**TEST TASK**

Position: Business Intelligence Analyst

Task 1. Brick is one of Paymentwall products which offers merchants a payment option through credit cards. Consider a merchant who provides watching online movies services and they are using Brick provided by Paymentwall.

They offer their users 4 packages: 1 month - $10, 3 months - $25, 6 months - $42, 12 months - $75. These packages automatically recur at the due date. The subscriptions can be stopped only when users cancel them or their cards don’t have enough funds at the due date. Beside the subscription packages, users can also pay one time to watch a specific movie, average price per movie: $5/movie

From the table below, there is a significant drop in gross revenue from 6/24/2020.

**Questions:**

1. What could be the reasons that caused the drop and kept the gross revenue

staying at a low level from that point of time?

2. What kind of extra data/information that you need to check to narrow down and

point out the correct reason for the drop?

3. What could be the possible solution to boost the revenue back to its usual level?

\* User Attempts: Number of attempts that users try to make payments, including successful and failed attempts

\* Successful Rate: percentage of successful attempts per total attempts (Successful Rate = Successful transactions / Total Attempts

**\* Observations from table:**

- On 6/23, the gross revenue was $4591, but it dropped to $974 on 6/24. This indicates a substantial decrease in the total revenue generated on that day.

- The number of user attempts to make payments dropped from 110 to 30. A significant decrease in user attempts could be a contributing factor to the drop in revenue.

- The successful rate increased from 67% to 93%. Although the number of attempts decreased, the percentage of successful transactions out of total attempts increased. This could indicate that a higher proportion of attempts were successful on 6/24 compared to 6/23.

- The sudden drop in revenue from around $4000 to $974 on 6/24 seems to be a significant anomaly.

- The revenue remains relatively stable around $500 after 6/24, it might indicate a return to normalcy or resolution of the issue that caused the drop.

**Question 1:**

Based on the observations, there are some potential reasons that might cause the drop in gross revenue:

- There might have been technical issues or downtime in the payment processing system, leading to failed transactions and a subsequent drop in revenue. Investigate system logs and performance metrics during the relevant period.

- Errors in the payment processing flow, such as misconfigurations or issues with third-party payment gateways, could result in unsuccessful transactions and a decrease in revenue.

Fraud Prevention Measures:

- Implementation of more stringent fraud prevention measures could lead to increased rejections of transactions. While this improves security, it may also result in a drop in successful transactions.

- Shifts in user behavior, such as reduced interest in the service or changes in spending patterns, might have contributed to fewer transactions.

- Users may have canceled their subscriptions, leading to a decline in recurring revenue. It's crucial to analyze subscription cancellation rates during this period.

- External economic factors, such as financial uncertainties or changes in user spending habits due to external events, could impact overall revenue.

- Increased competition or the introduction of new services in the market might divert users to alternative platforms, affecting revenue.

- Changes in marketing strategies or the absence of promotional campaigns could impact user acquisition and retention, influencing overall revenue.

-Issues with specific payment methods or changes in payment method preferences among users could affect successful transactions.

- External events, such as global crises or events impacting user behavior, might have played a role.

**Question 2:**

To indicate the potential reasons for the drop, there are some data and information that can be utilized for further investigations:

- Investigate system logs and performance metrics on 6/24 and the surrounding days to identify any technical issues or downtime in the payment processing system.

- Examine detailed transaction logs, especially those associated with failed transactions on 6/24. Look for specific error codes and messages to understand the nature of transaction failures.

- Conduct a detailed analysis of user behavior leading up to and during the revenue drop. Examine subscription data, including cancellation rates and modifications, to identify any unusual patterns.

- Break down revenue by payment method to determine if the drop is specific to certain payment methods. Check if there were changes in payment method preferences among users.

- Analyze the timing and impact of marketing campaigns and promotions, particularly those around 6/24. Determine if any promotional activities coincided with the drop in revenue.

**Question 3:**

There are some potential solutions to boost revenue back to its usual level by addressing the root causes identified:

- If technical issues or system downtime were identified, work closely with the IT team to resolve these issues promptly. Implement monitoring tools to detect and address any future technical glitches quickly.

- Improve the overall user experience on the platform. Simplify the payment process, enhance the user interface, and provide clear instructions to users. A seamless and user-friendly experience can encourage more successful transactions.

- Offer promotions or discounts to incentivize users to renew their subscriptions. Consider introducing limited-time offers for subscription renewals, bundling services, or providing additional benefits for longer subscription commitments.

- Review and adjust marketing strategies. Launch targeted marketing campaigns to re-engage existing users and attract new ones. Consider promotions, discounts, or exclusive content offerings to drive user interest and increase transactions.

- If specific payment methods are contributing to the drop in revenue, optimize the payment process for those methods. Address any issues with payment gateways, and consider expanding or diversifying the range of accepted payment methods to accommodate user preferences.