1. How to add new data in Employee Survey excel file

1. The format for the new survey data should be same as the existing data.
2. Open Employee Survey excel file.
3. Add new sheet to the file and name it.
4. Enter data in the sheet.

2. Steps to add year column in Employee Survey excel file

1. Open Employee Survey excel file.
2. Open excel sheet in which year column is to be added.
3. Create new column named "Survey Year" and enter the year of survey. If Survey Year already exists, skip this step.

3. Steps to import Employee Survey file in Power BI

1. Open Power BI Desktop.
2. In Home tab, under Data section click on Excel.
3. Select the excel file to be imported.
4. Once Navigator window opens, select the required excel sheets.
5. Click on Load, after this step the excel sheets are imported.

4. Steps to Prepare data

1. Open Power BI Desktop.
2. In home tab, under the queries section, click on Transform data.
3. After clicking transform data, Power Query Editor window opens.
4. Power Query Editor helps to modify data as per requirement. It has three components - Queries, Table and Query Setting.
5. From Queries, select the table in which modification is to be done. For example, select sheet named "Survey 2020".
6. For steps 7 and 8, if any step is already applied, then skip that step. (All the steps are visible in Applied Steps under Query Settings)
7. Follow the below given steps in sequence:

    i. In home tab, from transform section select "Use First Row as Headers" to make first row as header.
    If this step is already done, it will be shown as "Promoted Headers" in Applied Steps.

ii. Check data type for each row header. To change data type of row header, right click on the header name, select change type and select the required data type.
For example, survey`s response is of whole number type and Designation of Text type.
If this step applied, it will be shown as "Changed Type" in Applied Steps.

iii. "null" values are assigned to the responses which are not answered. To remove null values from response columns, right click on header name and select replace values. Fill values to find as "null" and replace with "0". Click on OK.
If this step is applied, it will be shown as "Replaced Value" in Applied Steps.

iv. Now, the data is prepared according to options (0, 1, 2, 3, 4, 5). To generalize the data by replacing options with their meaning like 5 as "Highly Satisfied", follow step number 8, otherwise skip the step.

8. Follow below given steps in sequence:

    i. Right click on header, for example "q1_a", select "Change type" and make data type as text. Do same for other response headers also.
    ii. Right click on header, for example "q1_a", select "Replace Values" then enter "5" in value to find and "Highly Satisfied" in Replaced with. Do same for values 0, 1, 2, 3, 4.

9. By this step, the data is ready for calculations and creating visuals.

5. Overview of final data

The final data will consist of following columns. Make sure survey data of each year contains all these attributes/column name

Department	q2_d	q5_b	q8_b
Designation	q3_a	q5_c	q8_c
Clinic	q3_b	q6_a	q8_d
q1_a	q3_c	q6_b	q8_e
q1_b	q3_d	q7_a	q9_a
q1_c	q4_a	q7_b	q9_b
q1_d	q4_b	q7_c	q9_c
q2_a	q4_c	q7_d	q9_d
q2_b	q4_d	q7_e	q9_e
q2_c	q5_a	q8_a	Survey Year

6. Steps to prepare list of departments who filled survey

At this step, the final survey data is prepared. To extract list of departments whose employee filled the survey, follow the below given steps.

1. Open Power Query Editor.
2. Create copy of Survey data.
    i. In left pane, under Queries section, Right-click on Survey data.
    ii. Select ‘Duplicate’
    iii. Copy of ‘Survey Data’ is created. Right-click in it.
    iv. Select ‘Rename’ and rename table as ‘Department [Year]’.

    Note: Year value varies as department list is created for each year. So, write year of survey in [Year].
3. Click on, let`s say, ‘Department 2018’ table.
4. Make sure the case and spelling of department is correct. Click on down arrow present in ‘Department’ header. The drop-down list shows the distinct values present in the ‘Department’ column. If a department name is present more than one time (because of word case issue) For example, ‘ADMIN’, ‘admin’ is same but varies due to upper case and lower case, follow the given steps:
    i. Right click on ‘Department’ header.
    ii. Select ‘Replace Values’.
    iii. Enter "ADMIN" in value to find and "Admin" in Replaced with.
    iv. Repeat step 2 and 3 if more name discrepancies occur.
5. Remove all column except ‘Department’ and ‘Survey year’. Right- click on header to be removed. Select “Remove”.
6. For list of departments of year 2018, filter rows with year ‘2018’. Click on down arrow present in ‘Survey Year’ header. Select tick box ‘2018’ and leave rest of the tick-box empty.
7. Remove duplicate values from ‘Department’ column. Right click on ‘Department’ header. Select “Remove Duplicates”.
8. By this step, ‘Department 2018’ table, consist of list of department and survey year.
9. Repeat from step 2 to step 7, to create list of departments for every survey year.

7. Steps to prepare list of common departments who filled survey every year (for any two survey years)

This section creates a new table which contains list of departments which filled survey every year.

Follow the below given steps to create common department list:

1. Open Power Query Editor.
2. Under ‘Home’ tab, click on ‘New Source’. From the list click on ‘Blank Query’.
3. A blank Query table is created. Rename it as ‘Common Departments’.
4. Under ‘Home’ tab, in ‘Query’ section, select Advanced Editor.
5. In the pop-up window, write the following code and click on ‘Done’.

```
let

   Source = Table.NestedJoin(#"Department 2018", {"Department"}, #"Department 2019", {"Department"}, "Department 2019", JoinKind.Inner),

   #"Removed Columns" = Table.RemoveColumns(Source,{"Department 2019"})

in

   #"Removed Columns"
```

The following code represents

i. Table.NestedJoin- Performs inner join between two tables, 'Department 2018' and 'Department 2019'.
ii. {"Department"} – Represents the common column in both table on which join condition is applied.
iii. Table.RemoveColumns – Remove columns from table

-> To combine data from a new year into the existing Common Department table:

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1. Open Power Query Editor.
2. Create a new department table, let's say, 'Department 2020' using step 6.
3. Select the Common Department table
4. Click on the 'Merge Queries'
5. In the pop-up, for the Common Departments table, select the 'Department Column'
6. Use the drop-down below this and select the 'Department 2020' table. The columns of this table will become visible.
7. Select the 'Department Column' for this table.
8. Use the drop-down below this and select 'Inner (only matching rows)' join type.
9. Click ok.
10. Select the Department column in the table view.
11. Right click and select 'Remove other columns' from the options.