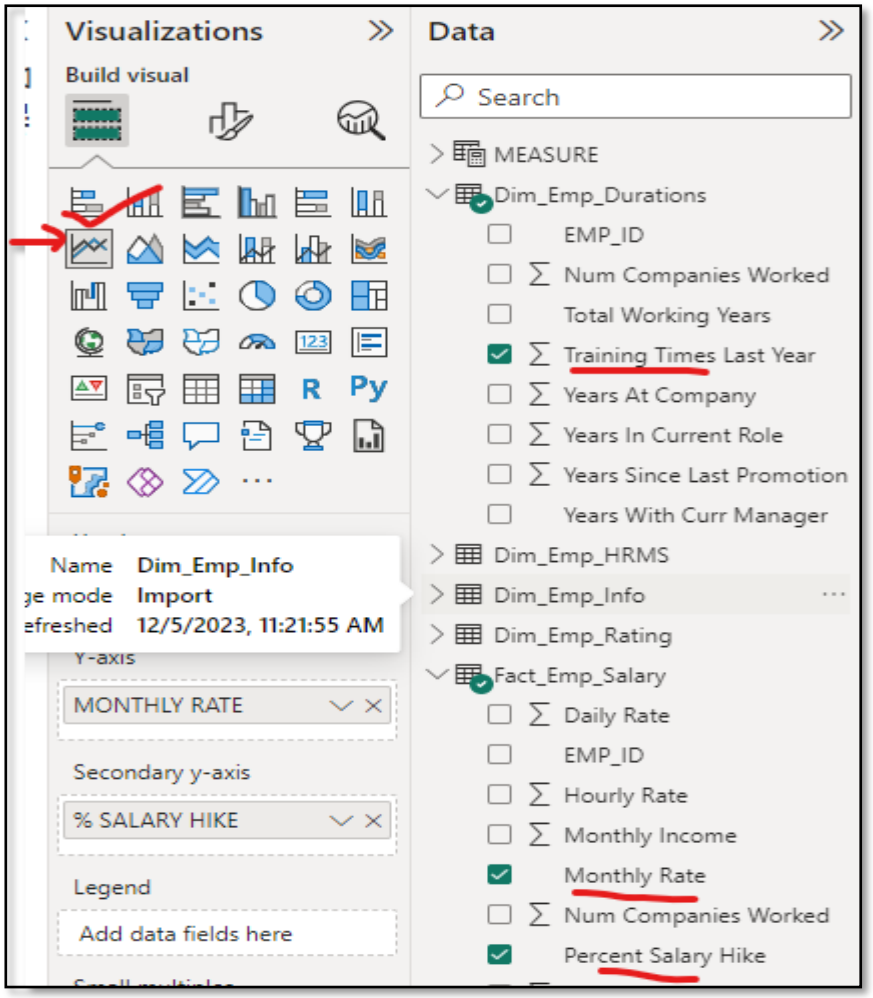


Line chart:

- X-axis: training time last year
- Y-axis: monthly rate
- Secondary y-axis: % salary hike

In the given line chart the training wise monthly salary hike and monthly rate is shown. According to given representation the salary hike with monthly rate is highest for those employees having training time 6. X-axis shows the training time last year and Y-axis shows the monthly rate with light blue color -

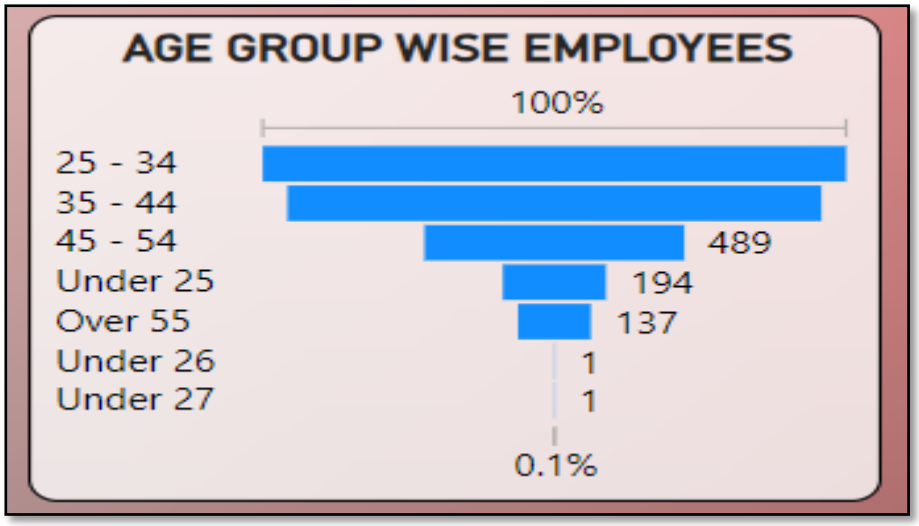


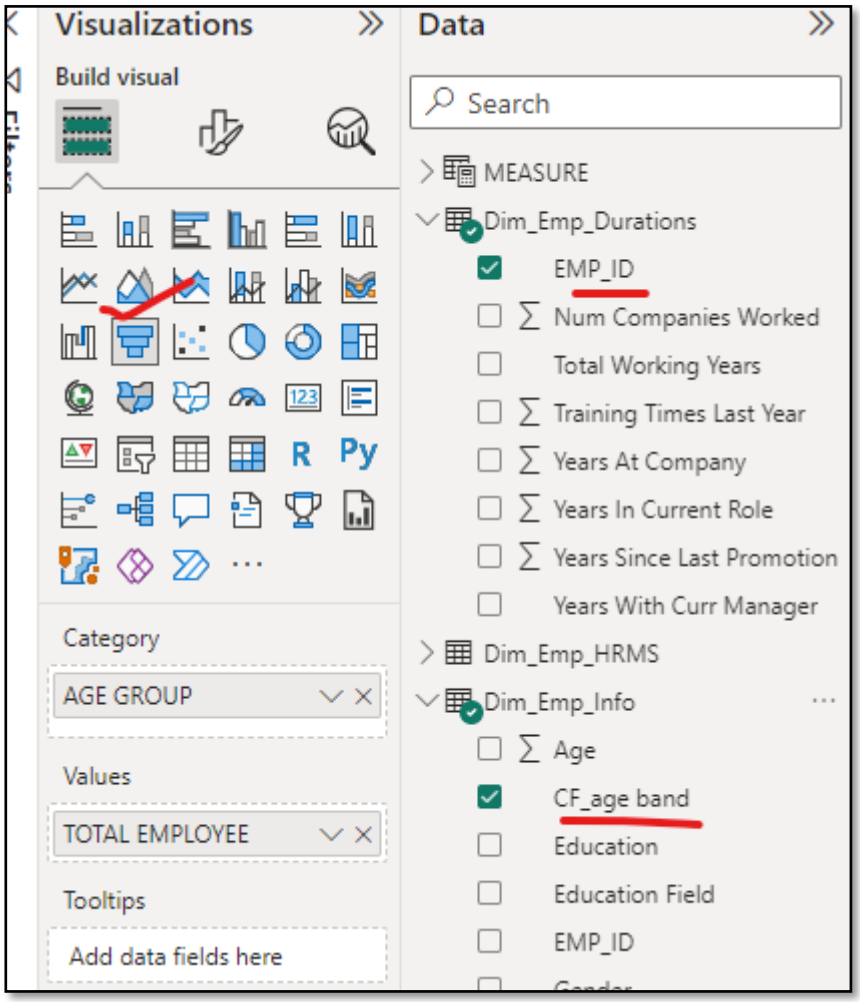


Funnel:

- Category: age group
- Values: total employee

This is a funnel chart representation of age group wise employees. In the below chart, the number of employees having age group 25-34 is highest -

