INFORMATICS INSTITUTE OF TECHNOLOGY

In Collaboration with

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Digital Marketing Social Media and Web Analytics

CW2

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PART A : ANALYTICS

Task 1 : Google Analytics

A) Connecting Google Analytics to My Website

After creating the google analytics account in order to connect the analytics account with the website the below script was added in the head tag of the website.

```
<!-- Global site tag (gtag.js) - Google Analytics -->

<script async src="https://www.googletagmanager.com/gtag/js?id=G-7BDVP1GLG7 ">
</script>

<script>

        window.dataLayer = window.dataLayer || [];

        function gtag(){dataLayer.push(arguments);}

        gtag('js', new Date());

        gtag('config', 'G-7BDVP1GLG7');

</script>
```

The script was taken from the analytics account web stream section. The analytics account generates a measurement id - "**G-7BDVP1GLG7**"

B) Differences, Advantages of Google Analytics(GA) And Universal Analytics(UA)

Differences

There's a huge difference between universal analytics and google analytics. The main difference is the measurement models.

UA uses a model where the sessions and the page views are taken into consideration. Sessions are group of user interaction with the website that will take place in a given timeline. GA uses

model where the events and parameters are taken into consideration. GA4 uses any type of interaction with the website as an event. (Meyrick, 2022)

The dashboards are different in each accounts. In UA home dashboard the menu holds the user activities of the last 7 days as in the reports the user has viewed and google insights while in GA4 have divided the menu as "Reports" and "Explore" where in reports section user can see the predefined reports. The predefined reports have been grouped to understand the report.

Comparing UA with GA4, UA is created to track events automatically but other reports that need to be generated the user must create/ setup manually. In GA4 tracks the basic events also it has more built-in such as scrolling and clicks of the website. A new user could work with GA4 with ease while in UA user would have to setup some parts of it. (Balatinac, 2022)

Advantages of GA4

- Measurement model is more accurate compared to UA.
- GA4 has already setup automatic tracking for certain types of events.
- Has a new set of metrics for more accurate engagement tracking.
- Provides free connection to BigQuery.
- Withing the reporting interface the debugging is provided.

(Key Benefits of Using Google Analytics 4 (GA4) - Optimize Smart, 2022)

Task 2 : Google Analytics Reports : Dimension and Metrics

A) GA Reports

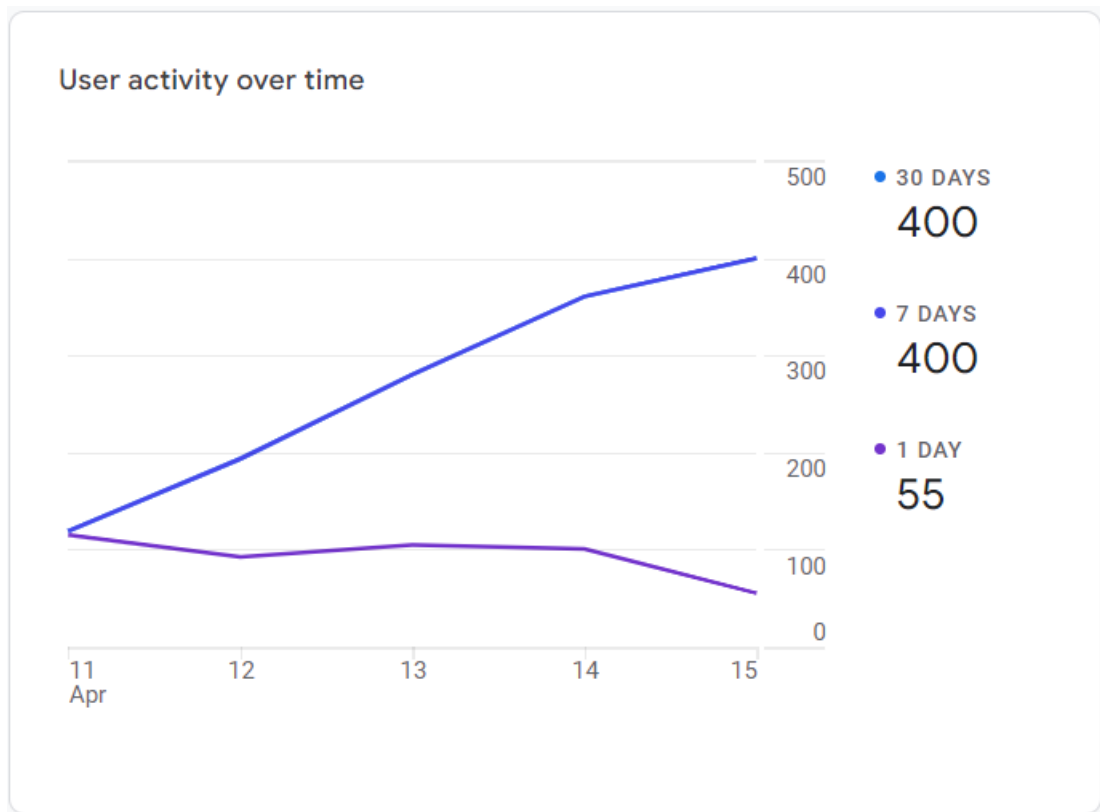### 1) User activity over time

Figure 1 : User activity over time

The user activity over time shows the number of users visited the website of the time period of 11th April to 15th April 2022. A total of 400 users have visited the website during the time period. The graph shows 2 results(lines) the first result which has increase every day is the total number of users visited each day added to the previous day, the second result is the number of user visited the website day by day during the time period. To elaborate it more during the day 1(11th April) 115 users visited the website, on the day 2(12th April) 95 users visited the website, on the 3rd day(13th April) 105 users have visited the website, on the 4th day(14th April) 100 users have visited the website and on the final day(15th April) 55 users have visited the website.(All the user count numbers were taken by hovering through each day of this result in the GA4 account).

As conclusion the users activity have decreased on the last day comparing to the other days. We can clearly say that users were interested during the first few days of the website traffic gaining period but at the last 2 days they have shown less interest in visiting the website.

2) Views by 'Page title and screen class '

WHICH PAGES AND SCREENS GET THE MOST VIEWS?

