Analytical SQL Case Study

# Datasets Used:-

1. Songs

2. Events

## Queries:-

1. We want to get the information of the artists from the two table to know the most famous one according to the number of users hear their songs and this will help us to improve the business income by adding additional songs for those artists
2. For improvement also we want to know the most famous sogs and some other information by joining the two tables so wan can attract more users and offer some promotions on these songs(hint:-we get the information we want by joining the two tables from songs and events and then order them according to the number of users who here them)
3. We want to know now the most played songs in all sessions in events table so we can get some offers and promotions to users and some information of each song (Hint1:- First, we get information, and the count of users heard this song. Hint2:-after this we get the rank of each song with dense rank and subquery )
4. We want to know the most famous song with the session distribution among users so we can improve the number of songs that is similar and attract more users.(Hint1:- we get the number of users, session id and some information about each song in the session. Hint2:- get the rank of each song in each partition but with distinct to prevent the duplication as the user may hear the same song in the same session, we count it but not to show it again, Hint 3:-lastly, to group all those information by all selected columns and order them by session number and the rank number here rank 1 means maximum number of users )
5. Now we want to know the order of the famous artist in all sessions so we can add more of their songs and get more profit from users (Hint1:- we get artist information and count of songs they made, Hint2:-to give each artist a rank according to the number of users and sort them in descending order)
6. We want to get the most contributed users in the system so we could make them more comfortable and give them addition offers which will attract other users to our web site (Hint1:- get the users and the number of songs they heard all over the session .., Hint2:- give each user a rank and order them in descending order according to the songs they hear)
7. We want to know the longest and shortest song the users heard in each session so we can put average for songs to not get the users feel boring (Hint1:-first value function with desc for the windowing issues as to compare for each session the length of all songs.)
8. Sometimes there can be issue In the connection from the user to our server so we need to analysis the number of successful trails has get to the website(Hint1:- get the number of trails for each user and the number of successful trails.., Hint2:- It is to calculate the percentage of successful connection to the website by successful trails by the number of trails. The result will be between [0,1])
9. We want now to analysis the income channel as we can know the income from each user from the level of the song paid or free so we will get the number of paid and free songs for which user with the percentage of paid songs which will bet between[0,1](Hint1:- get the information of the each user, count of paid songs and count of free songs.., Hint 2:- Calculate the percentage of the paid songs from the total and then order by the user id)
10. We need to know how long each user spent in the system website listening to songs and order the user to know the most one spent time to improve the website if some users don’t spend too much time.(Hint1:-get the information and the summation of each song the user played in seconds.., Hint2:-to order the users and give them rank according to the duration in seconds descending order.)