DAX used in Spotify data analysis.

1) To find no of Albums played in Latest/Current Year

```
LatestYearAlbums =
VAR _LatestYear = MAX('Date Table'[Year])
RETURN
CALCULATE(DISTINCTCOUNT(spotify_history[album_name]), 'Date Table'[Year] = _LatestYear)

```

2) To find no of artist played in Latest/ Current Year

covery contains some recovered files that haven't been opened.

```
LatestYearArtist =
VAR _LatestYear = MAX('Date Table'[Year])
RETURN
CALCULATE(DISTINCTCOUNT(spotify_history[artist_name]), 'Date Table'[Year] = _LatestYear)
```

3) To find no of tracks played in Latest/ Current Year

```
LatestYearTrack =
VAR _LatestYear = MAX('Date Table'[Year])
RETURN
CALCULATE(DISTINCTCOUNT(spotify_history[track_name]), 'Date Table'[Year] = _LatestYear)
```

4) To find no of Albums played in Previous Year

```
PreviousYearAlbums =
VAR _LatestYear = MAX('Date Table'[Year])
VAR _PreviousYear = _LatestYear - 1
RETURN
CALCULATE(DISTINCTCOUNT(spotify_history[album_name]), 'Date Table'[Year] = _PreviousYear)
```

5) To find no of Artist played in Previous Year

covery contains some recovered files that haven't been opened.

```
PreviousYearArtist =
VAR _LatestYear = MAX('Date Table'[Year])
VAR _PreviousYear = _LatestYear - 1
RETURN
CALCULATE(DISTINCTCOUNT(spotify_history[artist_name]), 'Date Table'[Year] = _PreviousYear)
```

6) To find no of tracks played in Previous Year

```
PreviousYearTrack =
VAR _LatestYear = MAX('Date Table'[Year])
VAR _PreviousYear = _LatestYear - 1
RETURN
CALCULATE(DISTINCTCOUNT(spotify_history[track_name]), 'Date Table'[Year] = _PreviousYear)
```

7) DAX query for creating a date table

```
Date Table = CALENDAR(MIN(spotify_history[Track Played Date]),MAX(spotify_history[Track Played Date]))
```

8) To extract day name from date

```
Day Name = FORMAT('Date Table'[Date], "DDD")
```

9) To extract day number from date.

```
Day NUmber in Week = WEEKDAY('Date Table'[Date], 2)
```

10) To find out weekday and weekend from date column

```
Weekday_Weekend = IF(WEEKDAY('Date Table'[Date],2)<5, "WeekDay","WeekEnd")
```

11) To extract year from date column.

```
Year = Year('Date Table'[Date])
```

12) To calculate listening time

```
Listening Time (mins) Value = SELECTEDVALUE('Listening Time (mins)'[Listening Time (mins)])
```

13) To calculate average listening time from ms played column

```
Avg Listening Time (min) = AVERAGE(spotify_history[ms_played])/ 60000
```

Cf – conditional formatting for quadrant | this is to show the track that is played maximum time with high listening time in the mentioned 4 quadrants

```
CF Quadrant =
VAR AvgTime = [Avg Listening Time (min)] <= 'Listening Time (mins)'[Listening Time (mins) Value]
VAR TrackFreq = [Track frequancy] >= 'Track Frequency (parameter)'[Track Frequency (parameter) Value]

VAR Result =
  SWITCH(
      TRUE(),
      AvgTime && TrackFreq,1, ---Low time & high frequaecy
      Not AvgTime && TrackFreq,2, ---high time & high frequaecy
      Not AvgTime && Not TrackFreq,3, -- high time & low frequaecy
      AvgTime && Not TrackFreq,4 ---Low time & low frequaecy
  )
  RETURN Result

```

14) To calculate hours from track played time column.

```
Hours = HOUR(spotify_history[Track played Time])
```

15) To calculate Latest year

```
Max Year = MAX('Date Table'[Year])
```

16) To calculate the minimum and maximum tracks played over time.

```
MinMax Albums Line Chart =
Var _MaxValue = MAX(ALLSELECTED('Date Table'[Year]), CALCULATE(DISTINCTCOUNT(spotify_history[album_name])))

Var _MinValue = Minx(ALLSELECTED('Date Table'[Year]), CALCULATE(DISTINCTCOUNT(spotify_history[album_name])))

Var _CurrentValue = DISTINCT(spotify_history[album_name])

Return

if( _CurrentValue = _MaxValue || _CurrentValue = _MinValue, _CurrentValue, Blank())
```