Views by Page title and screen class

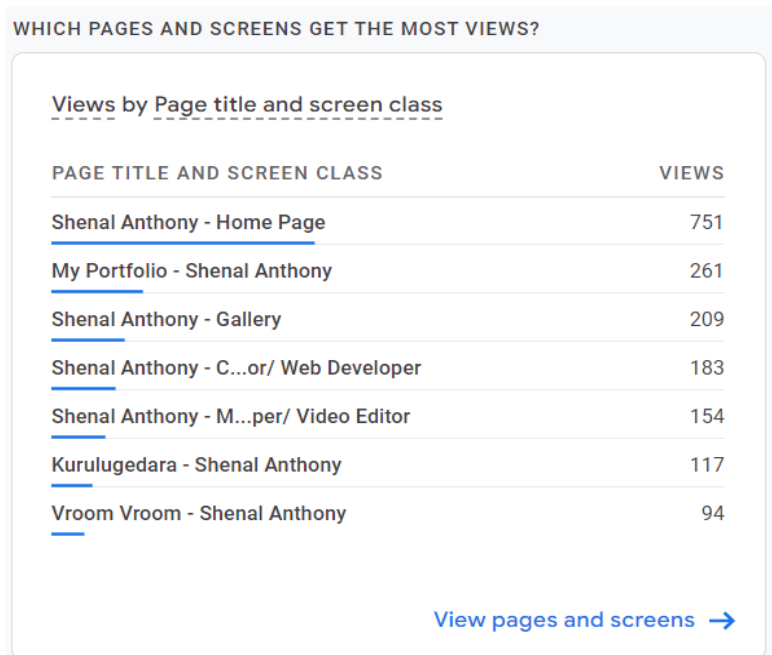| PAGE TITLE AND SCREEN CLASS	VIEWS
Shenal Anthony - Home Page	751
My Portfolio - Shenal Anthony	261
Shenal Anthony - Gallery	209
Shenal Anthony - C...or/ Web Developer	183
Shenal Anthony - M...per/ Video Editor	154
Kurulugedara - Shenal Anthony	117
Vroom Vroom - Shenal Anthony	94

View pages and screens →

Figure 2 : Views by 'Page title and screen class '

The above figure shows the number of times users view each screen by screen class. The GA4 automatically monitors the user activity time to time as long as the user stay in the web site. According to the results the home page has the highest number of views out of all the pages in the website that is 751 views, next is the 'My Portfolio' page has 261 views, next the 'Gallery' page has 209 page views, next the 'Contact Me' page with 183 page views and next the 'My Services' page has 154 page views. The main 5 pages have got more views compared to the other subpages on the website. A more detailed insight is given below to understand more about the page views.
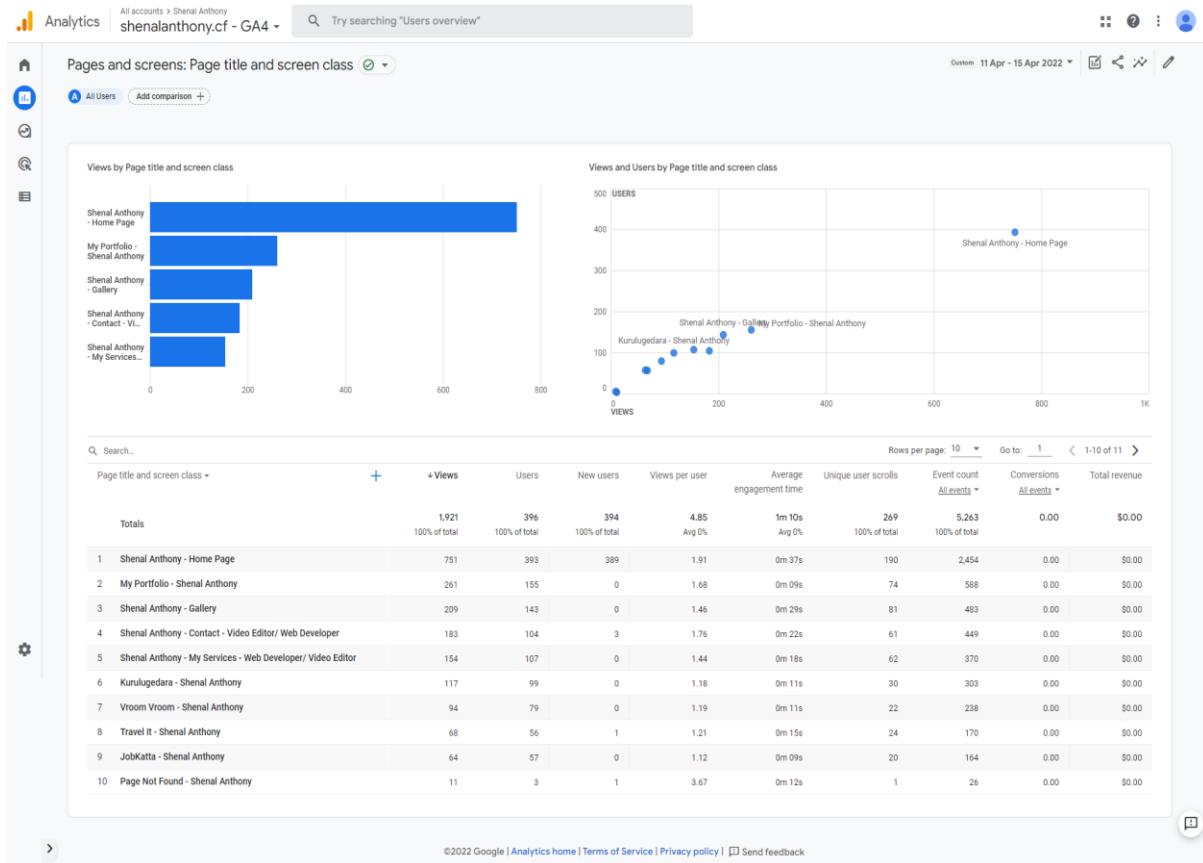
Figure 3 : Page and screen class

The above figure shows a more detail view of the views by page title. This shows the total number of users viewed each page in the website, also the total number of new users viewed each page. Along with it the average engagement time a user spent on each page is also shown.

There is a high rate of users viewed the home page compared to other pages which can tell the more users have visited and engaged with the website. The average time a user spent on each page is low as the highest time and that to for the home page is 37 seconds. Now that tells us that users have moved from on page to another in short time.

