Project Overview:

This case study will guide you through the essential features and functionalities of PowerBI using a dataset containing information about music tracks and albums. By the end of this project, you will have learned how to clean and prepare data, create relationships between tables, and visualize data using various types of charts.

Dataset Overview:

Dataset Link: Album Dataset, Track Dataset

Album Table:

- **AlbumID**: Unique identifier for each album.
- **Title**: Title of the album.
- **ArtistID**: Unique identifier for the artist.

Track Table:

- **TrackID**: Unique identifier for each track.
- **Name**: Name of the track.
- **AlbumID**: Unique identifier for the album.
- **MediaTypeID**: Identifier for the media type.
- **GenreID**: Identifier for the genre.
- **Composer**: Name of the composer.
- **Milliseconds**: Duration of the track in milliseconds.

- **Bytes**: Size of the track file in bytes.
- **UnitPrice**: Price per unit of the track.

Exercise:

1. Extracting Values:

Learn how to extract specific values from the dataset.

2. Splitting Columns:

Split columns to create new columns for more detailed analysis.

3. Replacing Values:

Replace all null values in the Composer column with "Unknown".

4. Removing Duplicates:

Remove duplicate rows based on the TrackID.

5. Removing Blank Rows:

Remove all rows where any key column (e.g., TrackID, Name) is blank.

6. Removing Columns in Power Query:

Remove the MediaTypeID and Bytes columns from the Track table.

7. Data Modeling or Relationships:

Establish a relationship between AlbumID in the Album table and AlbumID in the Track table.

8. Creating Pie Charts and Stacked Column Charts:

Create a pie chart to show the distribution of tracks by genre and a stacked column chart to show the number of tracks per album, grouped by artist.

9. Formatting Charts:

Add data labels to the pie chart and change the color of data points in the stacked column chart to differentiate between artists.