# Power Query

```
┌ ETL
├ Data cleaning
├ connect
├ consolidation
└ Data Generation
```

- Power query is applicable for both "Excel" and "Power BI"

- what is power query?

  - It has multiple purpose multiple meaning, Basically its provide a ETL Application.
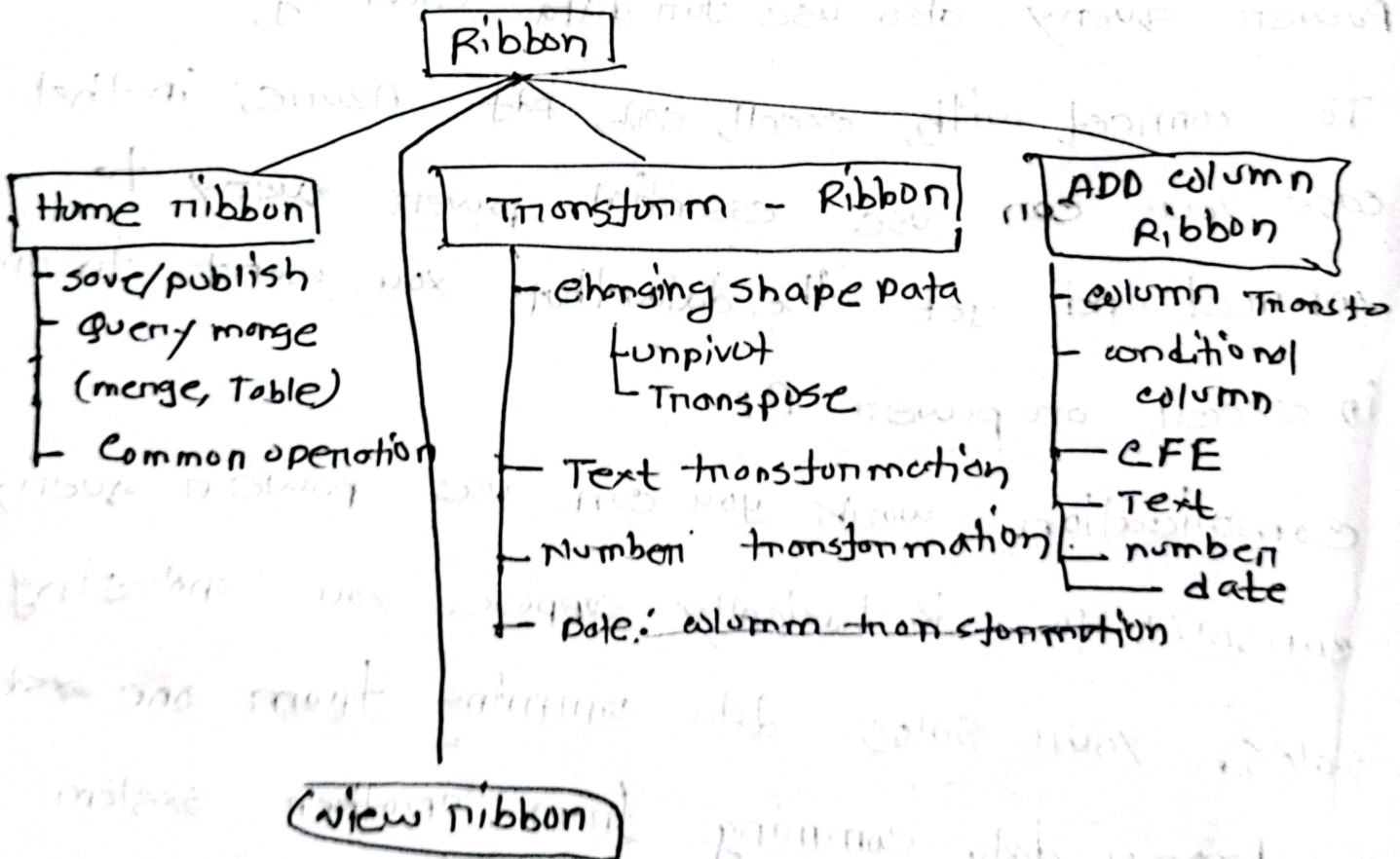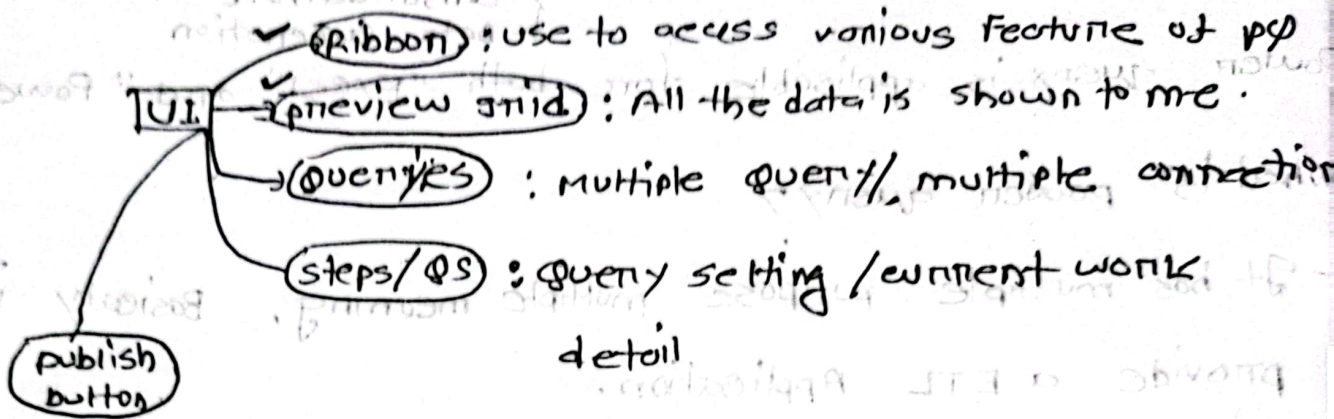
    ETL - Extract Transform Load