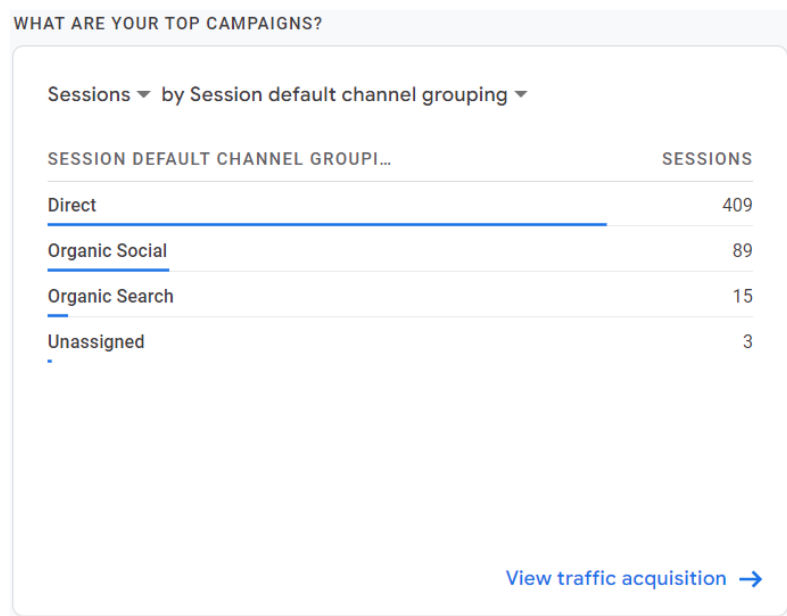## 3) Sessions by 'session default channel grouping'

Figure 4 : Sessions by 'session default channel grouping'

The above figure shows total number of sessions that was created with different channels. Traffic can be gained using different methods the author used mailing, posting on social media platforms were the main channeling groups. As per the above figure 409 sessions were created from direct channel, this direct channels have been created from users clicking the website link directly from email. 89 sessions have been created from organic social channels, 15 sessions from organic search's and 3 from unassigned. Below figure gives a more detailed view of the session by session default channel grouping.
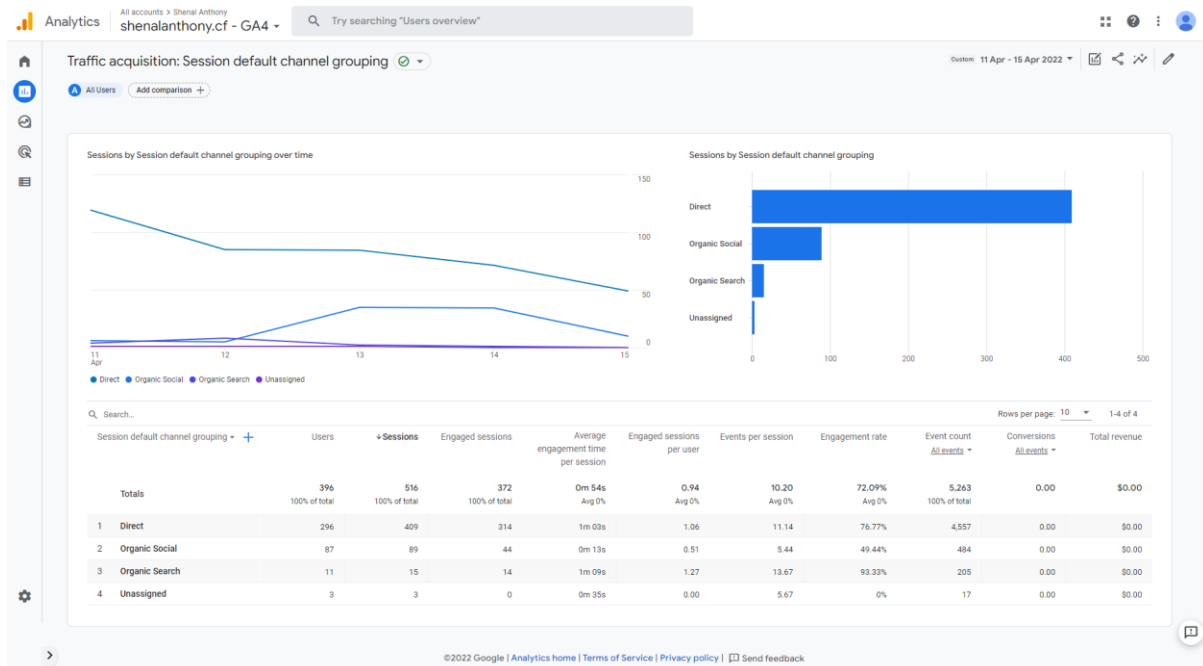
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Figure 5 : Traffic acquisition: Session default channel grouping

Looking at the above figure we can come to a conclusion that the average engagement time per session of direct channels are high that is 1 minute and 3 seconds. More sessions have been active when users have come to the website directly from the website link.

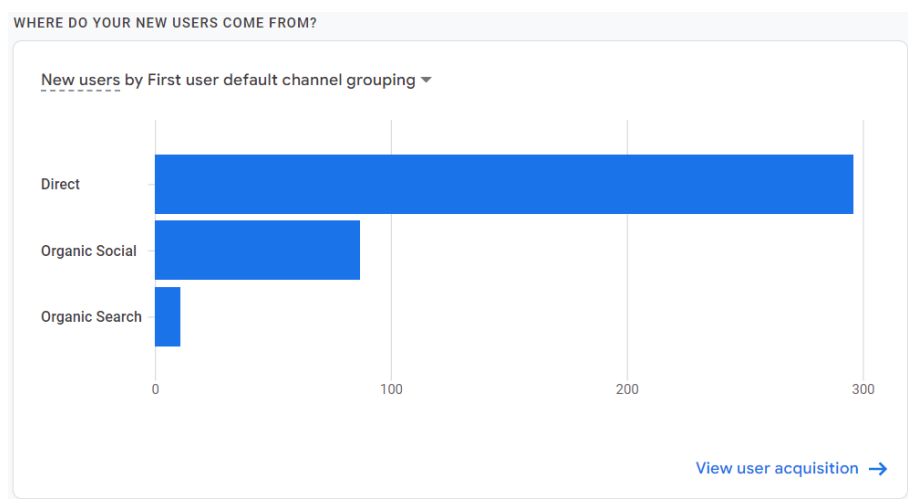## 4) New users by 'First user default channel grouping'

Figure 6 : New users by 'First user default channel grouping'

The above figure shows the number of new users channel groups. GA4 tracks new users channel groups, how the user has visited the website. 296 new users have been identified as