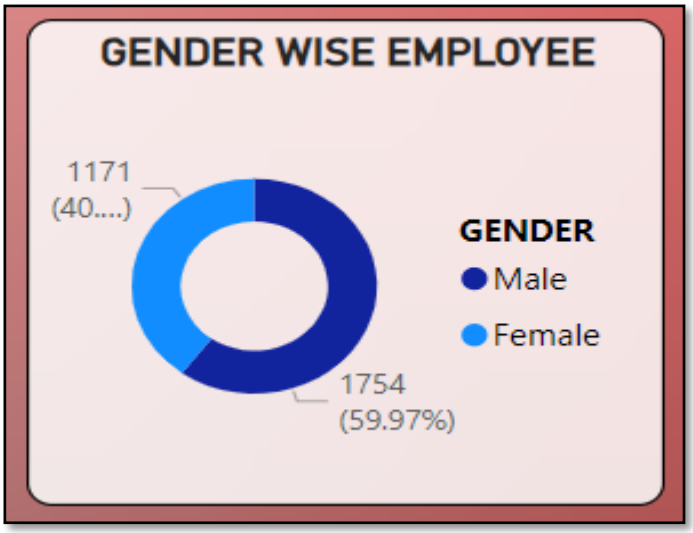


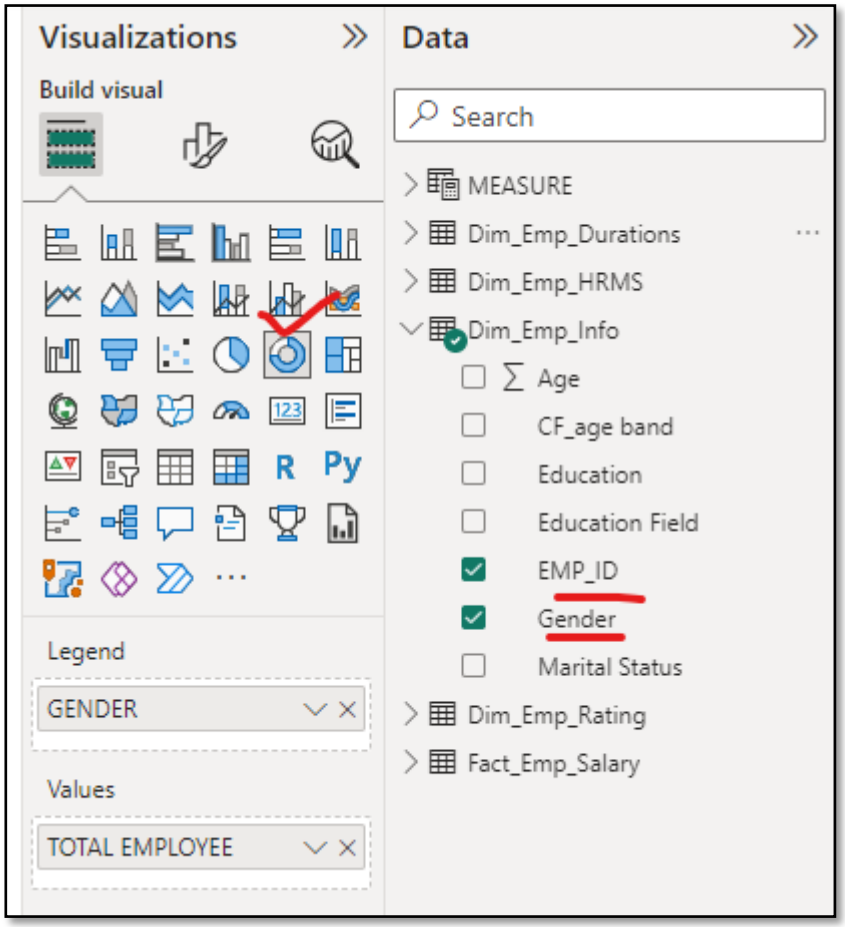


Donut chart:

- Legend: gender
- Values: total employee

Below donut chart represents gender wise employees number. According to this chart the number of male employees is higher than that of female which is 1754 (59.97%) of total employees -

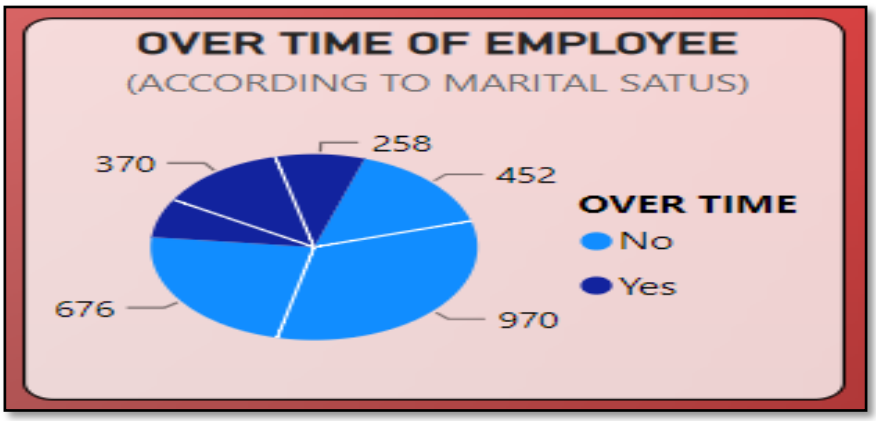


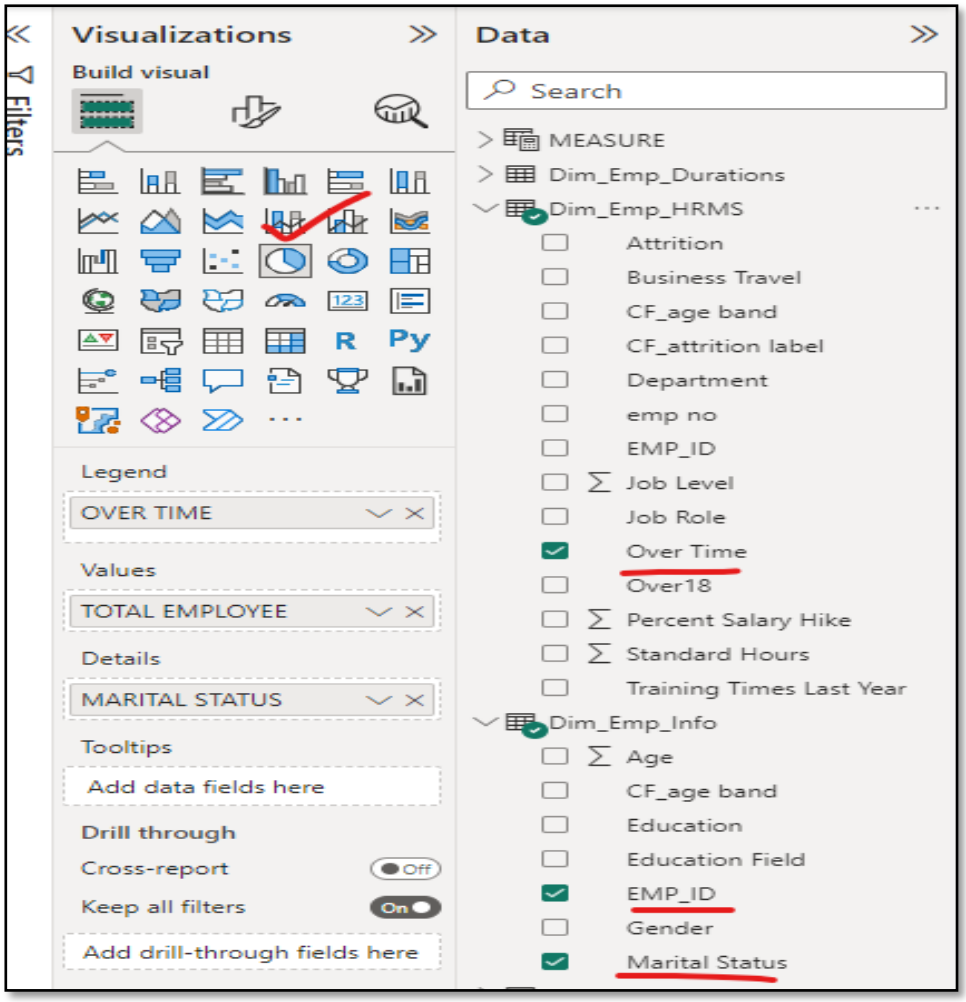


Pie chart

- Legend: over time
- Values: total employee
- Details: marital status

This chart is known as pie chart, here it is used to shows over time of employees. Among the employees who worked overtime, the highest number were from married employees.