  Power query is Essentially an ETL Application.

- Power query also use for data cleaning,

- To connect with, excell, sql, pdf. Azure, in that case you can use essential power query to connect and get the data that you want to analize in excell or power BI

- Consolidation work you can use power query. consolidation is basically suppose you analysing sales. your sales data comming from one system, costumer data comming from another system and you want to get both at consolidate in on full File.

- You can $ use power query for data generation.

- Power query UI (User Interface).

UI ├─ Ribbon : use to access various feature of pq
   ├─ preview grid : All the data is shown to me.
   ├─ Queries : multiple query // multiple connection
   └─ steps/QS : query setting / current work
                 detail

publish button

Ribbon ── Home ribbon
       └── Transform ribbon

Ribbon
├── Home ribbon
│    ├ save/publish
│    ├ query merge
│    │  (merge, Table)
│    └ Common operation
│
├── Transform - Ribbon
│    ├ changing shape pata
│    │  ├ unpivot
│    │  └ Transpose
│    ├ Text transformation
│    ├ Number transformation
│    ├ Date: column transformation
│    └── view ribbon
│
└── ADD column Ribbon
     ├ column Transfo
     ├ conditional
     │  column
     ├ CFE
     ├ Text
     ├ number
     └ date

## Preview

**Data grid**

- column profile
- How Data,
- Block on not etc
- preview of selection

## Queries

structure query within Groups/ Folders

### steps and query setting

This is where you can see For a selected query
the one that you currently working on all
the steps that one being applied and name of
the query as well.

(name) & (steps)

* Power query use its own language (M language)

* 99% of the time you do not need to know (M)
Language you can just use the ui features
right click, left button option and many option
  power query is case sensitive.

* Everything within power query almost all the time's basically step by step fashion essentially power query is step Reorder, Record what ever you doing. And repeats those steps for you every time. ( Data process automation )

one of the important thing to remember ↓

**Step Reorder** — each steps depends on the previous steps.

Suppose 1st operation you filter something then 2nd operation will will apply on filtered data.

