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Challenge 10

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Part 1: Row Number, Rank and Dense Rank

1. Using the Sample Superstore database answer the following:

\* Create a joined table from the Artist and Album tables and order it by Name and Title

\*/

**SELECT** \*

**FROM** Artist

**inner** **join** Album **on** Artist.ArtistId = Album.ArtistId

**ORDER** **BY** Artist.Name, Album.Title;

--Artist.ArtistId, Artist.Name, AlbumId, Title,

--Using the table created above make a table that contains Name, Title and a distinct TableID number for every record in the table

**SELECT** **ROW\_NUMBER** () **OVER** (**ORDER** **BY** Artist.ArtistId) TableID,

Artist.Name, Title

**FROM** Artist

**inner** **join** Album **on** Artist.ArtistId = Album.ArtistId

**ORDER** **BY** Artist.ArtistId, Artist.Name, Album.Title;

**SELECT** **ROW\_NUMBER** () **OVER** (**ORDER** **BY** Artist.Name, Album.Title) TableID,

Artist.Name, Album.Title

**FROM** Artist

**inner** **join** Album **on** Artist.ArtistId = Album.ArtistId

**ORDER** **BY** Artist.ArtistId, Artist.Name, Album.Title;

--Add a column called album rank that ranks each album, windowed by Name creating an album rank for each band

**SELECT** **ROW\_NUMBER** () **OVER** (**ORDER** **BY** Artist.ArtistId) TableID,

Artist.Name,

Title,

**Rank**() **OVER** (**PARTITION** **BY** Artist.Name **ORDER** **BY** Album.Title) Album\_Rank

**FROM** Artist

**Left** **join** Album **on** Artist.ArtistId = Album.ArtistId

**ORDER** **BY** Artist.ArtistId, Artist.Name, Album.Title;

/\* Part 2: Lag

\* 1. Using the Sample Superstore database answer the following:

\* Select a table that contains the TrackID, Name, AlbumId and Milliseconds from AlbumId = 13 ordered by TrackID

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**SELECT** t.TrackID, t.Name, t.Milliseconds

**FROM** Track t

**WHERE** t.AlbumId = 13

**ORDER** **BY** t.TrackID;

--Create a column of Milliseconds lagged by 1 row

**SELECT** t.TrackID,

t.Name,

t.AlbumId,

t.Milliseconds,

LAG(t.Milliseconds) **OVER** (**ORDER** **BY** t.TrackID) LagMilliseconds

**FROM** Track t

**WHERE** t.AlbumId = 13

**ORDER** **BY** t.TrackID;

**SELECT** t.TrackID,

t.Name,

t.AlbumId,

t.Milliseconds,

LAG(t.Milliseconds) **OVER** () LagMilliseconds

**FROM** Track t

**WHERE** t.AlbumId = 13

**ORDER** **BY** t.TrackID;

--Create a table that subtracts Milliseconds from LagMilliseconds from the table above to compare the length of consecutive songs on the album

**SELECT** t.TrackID,

t.Name,

t.AlbumId,

t.Milliseconds,

LAG(t.Milliseconds) **OVER** () LagMilliseconds,

(t.Milliseconds - LAG(t.Milliseconds) **OVER** ()) DiffMilliseconds

**FROM** Track t

**WHERE** t.AlbumId = 13

**ORDER** **BY** t.TrackID;