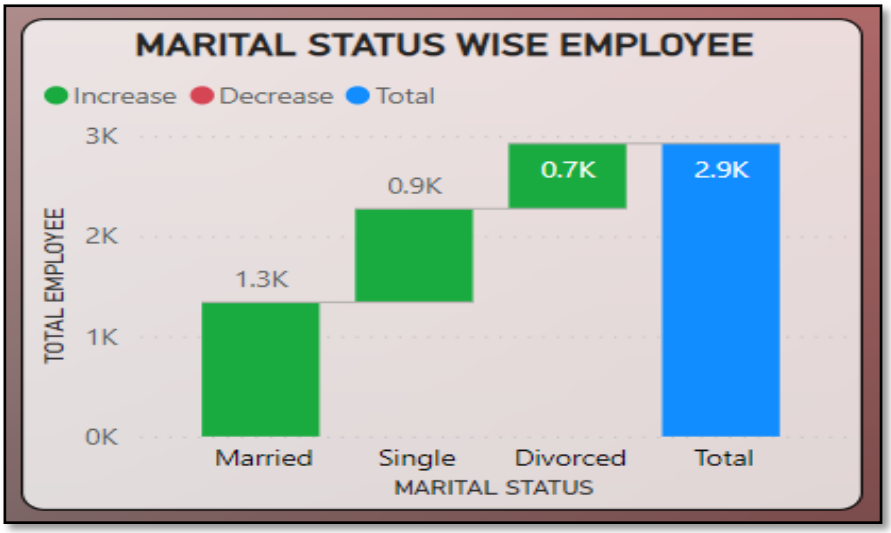


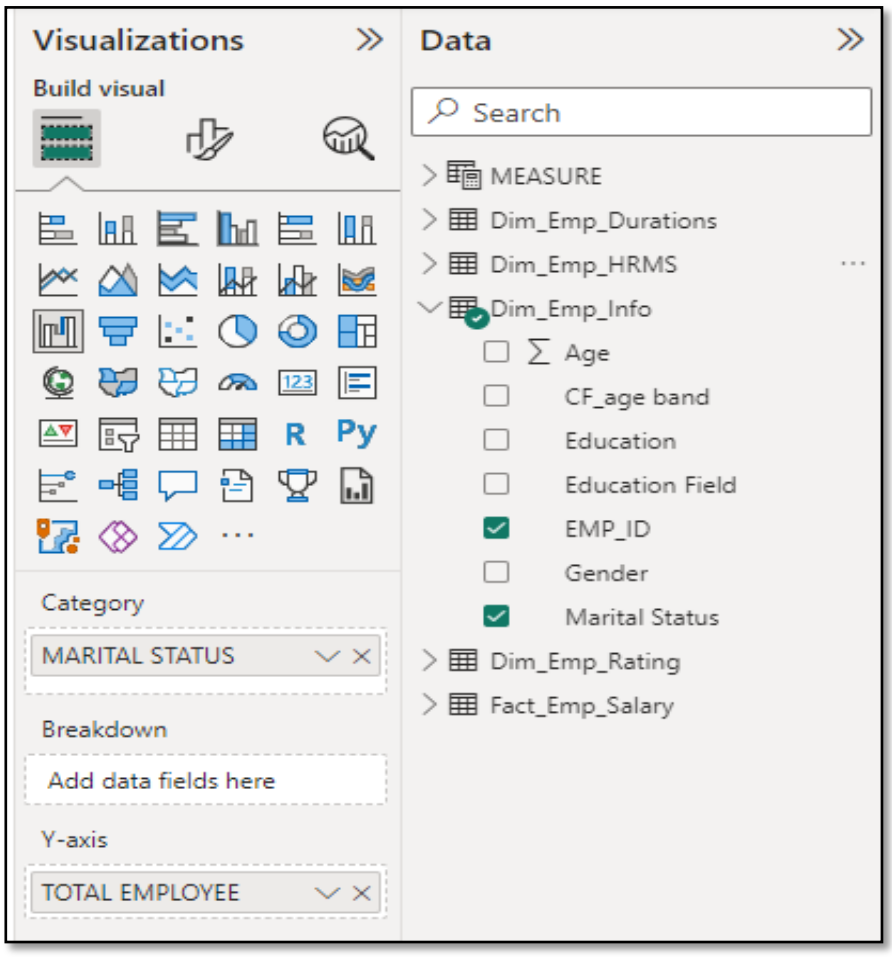


Water fall chart:

- Category: marital status
- Y-axis: total employee

Below water fall chart shows the employee number according to marital status. In which Y-axis shows the total employee. According to this chart the number of married employee is highest than that of others -

