TASK-1

1. The first challenge was to find the newly acquired user. For that, all the user keys were separated having the key previous_first_open_event to be 0.
2. After that the average number of days of usage of the (a) lyrics feature (b) youtube feature (c) playing music feature were required to be found to maximize the usage.
3. For that the average stickiness of all the users over the app was found out and the average was taken.
4. Now all the new users having an average value of stickiness more than that of all the users were separated and were analyzed.
5. Now the new users were considered for the lyrics feature, youtube feature, and the playing music feature.
6. Now discrete usage which is the usage of the user over the entire month and continuous usage that is the usage of the user continuously was considered.
7. The discrete usage of these new users came out to be 0.79 days, 1.4 days, and 12 days respectively
8. The continuous usage of these new active users came out to be 0.08,0.29 and 7.58 days respectively

TASK-2

1. There were two parts to the question and we have to solve them. The first part saying the number of active users in the three cohorts given which came out to be 56,46 and 56 users respectively.
2. This shows that appx 50 users out of 1200 users use the app every day
3. The second part was to find the number of new users who uninstalled the app in 1D,3D, and 7D respectively.
4. The analysis was performed and the users came out to be 5 in 1 day 9 in 3 days and 11 in 7 Days for the dataset1. Similarly, the analysis was performed and the 4,4,5 new users removed the app in dataset2. Considering dataset3 7,7,8 new users removed the app.
5. There is not much difference in the daily active users over the 30days on the app but a significant change in new users deleting the app in dataset1 as compared to dataset2 and dataset3 could be observed when day1 and day3 were considered.

TASK-3

1. Considering the addition of songs on the app for different active users.
2. On analyzing I found out that for new users adding a new song leads to an increase in retentivity and considering 7D and 10D active users I found out that for these users adding new songs does not have much effect on their retentivity as observed from scatter and histogram plots.

3. A continuous variation of retentivity and the addition of new songs could be seen for the 7D and 10D active users.

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