17) To calculate the minimum and maximum number of artist played over time.

```
MinMax Artist Line Chart =
Var _MaxValue = MAX(ALLSELECTED('Date Table'[Year]), CALCULATE(DISTINCTCOUNT(spotify_history[artist_name])))

Var _MinValue = Minx(ALLSELECTED('Date Table'[Year]), CALCULATE(DISTINCTCOUNT(spotify_history[artist_name])))

Var _CurrentValue = DISTINCT(spotify_history[artist_name])

Return

if( _CurrentValue = _MaxValue || _CurrentValue = _MinValue, _CurrentValue, Blank())
```

19) To calculate the minimum and maximum number of tracks played over time.

```
MinMax Track Line Chart =
Var _MaxValue = MAX(ALLSELECTED('Date Table'[Year]), CALCULATE(DISTINCTCOUNT(spotify_history[track_name])))

Var _MinValue = Minx(ALLSELECTED('Date Table'[Year]), CALCULATE(DISTINCTCOUNT(spotify_history[track_name])))

Var _CurrentValue = DISTINCT(spotify_history[track_name])

Return
```

20) To calculate distinct number of albums played over time

```
No of Albums = DISTINCTCOUNT(spotify_history[album_name])
```

20) To calculate distinct number of artists played over time

```
No of Artist = DISTINCTCOUNT(spotify_history[artist_name])
```

21) To calculate distinct number of Track played over time.

```
No of Tracks = DISTINCTCOUNT(spotify_history[track_name])
```

22) To calculate No of Albums played in previous year

```
PreviousYearAlbums =
VAR _LatestYear = MAX('Date Table'[Year])
VAR _PreviousYear = _LatestYear - 1
RETURN
CALCULATE(DISTINCTCOUNT(spotify_history[album_name]), 'Date Table'[Year] = _PreviousYear)
```

23) To calculate No of artist played in previous year

```
PreviousYearArtist =
VAR _LatestYear = MAX('Date Table'[Year])
VAR _PreviousYear = _LatestYear - 1
RETURN
CALCULATE(DISTINCTCOUNT(spotify_history[artist_name]), 'Date Table'[Year] = _PreviousYear)
```

24) To calculate No of Track played in previous year

```
PreviousYearTrack =
VAR _LatestYear = MAX('Date Table'[Year])
VAR _PreviousYear = _LatestYear - 1
RETURN
CALCULATE(DISTINCTCOUNT(spotify_history[track_name]), 'Date Table'[Year] = _PreviousYear)
```

25) To find latest and previous year analysis for Albums.

```
PY and YoY Albums KPI =

VAR _latest = [LatestYearAlbums]
VAR _previous = [PreviousYearAlbums]

VAR _YoY = IF(NOT(ISBLANK(_previous)), DIVIDE(_latest - _previous, _previous, 0),

BLANK())

RETURN

IF(NOT(ISBLANK(_previous)),
"vs PY: "& FORMAT(_previous, "#,##0") &
" (" & FORMAT(_YoY, "0.00%") & ")",
"      no data")

```

26) To find latest and previous year analysis for Artist.

```
PY and YoY Artist KPI =

VAR _latest = [LatestYearArtist]
VAR _previous = [PreviousYearArtist]

VAR _YoY = IF(NOT(ISBLANK(_previous)), DIVIDE(_latest - _previous, _previous, 0),

BLANK())

RETURN

IF(NOT(ISBLANK(_previous)),
"vs PY: "& FORMAT(_previous, "#,##0") &
" (" & FORMAT(_YoY, "0.00%") & ")",
"      no data")
```

27) To find latest and previous year analysis for Track.

```
PY and YoY Tracks KPI =

VAR _latest = [LatestYearTrack]
VAR _previous = [PreviousYearTrack]

VAR _YoY = IF(NOT(ISBLANK(_previous)), DIVIDE(_latest - _previous, _previous, 0),

BLANK())

RETURN

IF(NOT(ISBLANK(_previous)),
"vs PY: "& FORMAT(_previous, "#,##0") &
" (" & FORMAT(_YoY, "0.00%") & ")",
"      no data")
```

28) Calculate entire No of track played

```
Track frequancy = COUNTROWS(spotify_history)
```

29) To calculate hours from time column

```
Hours = HOUR(spotify_history[Track played Time])
```