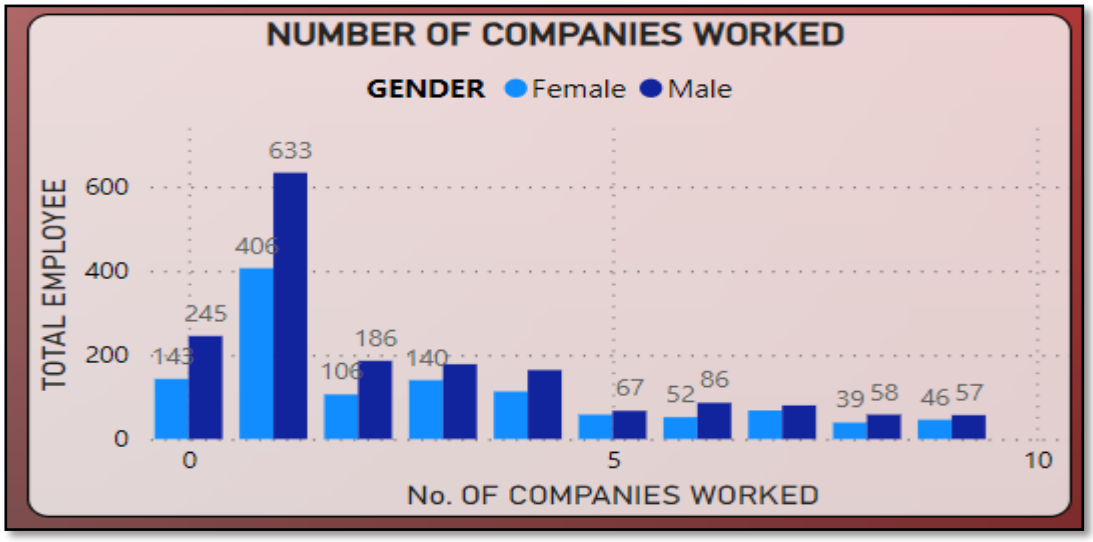


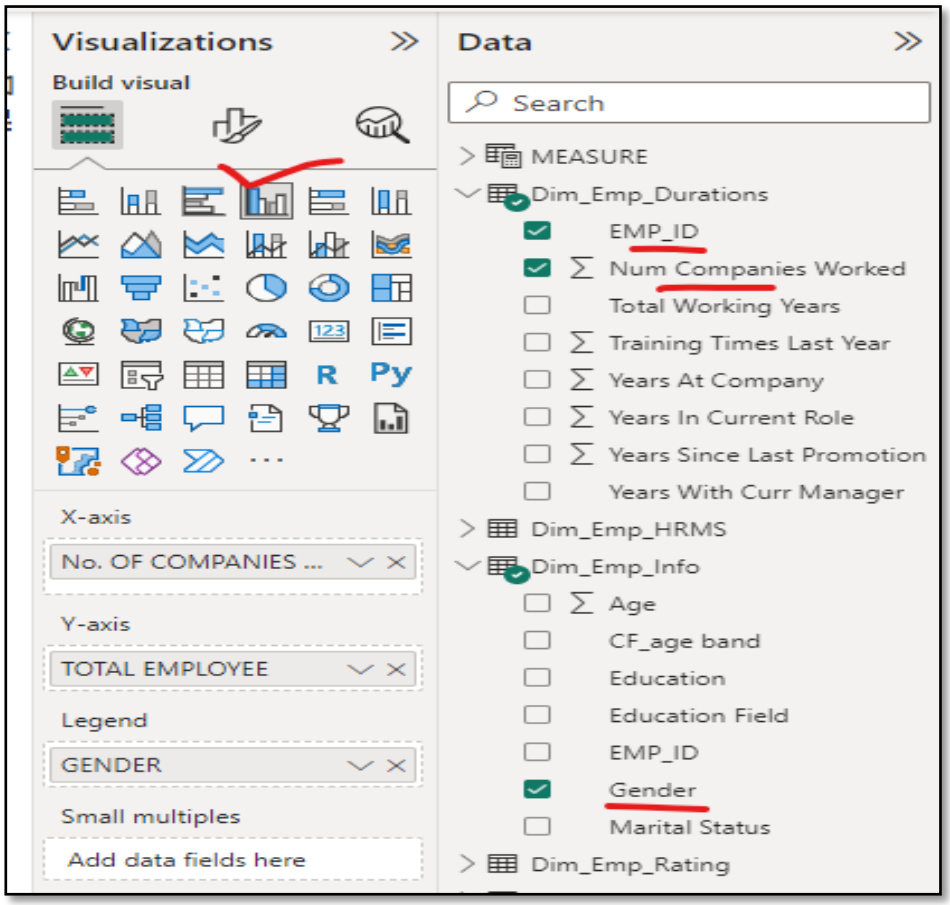


Clustered column chart:

- X-axis: number of company worked
- Y-axis: total employee
- Legend: gender

Below clustered column chart shows the number of companies worked by employees. In this chart X-axis shows the number of company worked and Y-axis shows the total employee -



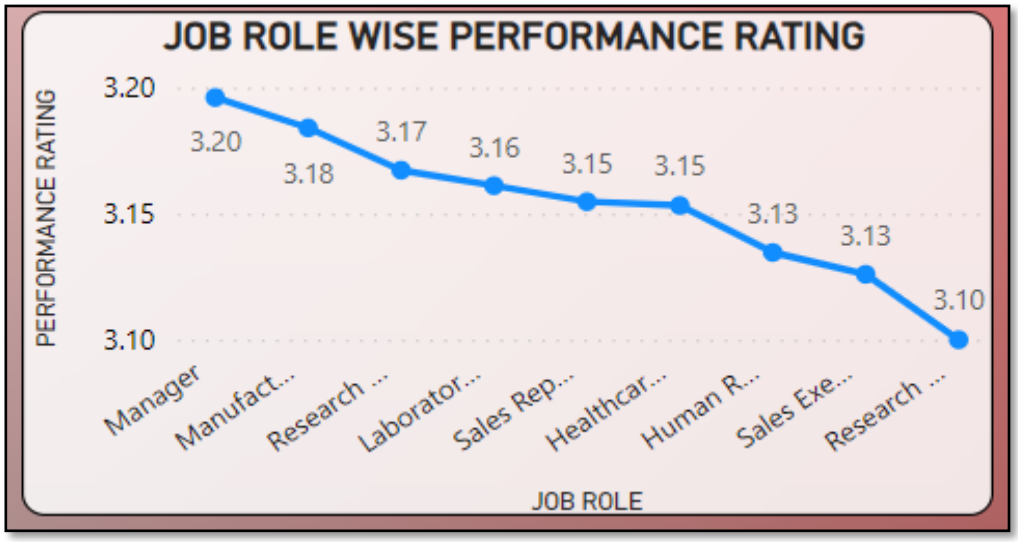


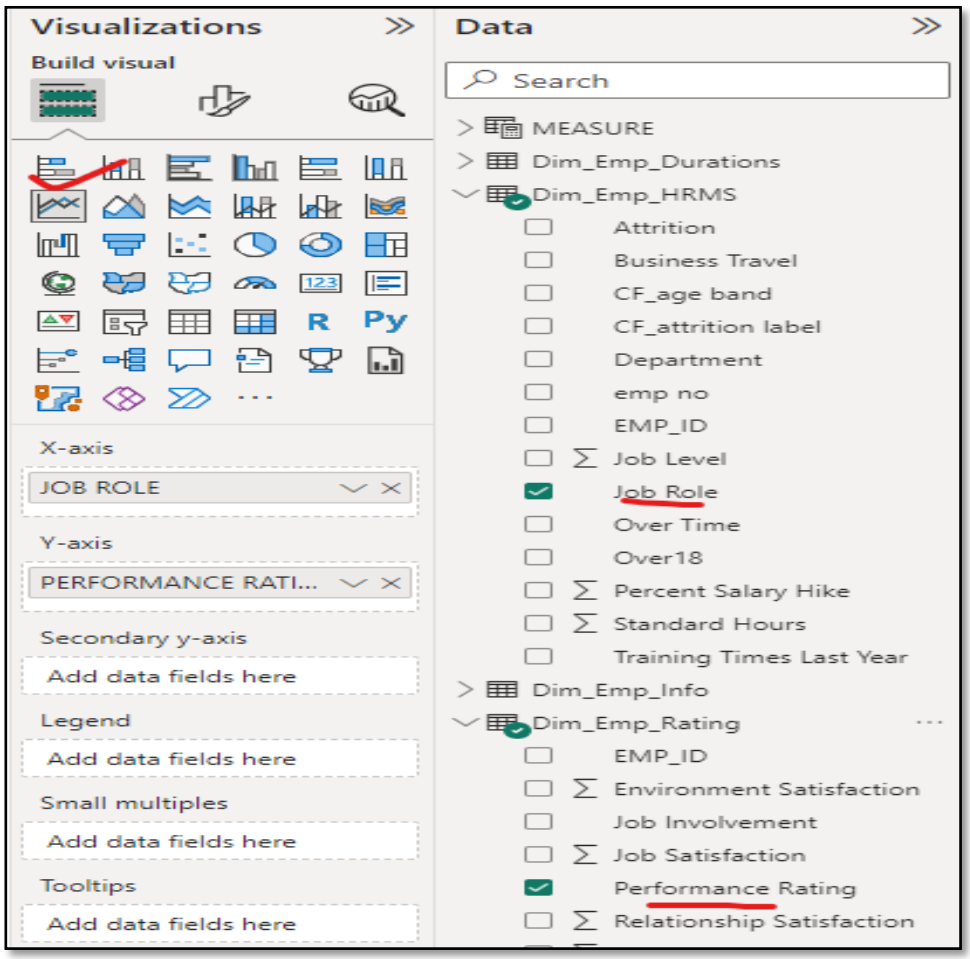
Line chart:

- X-axis: job role

- Y-axis: performance rating

This is a type of line chart in which performance rating of employee is shown according to job roles. According to below representation the performance rating of Manager is highest than that of others -

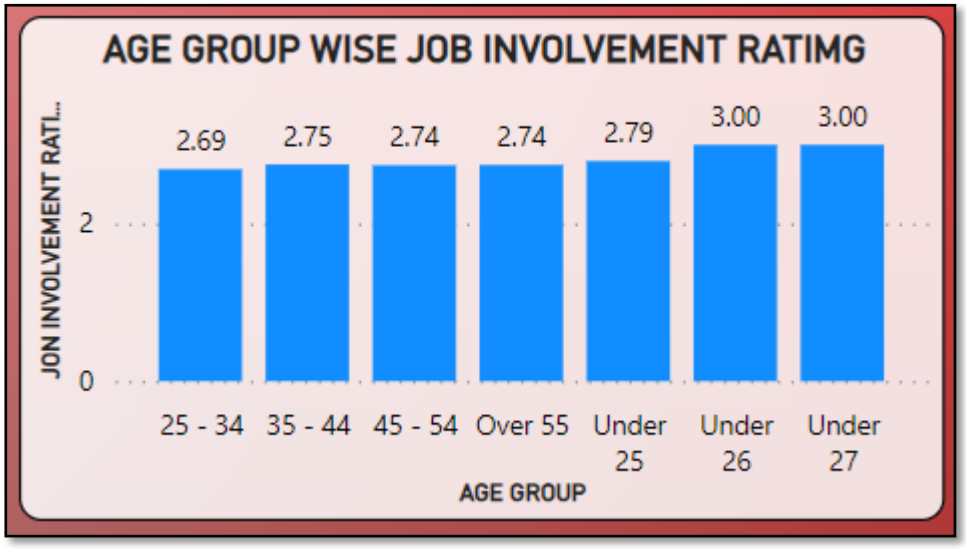


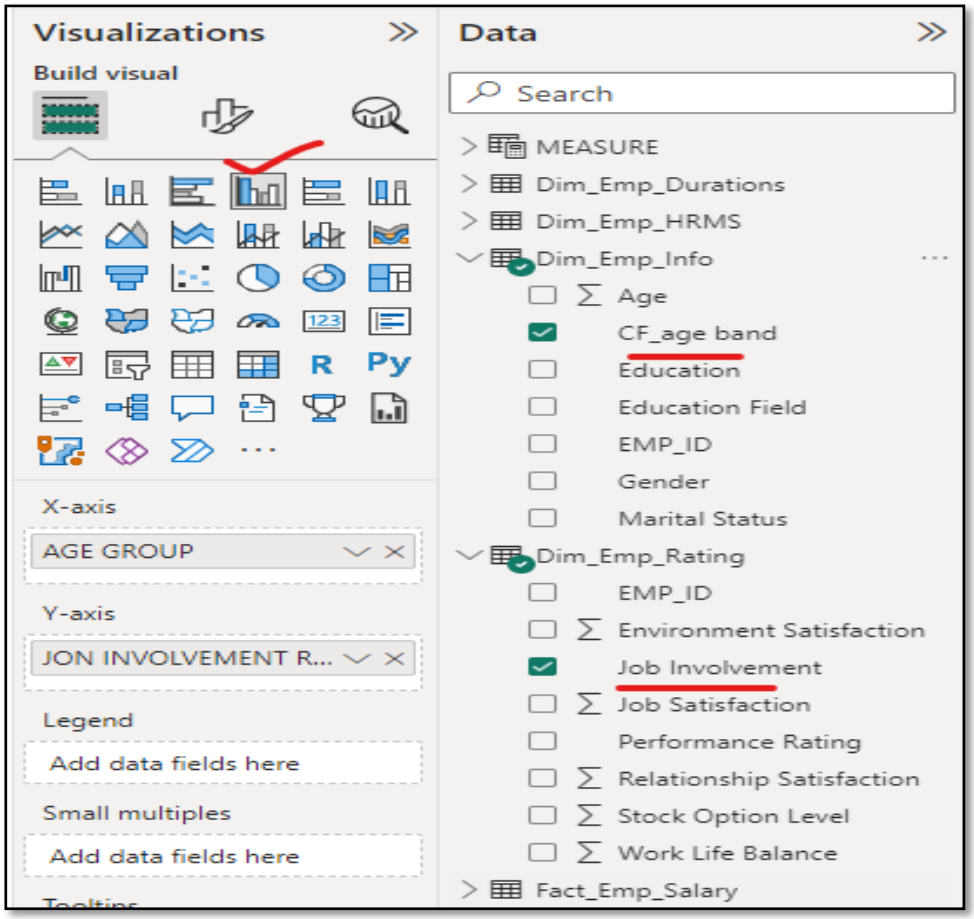


Clustered column chart:

- X-axis: age group
- Y-axis: job involvement rating

In this clustered column chart the job involvement ratings according to age group is shown. X-axis shows the age group and Y-axis shows the job involvement. The ratings of employees under 27 is highest than that of other employees -

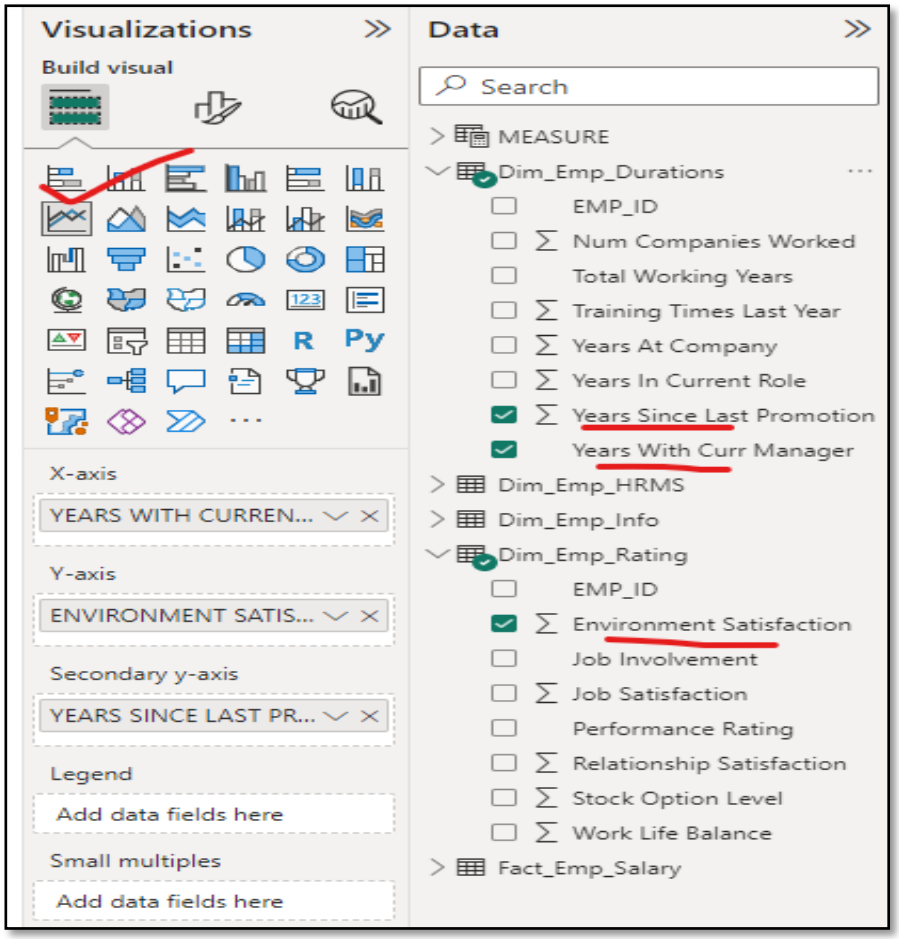




Line chart:

