# Interview Prep

# Going over take-home exercise:

In order to it with all the objects, I usually figure out the logic with 1 object first then loop all the objects, in this case, the object is the memberID.

1. Read in the csv files with Revenue and Calendar tables.
2. I created a new dataframe for just one memberID, then group by memberID and activity\_year\_month, count their number of wagers for each month.
3. Get the max and min of the dataframe. So that I know the period during which the member is active.
4. I then created a calendar dataframe with each month for just the period during which the member is active with the max and min variables that I just obtained.
5. Joining these two dataframe together and fill in the NaN values. This create a new dataframe that have all the active and non-active months for that one member during the time that’s the member is active.
6. To calculate the lifecycle status, I loop each row in the dataframe.
   1. If the index equal to 0 that means it’s the first existing record, it means that the member played for the first time in that month,
   2. For the row index not equal to 0, I create a small dataframe with the entries last month and current month. Then compare these two month with the definitions to create “Retained”, “Unretained”, ”Reactivated” and “Lapsed”. Then drop the record for the previous month, so only 1 record of current month remain. The append the table to the lifecycle table.
7. If it’s “Lapsed” in the Lyfecycle Status column then accumulate count the number of months that are “Lapsed”, starting 2.
8. After the logic is sorted out, then loop the logic for all the memberID.

# Technical SQL:

1. Foreign Key is when there is a primary key in the first table, and then it’s joined with the other table. It becomes the foreign key to the other tables.
2. Dense-Rank & Rank

# Questions:

1. I heard that there might be a chance to do something in in cloud, that does that involve? Is there any chance to upskill my cloud platform skills?
2. What are the important skills and qualities that are required to do well in this role?
3. For the daily-to-daily task, will it be similar to the takehome exercise?