• when you you work with power query you should remember that itsa step by step process. so while working with power query you should think about future.

( * what kind of dataset may be connec connect?

(□ Excel
— csv
— web connector
— xml/ json
— Api.
— Database
— cloud source, Folders, pdf,

Set up power Query

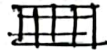* To set up a power query

   — create a blank worksheet, save the worksheet

     → [Data tab] → [Get data] ⊟ → select from where you import data
                        ↓
                       import.

Then a navigaton will create

   → select the table... → Transform data
            ⊞
                ↓
       | power query Interface will open |

Queries                                Query setting


• Removing rows / colums

   | Home ribbon | → | Remove rows | →  Remove top
                             Remove Bottom
                             Remove alternate
                             Remove Duplicate
                             Remove blank row
                             Remove error

• | Home ribbon | → Remove use First row as header icon

- To handle null values for a column
  wheather you delet / replace

  to replace → click might click by mouse on a colum
          then → Replace value

  For conditionally change column value

  → select the column, → | Add column
                           Ribbon. |

  * You can simple filter from Filter button of each
    column heading, PQ will save this on Query
    Setting. means filtered data will only execute

- To extract ony text for a column / encode
  colomn based on extract

  → | Add column | → Format text.
      Ribbon |

                        Extract ⌐ length
                               ├ Extract last
                               │ charocter
                               ├ Text before
                               │ Delimeter
                               ├ Text between
                                 Delimeter

- on another way is
  Flashfill technique

  select the column → | Add column
                        Ribbon |

→ | Column
    From   | → From selection – Teach colum. by AI monually
    Example |

* After completing your power query work, Ho

  [Home Ribbon] → [close and load]

to
* Editing the query and Additional more step

  → [Data tab] → Query and connection

  → R.Hside a Query and connection item will

    demonstate: The click edit on your specific data

                                to create a new column
* To perform any modification in column a in PQ (UI)

  open [Add column] Ribbon then modify


* To convert data from website

    Excell — Data — Get Data → From other
                                  sources → web
                                        — inter Phose

* To unpivot a table in                 → web url osk
  power query                              paste the url

  Go to the click the column
                                          Power query Navigation
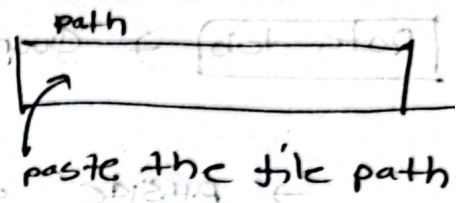  → [Transform] → unpivot table           will on with extracted
                    column                 data from the website.

**\* Consolidation a folder of files with power query.**

→ Basically Taking a folder of all files and consolida[te]
them into one Big table using power query

- Data tab → Get data → From File → From Folder
  path
  
  paste the file path

Then p4 Navigaton
↓
combined. Transform data

sample files
↓
powe query ur

Left hand side oll file show

Sample file  ← Teaeh it to go by →  small internal
query
Transform  sample
file

③ Transformation does
in transformmotion
sample file

whatic operation
ame detine.

when those one done,
then power query create
a Transform File. fu

Then go to
the
original.

* If we dont wont to opply transfunmation on everry dataset like there two csv 2· xlsx, 1 pdf. I wont only opply transfunmation in xlsx. then

go to night

[Querry setting]

↓

[source]

↓

[extention] — equols

└→ XLSX
 ✗ pdt
 ✗ cev

# Merging & Appending querics (joining) p$\phi$

join two on mune table /worksheet

→ Data tab, → Get data → File → Filety import

↓

Navigator

↓

Select multiple

↓

monvolly select

Append

- To menge two toble

• select one toble from left tables section

→ Home nibbon → Append querics → Append Dialogre box

Toble to append

• To menge two toble

Home - menge query

select column basic

~~Xeort~~

Then nename the

menged toble