- X-axis: training time last year
- Y-axis: monthly rate
- Secondary y-axis: % salary hike

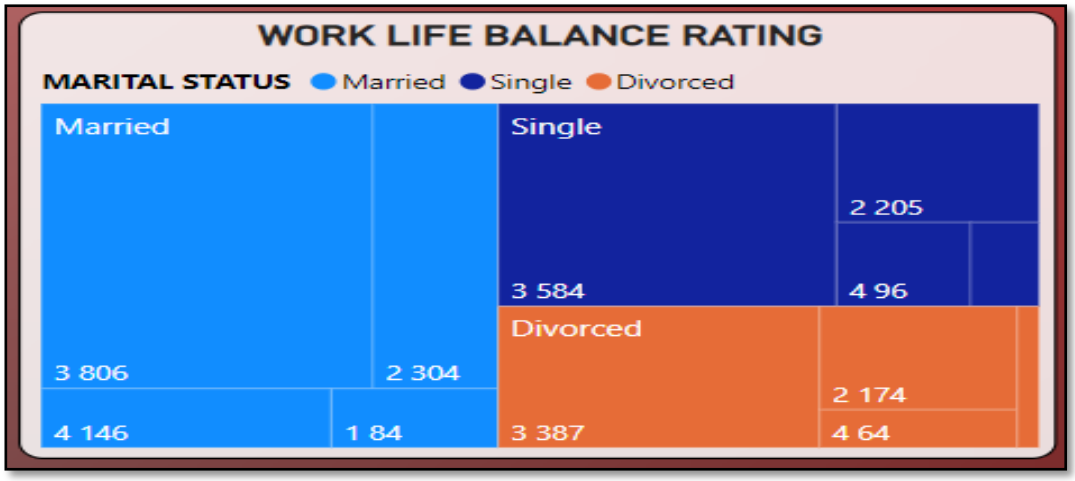
Below line chart shows the employee satisfaction ratings with light blue color. In which X-axis shows the training time last year and Y-axis shows the monthly rate -

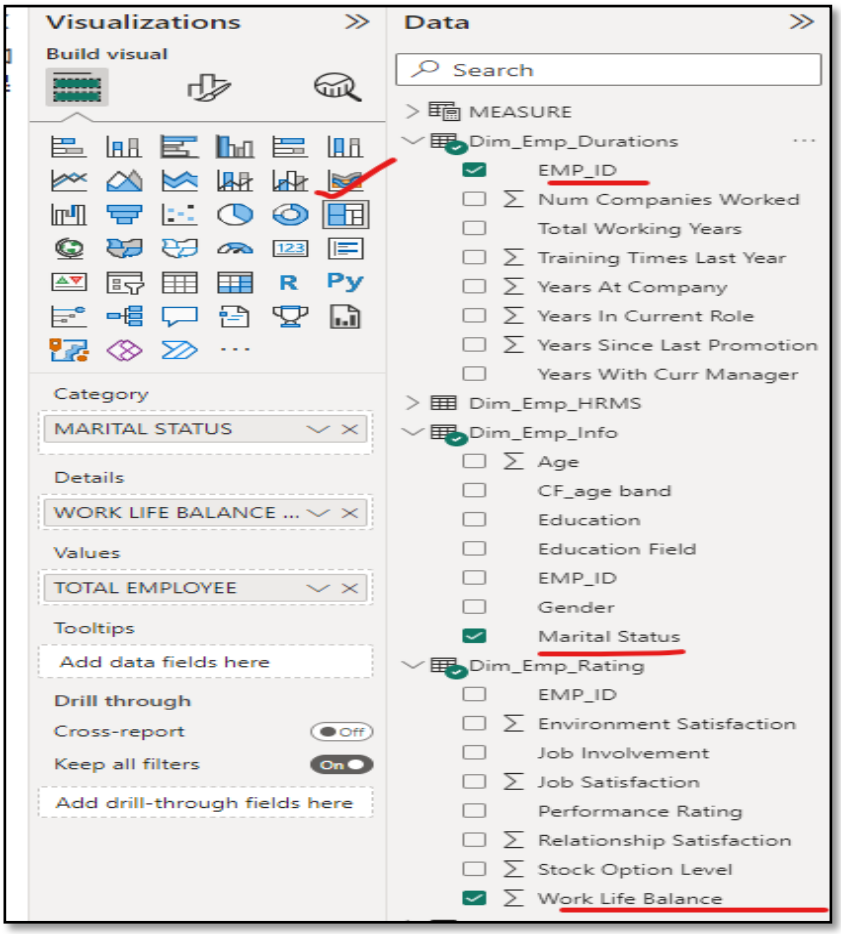


Tree-map:

- Category: marital status
- Details: work life balance rating
- Values: total employee

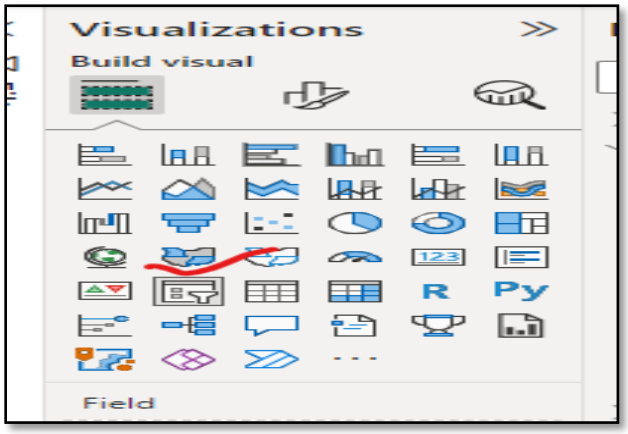
This is a tree map shows the work life balance ratings. According to this married employees is highest number and they have 3 star ratings -



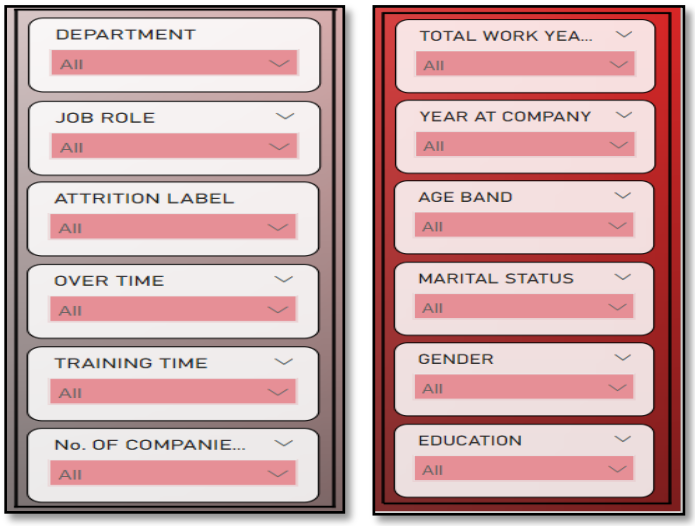


Insert slicer:

- The slicer are the used to filter the data and visuals.
- In the visualization, select the slicer.



