GREEDYGAME

Business Analyst Assignment

The following 4 questions are a part of your assignment assessment. Please make sure you go through them thoroughly before you start with the assignment. You can submit the assignment in PPT/PDF formats that consist of your approach and description. You might also use github for including the code snippets.

1. 'Sikka' is a money earning app where you can earn cash rewards by completing simple offers daily that give you sikka coins, which you can withdraw to your bank account as real money. You can learn more about this app here **Sikka**

   Problem Statement:

   Users come to this app through different marketing channels. They use the app to complete offers to earn money and we generate revenue in the process. Using the data furnished below, you need to:

   Calculate the lifetime value (LTV) of the users acquired through different marketing channels

Note: Work out the result based on the schema of the tables only and not the actual dataset.

   Data to be used:

   User Signup data:

   This table stores the details of every user coming through different marketing channels on 'Sikka' app.

Column_name	Data Type	Comments
user_id	TEXT	Unique value assigned to every user
utm_source	TEXT	The utm source through which the user signed up. This is the marketing channel through which the user came
created_at	TIMESTAMP	The time and date at which the user account was created
last_login_at	TIMESTAMP	Last login timestamp of the user

User offer completion data:
This table stores the data of the offers completed by any ‘Sikka’ user.

Column_name	Data Type	Comments
user_id	TEXT	Unique value assigned to every user
offer_id	TEXT	Unique id of an offer
reward_id	TEXT	Unique id of a reward, can be linked with reward id of rewards table
created_at	TIMESTAMP	The time and date at which the offer completion log was created

Rewards details:
This table stores the details of every offer-reward that is in the ‘Sikka’ App

Column_name	Data_type	Comments
reward_id	INT4	Unique id of the reward
offer_id	INT4	Unique id of the offer
label_in_english	TEXT	Label of the offer in english
description_in_english	TEXT	Description in english
total_payout_in_paise	INT4	Reward amount earned by a user in paisa
total_revenue_in_paise	INT4	Amount of revenue earned by GG if that offer is completed

2. ‘Sikka’ is a type of Incent app. There is another similar incent app called ‘Sikka Pro’. You need to find insights from the data for both these apps and tell which app is better of these two.

   The data points you can consider to find the insights:

   Offer Initiation by users
   Offer Completion by users
   Rewards earned by users
   Revenue generated

User Signup data:
This table stores the details of every user coming through different marketing channels on ‘Sikka’ app.

Column_name	Data Type	Comments
user_id	TEXT	Unique value assigned to every user
app_id	TEXT	Name of the app the user belongs to
created_at	TIMESTAMP	The time and date at which the user account was created
last_login_at	TIMESTAMP	Last login timestamp of the user

User offer data:
This table stores the details of every offer that was initiated on ‘Sikka’ or ‘Sikka pro’ app.

Column_name	Data_type	Comments
user_id	TEXT	Unique id of the user
offer_id	NUMBER	Unique id of the offer
status	STATUS	Tells the status of the offer. Can be COMPLETED, ONGOING
started_at	TIMESTAMP	Timestamp at which the offer was started
completed_at	TIMESTAMP	Timestamp at which the offer was COMPLETED
expires_at	TIMESTAMP	Timestamp at which an ONGOING/LOCAL VERIFIED offer expires

User offer completion data:
This table stores the data of the offers completed by any ‘Sikka’ or ‘Sikka pro’ user.

Column_name	Data Type	Comments
user_id	TEXT	Unique value assigned to every user
app_id	TEXT	Name of the app the user belongs to
reward_id	TEXT	Unique id of a reward, can be linked with reward id of rewards table
created_at	TIMESTAMP	The date at which the offer completion log was created

Rewards details:
This table stores the details of every offer-reward that is in the ‘Sikka’ or ‘Sikka pro’ App

Column_name	Data_type	Comments
reward_id	INT4	Unique id of the reward
offer_id	INT4	Unique id of the offer
label_in_english	TEXT	Label of the offer in english
total_payout_in_paise	INT4	Reward amount earned by a user in paisa
total_revenue_in_paise	INT4	Amount of revenue earned by GG if that offer is completed

* ***Refer to the datasets here : Datasets (Please refer to Q2 files for this question)***

3. Here you are given the Install numbers, uninstall numbers, daily signups, number of daily active users and number of referrals made of the ‘Sikka’ app for the month of October 2022. Also, the Install numbers, uninstall numbers, daily signups, number of daily active users for the first 15 days of November is given.

   You need to predict the number of referrals for these 15 days of

   November Sikka_numbers:

Column_name	Data_type	Comments
day	DATE	Date of the log
Installs	INT	Install numbers for that day
DAU	INT	DAU for the day
referrals	INT	Referrals for that day

**** Refer to the datasets here : Datasets (Please refer to Q3 file for this question)***

4. ADX is an ad exchange platform for large publishers with significant sales. It supports both Web and mobile apps & game inventories. Through ADX, publishers can sell their ad inventory to advertisers and agencies using real-time bidding technology. AdX provides more efficient usage of ad spaces using real-time auctions.

   Data Definition:

   Sample_ADX_data

Column Name	Type	Comments
date	DATE	Date on which the report log was recorded
pub_id	STRING	Unique ID of a Publisher. Publisher is the one who owns a particular app and wants to monetize by offering ad-space on his/her app
app_id	STRING	Unique ID of the app
ad_unit_code	STRING	Unique ID of an ad_placement_unit space given for a particular app. Can be more than 1 unit code for a single app
country	STRING	Country from which the ad requests came
requests	INTEGER	The number of time an ad was requested by the app
responses	INTEGER	The number of times has the network responded with an Ad for a particular ad_request
impressions	INTEGER	When an ad has been served to the mobile device, it needs to be shown on the screen. Once the ad is displayed it is counted as an impression
clicks	INTEGER	Clicks coming after the ad is being rendered on the screen
revenue	NUMERIC	Total revenue made by the app in USD

   A sample dataset with data for a few apps which uses ADX is given from the month of October.

   You need to find out if there is any anomaly present in the data for any of the apps present in the sample dataset. The metrics you can look into are the requests, impressions, clicks, revenue, show-rate(impressions/responses), click-rate (clicks/impressions) or any other feature which you think will be helpful to gain more insight about any anomaly.

   **** Refer to the datasets here : Datasets (Please refer to Q4 file for this question)***