direct, 87 new users have identified as organic social and 11 new users have been identified as organic search category. A more detail view is given below.
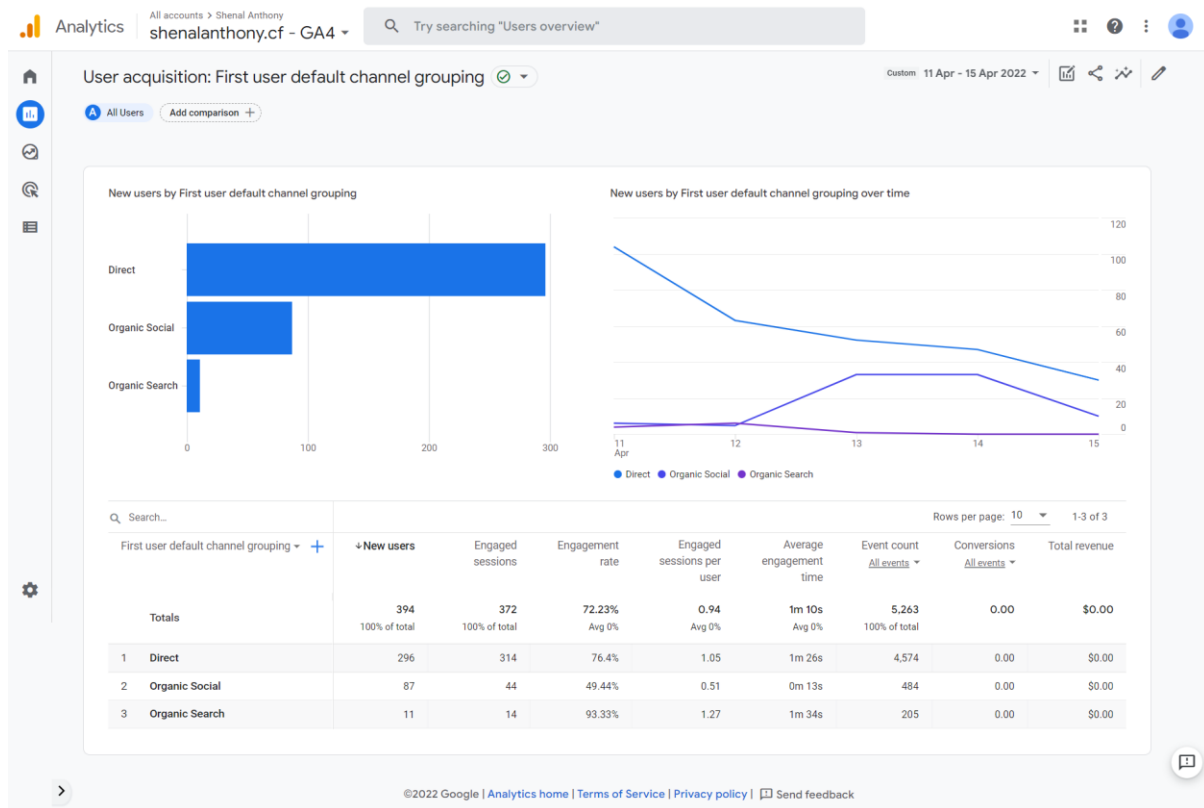

Figure 7 : Use acquisition: First user default channel grouping

The above figure shows more static view of the new user default grouping. In this view the author could get an idea of how the new user has interact with the website such us the average engagement time, total number of session, engaged session per user etc.

Taking all the results into consideration we can tell that more users have visited the website through direct links. Organic search is very low and need to be improve as in future it might help in gaining more traffic when many would not be satisfied with email campaigns.
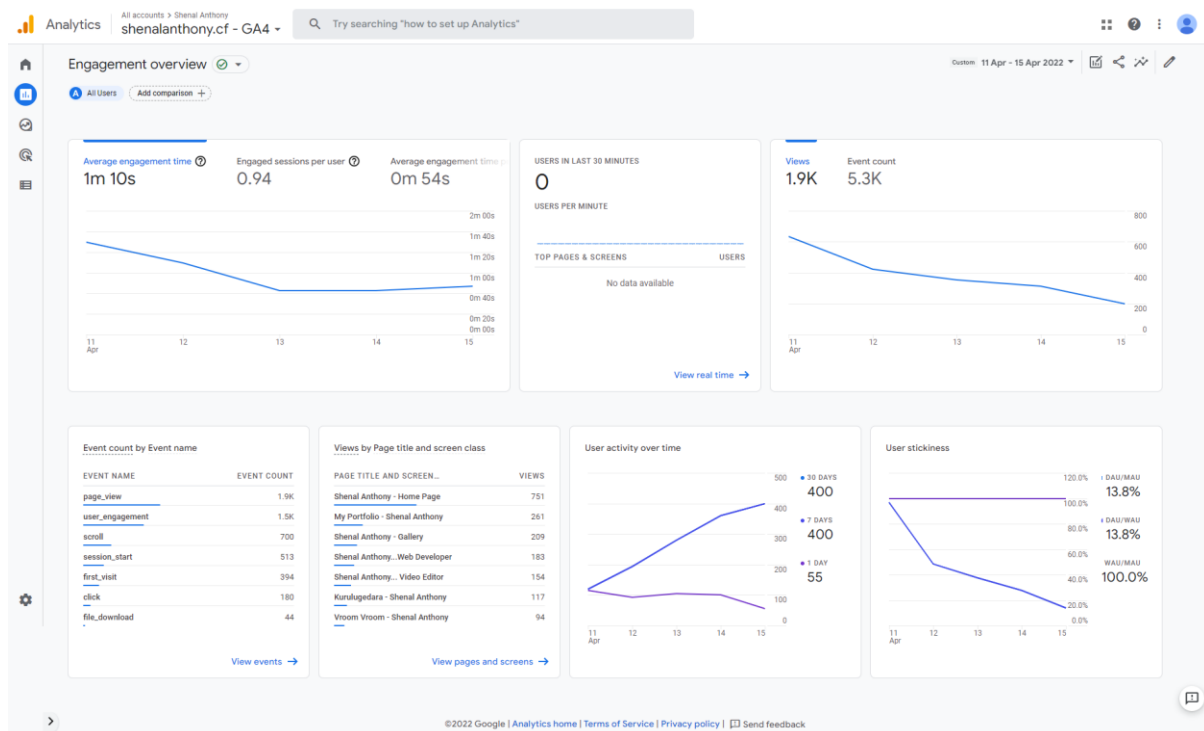
5) User Engagement (overview)

Figure 8 : User Engagement (overview)

The above figure is for the user engagement overview of the website. The data is for the date range of 11th April – 15th April. During the time the average engagement time is 1 minute and 10 seconds. Also, the average engagement time per session is at 54 seconds.

During the first day the average engagement time was 1 minute and 29 seconds, 2nd day the time was 1 minute and 9 seconds, 3rd day the time was 42 seconds, 4th day the time was also 42 seconds and in the final day it was 47 seconds. The total number of views gained during the time period were 1.9K(1900) and 5.3K(5300) event count on the website.

We can see the average engagement time has decreased day by day. Maybe it was because of users have already visited the website the other day so they have just gone through the website with little amount of time. The author should look into this and make changes in website so that in future users would stay longer on the website.