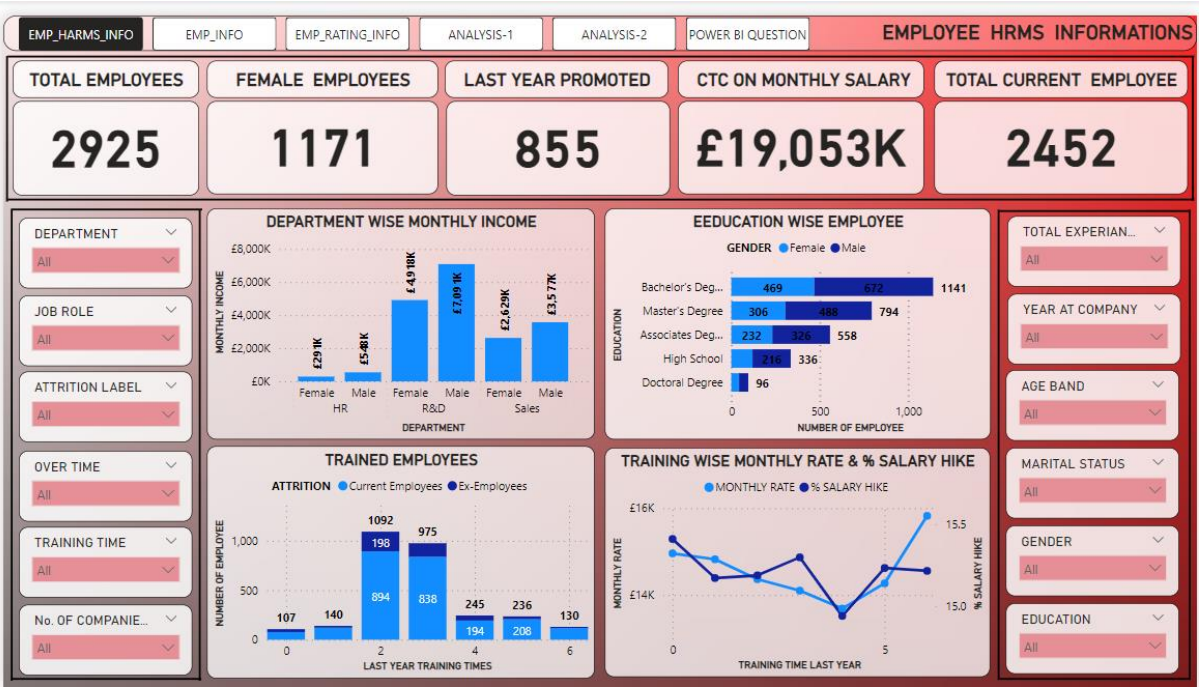
- And insert the required fields.



Final view of pages:

1. **EMP_HARMS_INFO**

This is a final view of HRMS portal represents overall details like – total employees, female employees, last year promoted employees with ctc on monthly salary with total number of current employee is shown with the help of number of charts and graphs -

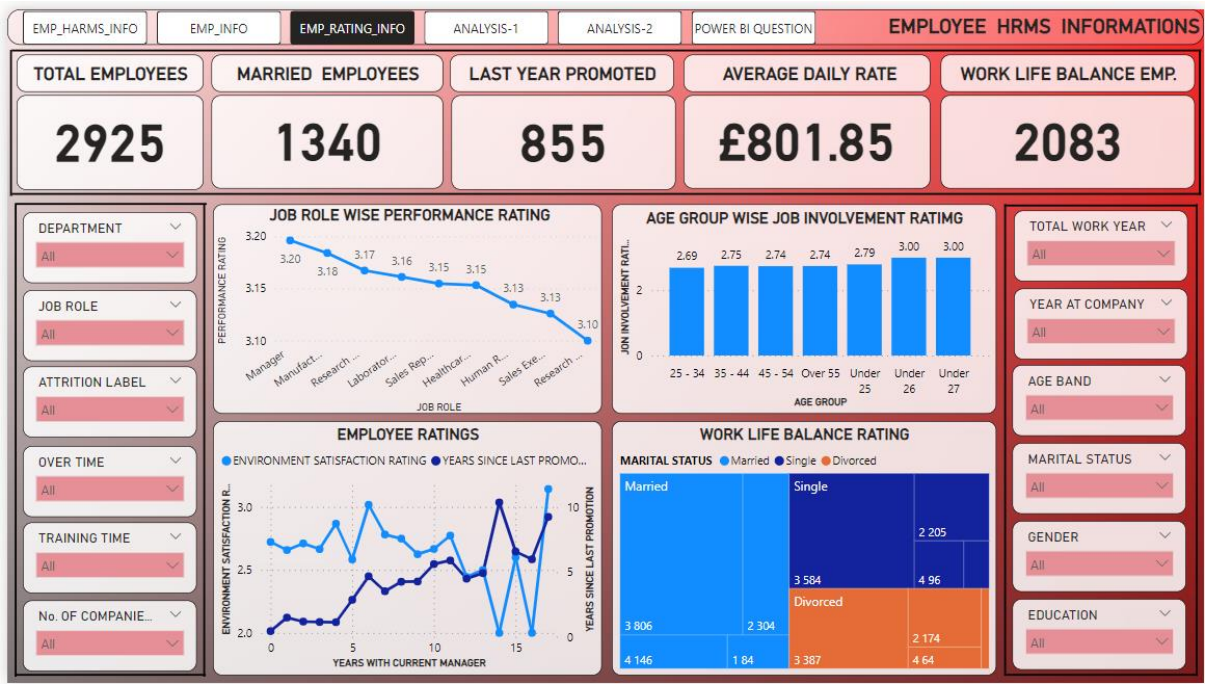


2. EMP_INFO

Below dashboard representation is for employee information only. Here total employees, job satisfied employee, average working hrs., percentage of salary hike with environment satisfied employees is shown -

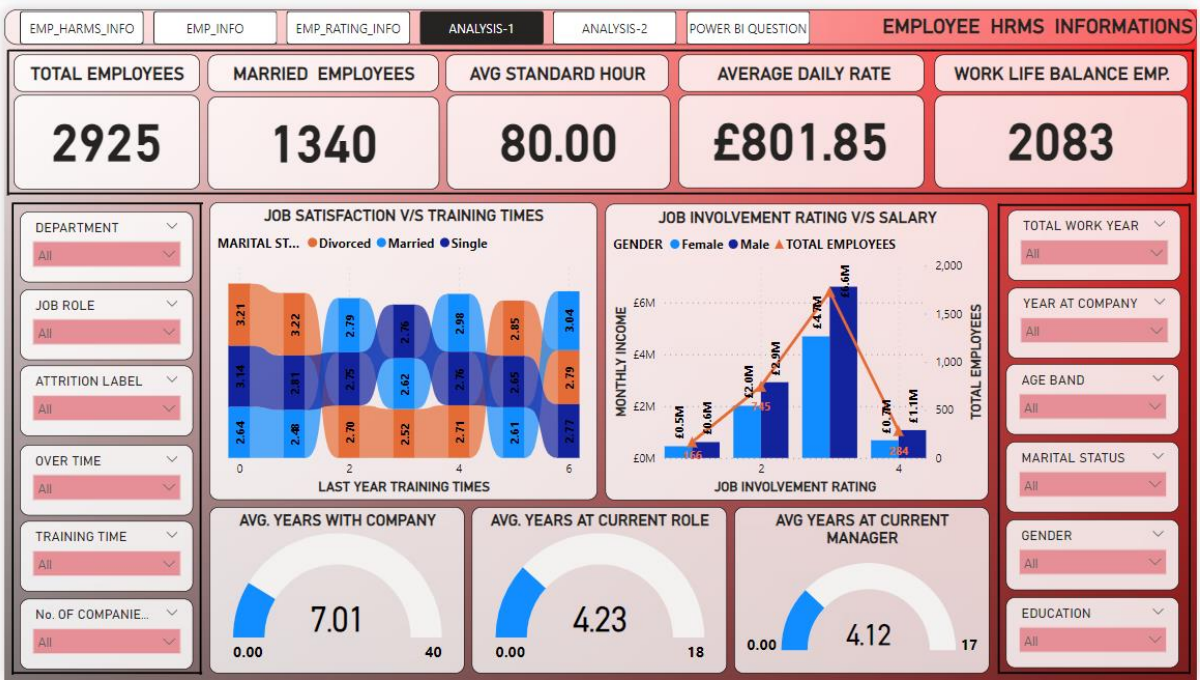
3. EMP_RATING_INFO

In below dashboard, the ratings of employee is shown with the help of number of charts and graphs. Here the total number of employees – 2925, Married employees number – 1340, Last year promoted employees – 855, Average daily rate – 801.85 and work life balance emp. – 2083 is shown -

