**Mncedisi Lindani Mncwabe Submission – Hyve Mobile Data Assessment**

**Section A**

***NB:*** *Performance shown only for successful transactions*

1. Chart, waterfall chart

   Description automatically generated

* **Provider A – GOT Spoilers** account for the most revenue **34% (R594K)** generated by provider A**.** This service is the best performer for this provider.
* **Provider B –** The best performing service for this provider is **Cool Songs**, which accounts for **76% (R3.19M)** of the total revenue generated by this provider.
* **Provider C –** Approximately **56% (R289K)** of the total revenue made by provider C is generated by **Cooking Recipes**, which makes this service the best performer for this provider.

Chart, bar chart

Description automatically generated**2.)**

- **Provider A** sees the most active subscribers on Wednesdays. This day accounts for **17% (140)** of the total active subscribers that provider A gets weekly.

- On the other hand, **Provider B** gets the most active subscribers on a Friday with **33% (362)** of the weekly total active subscribers active on this day.

- **Provider C** also has the most active subscribers **(22% or 10)** on a Friday.

**3.)**

Yes, 19 unique users have a subscription with both Provider A and B and different services.

Table

Description automatically generated

**Section B**

1. Graphical user interface

   Description automatically generated with medium confidence

* A picture containing application

  Description automatically generated**Acquisition**
* Graphical user interface, chart, application

  Description automatically generated**Churn**
* Graphical user interface

  Description automatically generated**Net Subscribers**

Graphical user interface

Description automatically generated with low confidence**3.)**

**Section C**



– snapshot of the table

Table

Description automatically generated

1. Graphical user interface, chart

   Description automatically generated with medium confidence

* Cape Town has the most active subscribers across all Providers. In terms of Services, this City has most active subscribers in GOT Spoilers, Pokemon-Go and Cool Songs for Provider A. While in Provider B, it has most active subscribers in Cool Songs, Cooking Recipes and GOT Spoilers, Provider C it has most active subscribers in GOT Spoilers only.
* Swartland has most active subscribers in Cooking Recipes only for Provider C.

**Section D**

1.)

**Methodology**

A picture containing icon

Description automatically generated- I have first created a new variable/column on the Subscription Data file called “Subscription Length”. This is a length/duration (in days) between subscription start date and end date.

- I then used the column to check its relationship with total billed column. This provides a clear view on whether a subscriber is billed more the longer they are subscribed to their services. Using the Pearson correlation method, it’s clear that the longer a subscriber is with their services the more they’re billed.

- I then plot the distribution of total billed and subscription length column individually to get their 25th, 50th and 75th percentile.

- **A Quantiles approach** is then used to bin the two columns “Total billed”, and “Length of subscription” based on their 25th, 50th and 75th percentile values. This method groups subscribers into 25% population based on their similarities of Subscription Length and Total Billed.

- I then created a variable called **LS\_TB (Lenght\_subscription and Total Billed)**. This creates a score of **1-4** for each subscriber **LS\_TB** variable, **4 - "Top Subscriber"** being a subscriber who subscribed for longer and billed higher, **1 - "worst subscriber"** - subscribed for few days and billed less. Both Total Billed and Length of Subscription are binned and assigned a score of 1-4 separately, with new variables called TB\_Score and LS\_Score respectively.

- TB\_Score and LS\_Score are then combined to form a single LS\_TB\_score. A Subscriber with **LS\_TB Score of 11** would be **"worst subscriber"** since they have subscribed for a shorter period and also billed less. A subscriber with **LS\_TB\_score of 44** is a Top subscriber since they have subscribed for longer and billed high.

- Once a single **LS\_TB\_Score** variable is created for each subscriber, I then assigned personalized names to make it easier to understand. These names are assigned based on their LS and TB Scores. The variable with the personalized names is called **LS\_TB\_Segment.**

**Description of the LS\_TB Segments**

* **Needs Attention** - these are subscribers who were billed high, but they didn't stay long with the services they subscribed to. Finding ways to re-activate these subscribers and have them stay longer could generate more profit to the business.
* **Top Subscriber** - These are subscribers who stay long with the services they subscribed to and are also billed high. These are subscribers who are worth retaining as they're most profitable.
* **Underperforming** - Subscribers who don't spend long with their services and are also billed less.
* **Top Subscriber-Less Bill** - These subscribers stay long with their subscriptions, but they're billed less. It's worth finding strategies to get them subscribe to other content that appetize them to increase revenue.

**Table

Description automatically generatedSnapshot of the resulting table**

**Summary of the LS\_TB\_segments**

Table

Description automatically generated

**Observations**

* The **Top Subscriber** are billed more than other subscribers **(average 1897 billed)** and they also spend longer on their subscriptions **(average 63 days)**
* The **"Needs Attention segment"** are the second most billed but they do not spend long on their subscription (only average 16 days).
* **Top Subscriber-Less Bill** - billed less but stay long with their subscriptions.
* **Underperforming** - least billed and low duration on their subscriptions.

***NB****: Resulting table (xlsx file) and code shared on python/Jupyter notebook file.*

**----------------------------------------------------------END!!! -----------------------------------------------------------**