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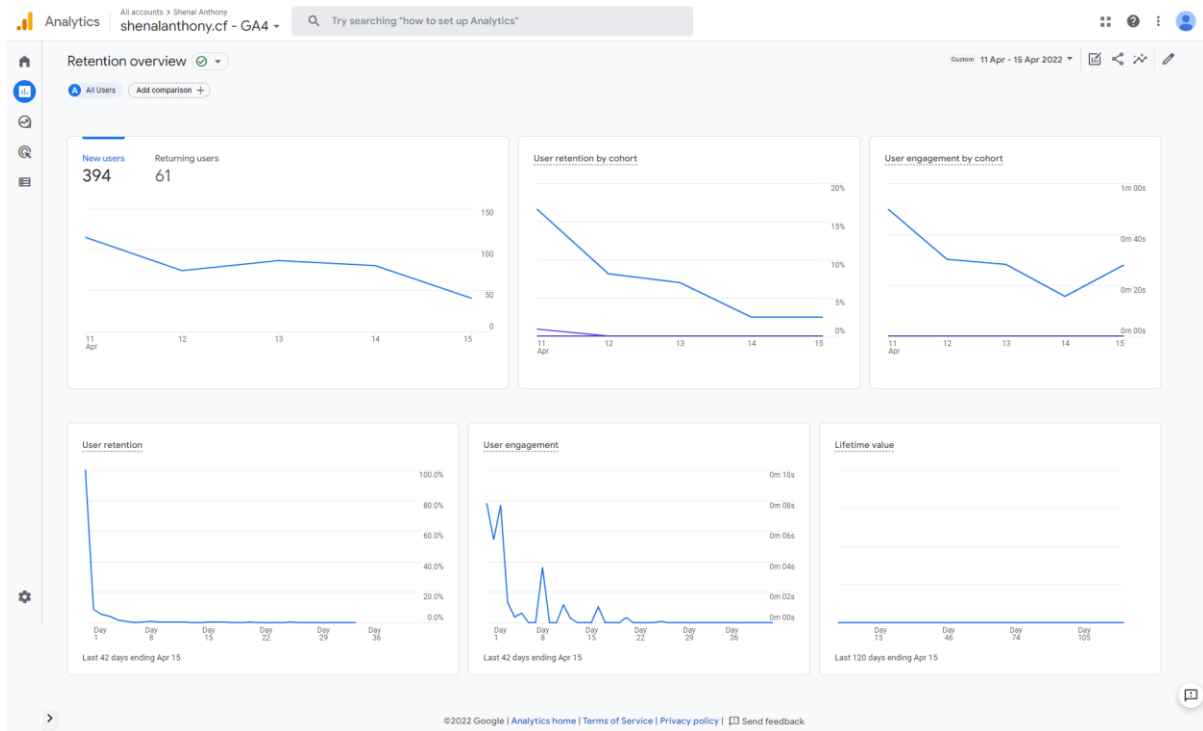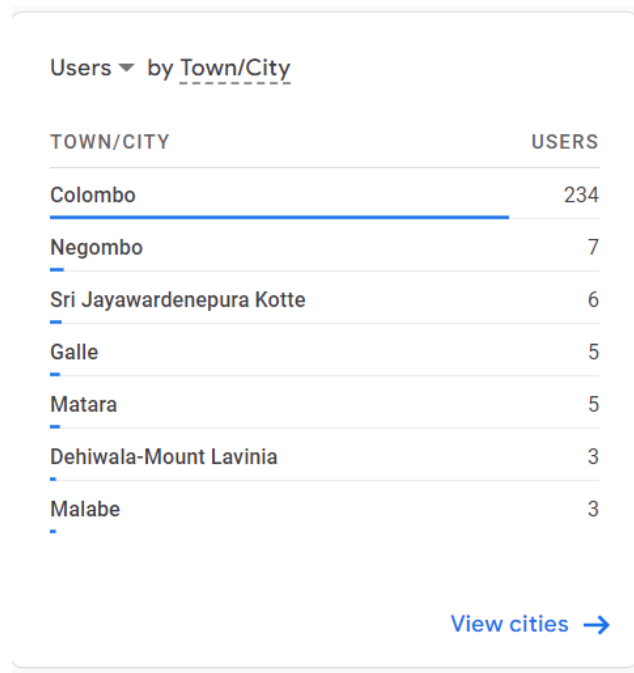## 6) User Retention (overview)

Figure 9 : User Retention (overview)

The above figure shows returning users for the time period of 11th April to 15th April. Out of 394 users that have visited the website 61 users have return to the website during the 5day time period. As a percentage it is 15.48% for some point the user retention is better as 61 users had an interest to the website and have return during the time period.

The author should have tried some more tricks in order to retain users. Returning users are important to a site as they have been to the website and already have an overview of what's happening on the website compared to new users.

7) Users by City

Figure 10 : Users by City

GA4 allows us to see from where users have visited the website through their device location. As shown in the above figure only the towns/ cities in Sri Lanka are taken into consideration. 234 users have visited the website from Colombo that is the highest number of users by city. A more detail view is given below to understand more of this.
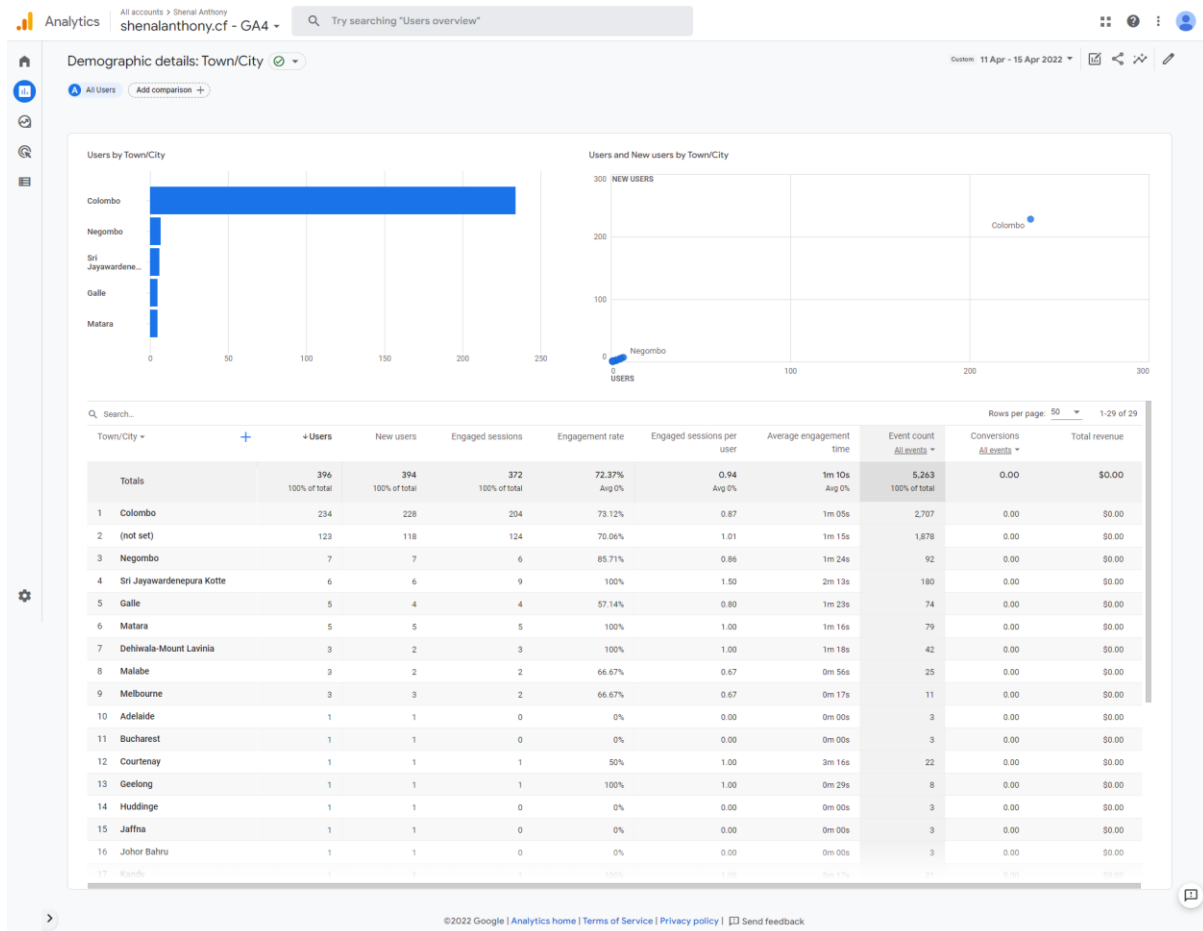
Figure 11 : Demographic Details : Towns/ City