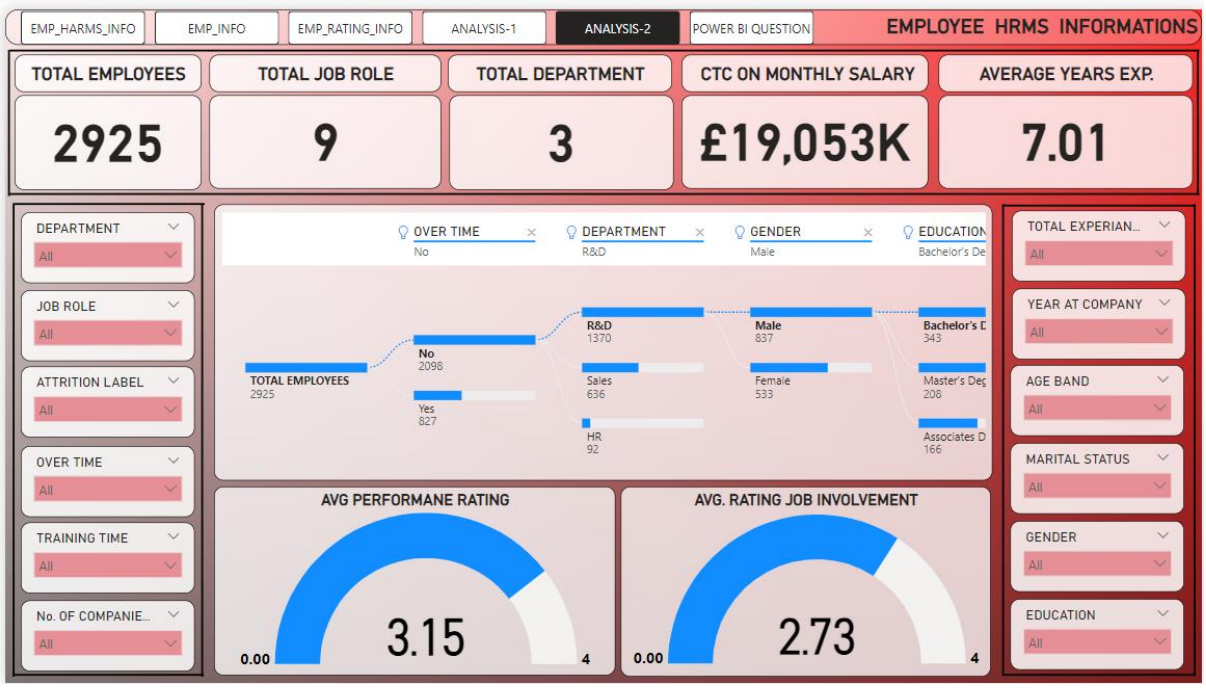


4. ANALYSIS-1

In this dashboard the overall analysis of the data is shown with the help of number of charts and trees
-

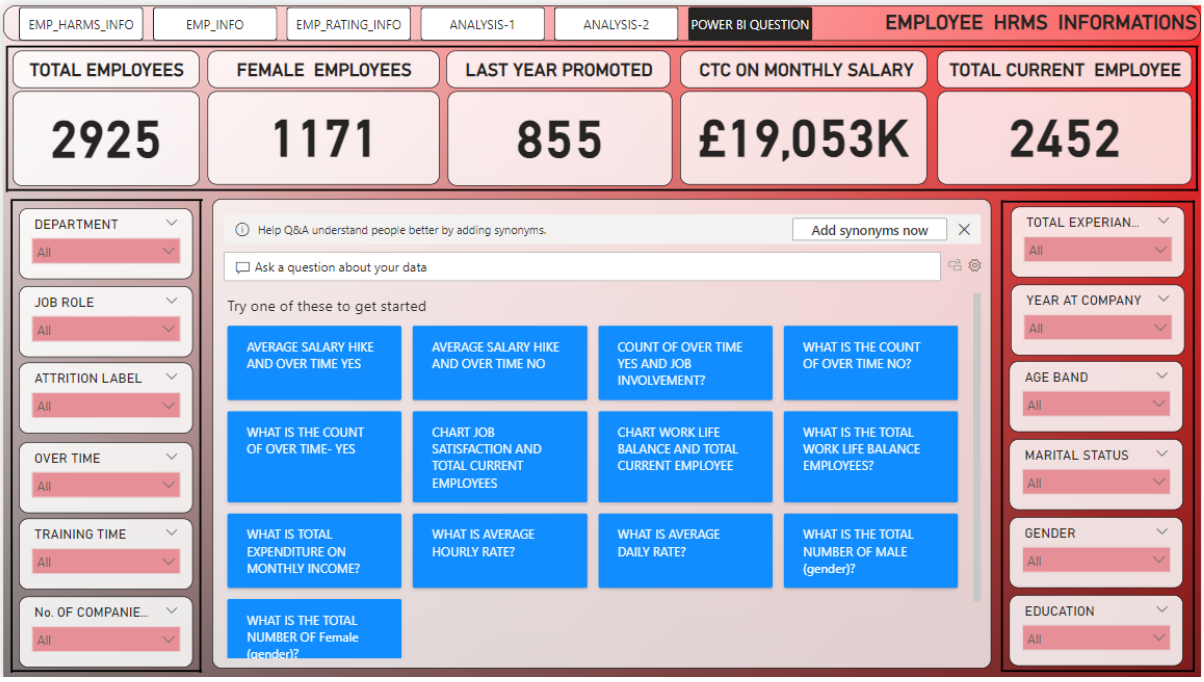


5. ANALYSIS-2



5. POWER BI Question Answer

This dashboard simply displays the questions that arises during the study of the report.



Conclusions:

- The salary of R&D department was the highest.
- The number of employees in the 25-34 age groups is highest.
- 370 married employees worked the most overtime.
- Total number of fresher in the company including male and females are 143+245 = 388
- HR Department had the highest performance rating which is 3.20

Recommendations:

- Employees under 27 should be recognized for having the highest job involvement.
- 370 married employees should be awarded for highest overtime for company.

References:

1. Zhao, J.J., Zhang, Y., Wang, X.C., Wang, X., Zhang, Q., Lu, P., Liu, P.P., Yu, Y.J., Han, L., Zhou, H.N. and Zheng, Q.X., 2022. A new platform for untargeted UHPLC-HRMS data analysis to address the time-shift problem. *Analytica Chimica Acta*, *1193*, p.339393.

2. Mardal, M., Dalsgaard, P.W., Rasmussen, B.S., Linnet, K. and Mollerup, C.B., 2023. Scalable analysis of untargeted LC-HRMS data by means of SQL database archiving. *Analytical Chemistry*, *95*(10), pp.4592-4596.

3. Ivanisevic, J. and Want, E.J., 2019. From samples to insights into metabolism: Uncovering biologically relevant information in LC-HRMS metabolomics data. *Metabolites*, *9*(12), p.308.

4. Nasar, N., Ray, S., Umer, S. and Mohan Pandey, H., 2021. Design and data analytics of electronic human resource management activities through Internet of Things in an organization. *Software: Practice and Experience*, *51*(12), pp.2411-2427.

5. https://www.udemy.com/course/learn_power_bi_for_free/

6. https://www.coursera.org/courses?query=power%20bi