The above figure shows the user engagement by city vise. The engagement rate is different compared to each of the city as only the top 2 cities have gained more users thane the other but the average engagement time and the event count is high when you look from the city by city.

We can say that most of the users are from Colombo and Gampaha(the not set city area is Gampaha). The author should try more to gain traffic from other cities and overseas as well to have a proper flow.

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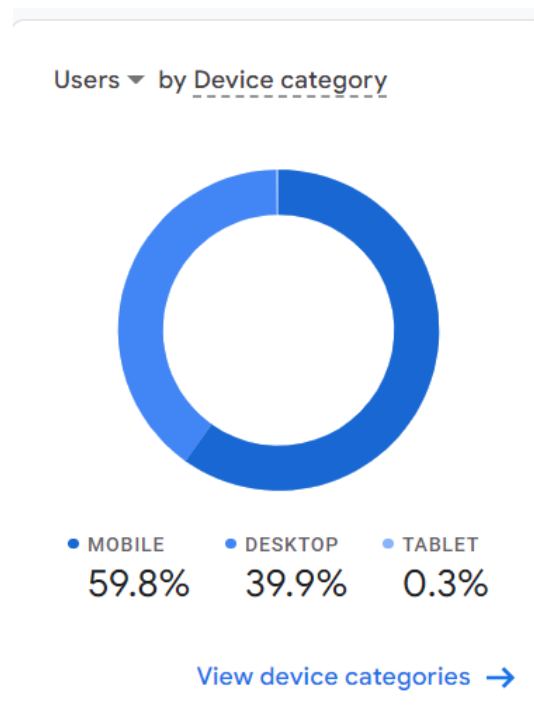
8) Returning users by device category

Figure 12 : Returning users by device category

Another way we can get a overview of how users interact with the website is through the users by device category. Now the GA4 only shows all the users devices they have used to view the website. 59.8% users have used mobile phones while 39.9% have used desktop and 0.3% users have used tablet to view the website. A more detailed view is given below to understand more about this.

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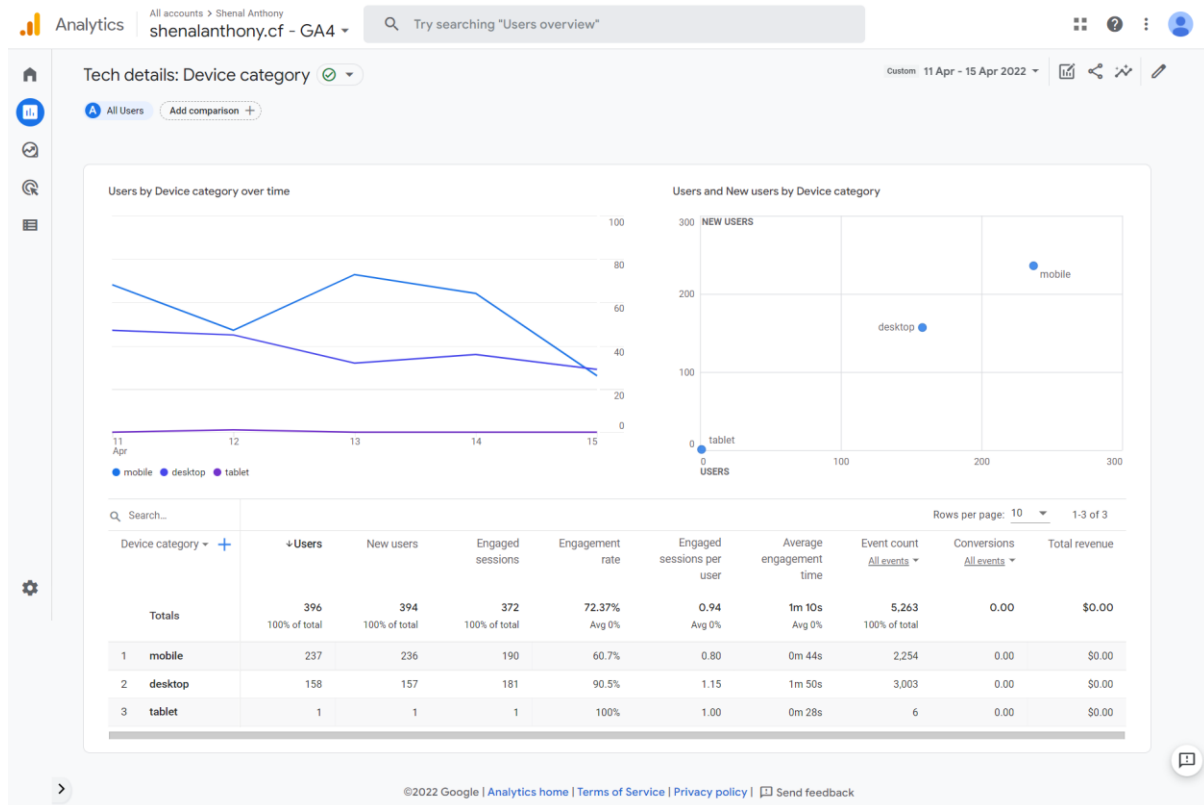
Figure 13 : Returning users by device category detailed viewed

The first graph shows the drastic view of each device during the time period where we can see that many users have used mobile phones as their device. 237 users have used mobile phones, 158 users have used desktop and only one user has used a tablet to view the website.

This shows that most of the users will use mobile phone as their device so the website should be compatible to mobile view. The website must be responsive to each device as users have different device so to make an impression responsiveness and compatibleness should be top priority.
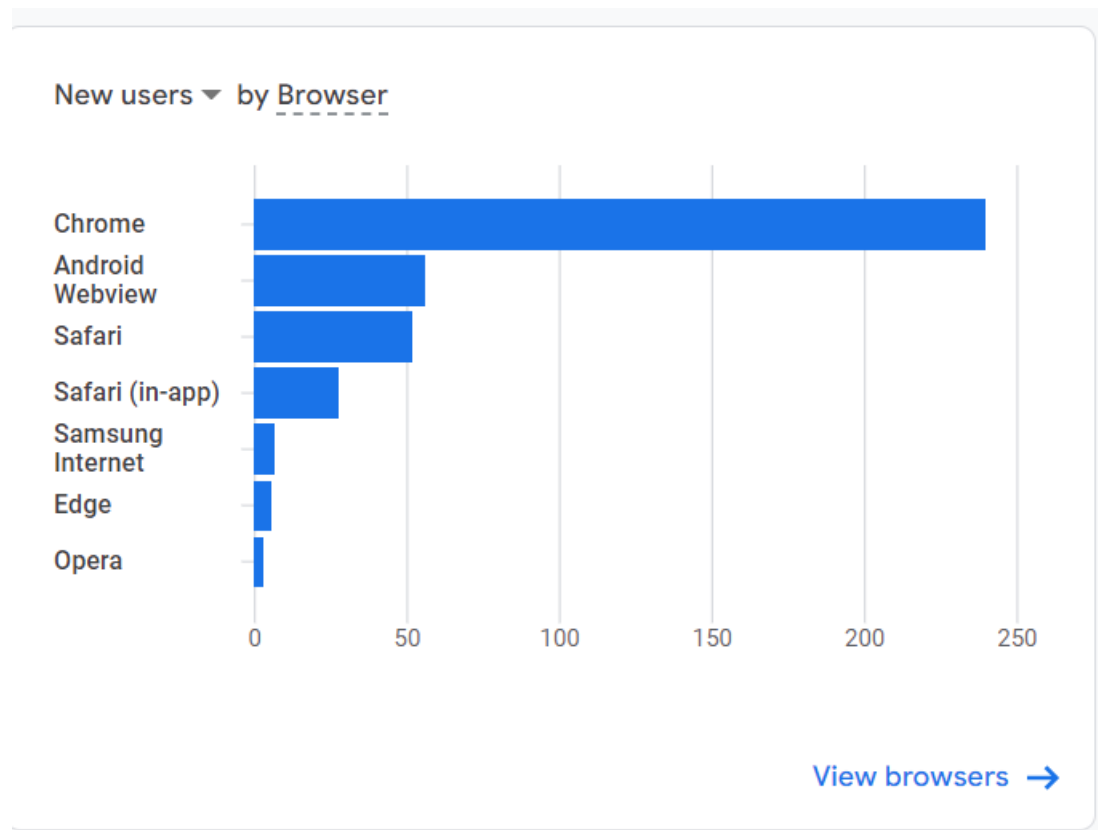
9) New users by browser

Figure 14 : New users by browser

GA4 also track the users browser which was used to visit the website. Chrome is the most used browser by users, next android webview, safari browser, safari(in-app), Samsung internet, Microsoft edge and opera are the top browsers users have used. A more detail view is given below to understand more about this.
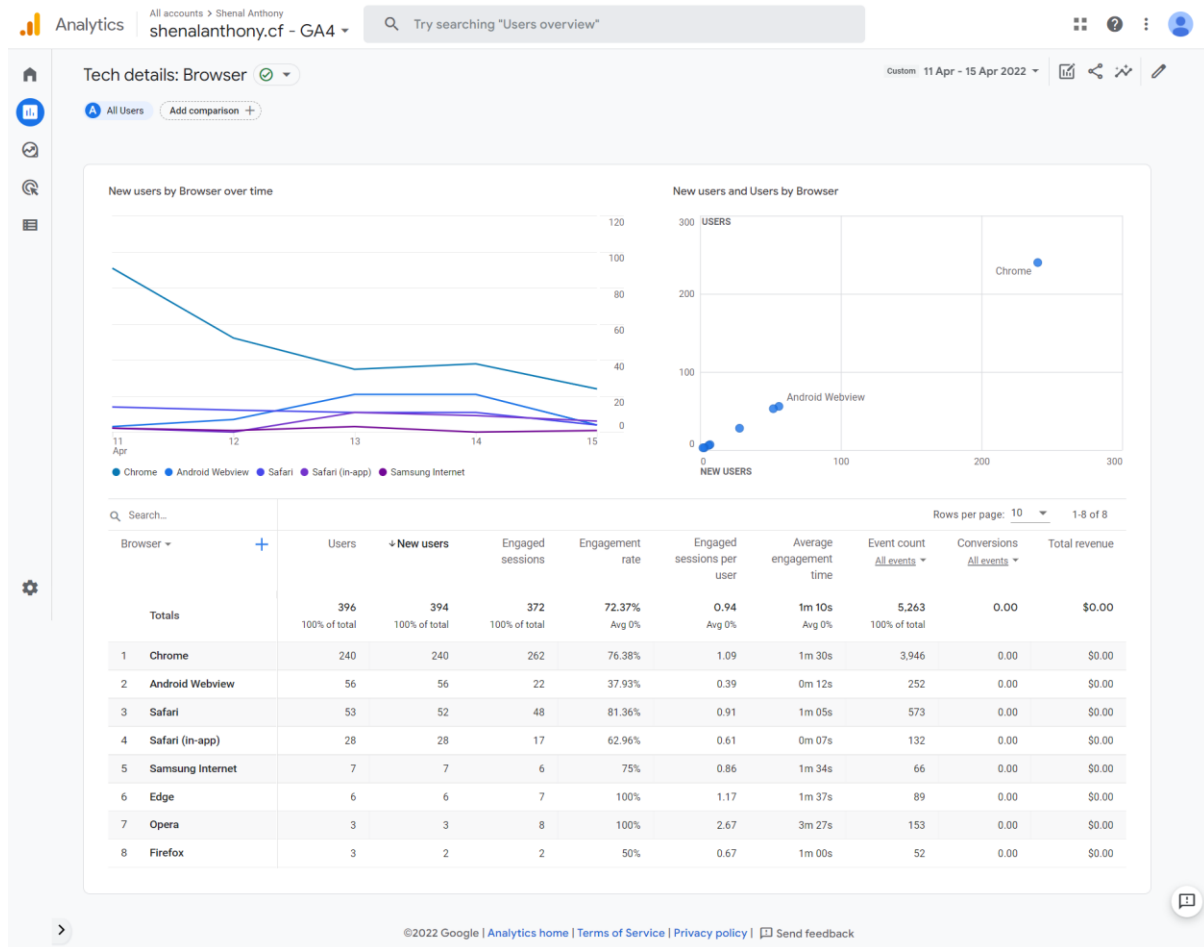
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Figure 15 : Tech details : Browser

Chrome is the most used browser as per the data which is 240 users. Other browsers have also been used by users to view the website.

From this we can say that different users use different browsers so the website should be compatible to each of the browser if it is not compatible users might not stay long in the website and user retention might even drop in the future.

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B) Dimension and Metrics

Metrics and dimensions are the key attributes GA4 that helps to create, organize and analyze the traffic data on the website. The metrics are the quantitative measurements while the dimensions are the labels that are created to describe the GA4 reports. (Dimensions & Metrics in Google Analytics | GA Glossary | Hotjar, 2022)

The bellow figure shows how the metrics and dimensions are created.

Figure 16 : Dimension and Metrics

The country is the dimension, countries are the dimension values while the columns(new users, engaged sessions, etc..)are the metrics used to describe the dimensions.

Normally in GA4 have their predefined dimensions to describe the metrics. The predefined dimension is called the primary dimension we can add a secondary dimension to describe the report more effective way. The bellow figure shows the primary and secondary dimensions added to the report.

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Figure 17 : Primary and secondary dimension

In GA4 the predefined metrics is enough to describe the reports dimensions. We can change the metrics value like given in the bellow figure. Changing the metrics value also helps us to identify different aspects of the report as comparing each of the values helps to analyze the report well.

Figure 18 : Changing the metrices

PART B : ANALYTICS AND KEY PERFORMANCE INDICATORS (KPIs)

A) What are a Key Performance Indicators(KPI)

KPI are quantitative measurement for performance of a objective within a time period. KPI provides the organization to come to better decisions while archiving their set milestones making progress. Organizations can move froward in strategic way when working with KPIs. (What is a Key Performance Indicator (KPI) Guide & Examples, 2022). KPIs are important in many ways such as in a organization keeping employers aligned to complete the projects, this will help to identify organizations failures and success likewise. There are many ways of identifying and creating a strong KPI. The main steps are given below on how a KPI should be Identified.

- Create Objectives – Objectives that need to be archived.
- Describe Results – What should the result be when you archived that objective.
- Identify Measures – Decide on the measures you will take to archive the object.
- Write KPIs – Write the KPI in the format of "Action- Detail Value – Unit - Deadline".

The more detailed view on how a KPI should be written is given below.

- Brief Description
- Exact change that needs to be done
- Time period
- Changes on the object
- Monitoring period

B) Identification of KPIs on the Google Merchandise Store

1) Returning user to the website is low

We can see that 80K new users have visited the website during the last 28 days(15th April – 12th May) and only 11K users have returned to the website. If we take that as a percentage the returning user percentage is 13.75% which we can say it is low when the website has more

users visitors. Returning users plays a huge role on the website where they know how the website works and what it could offer them, this will help to build up a market for the website if it is selling products. So, the website should do changes in order to increase the number of returning users to the website.
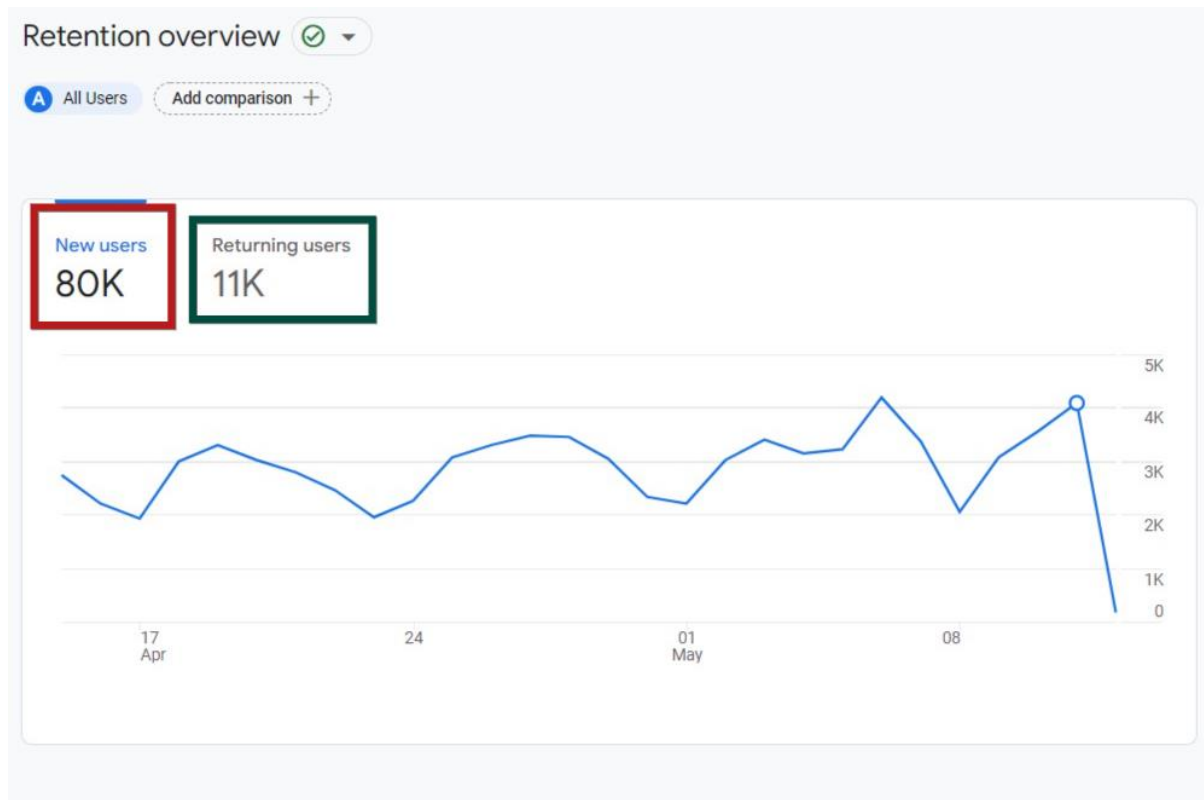

Figure 19 : Retention Overview in Google merchant webstore

The objective of this is to increase the returning user of the website and we can create the KPI for it to archive the objective.

- The returning users as of 15th April to 12th May should be increased up to 20K during the time period of the next 2 months. To archive this the website should have gamification like process where user could interact with and later redeem the points they gain for a discount like something. The change should be done and be monitored every week.

2) Low view count from different countries users

The Google merchandise store has many user visiting from different countries. United States have the most number of users based on the country. Countries like Sri Lanka, Austria users

visits are low compared to the other countries. From Sri Lanka only 191 users have visited the website withing the last 28 days(15th April to 12th May). Likewise, many countries have less view counts also. The website should be reached to more users as it will help to gain more traffic towards the website.
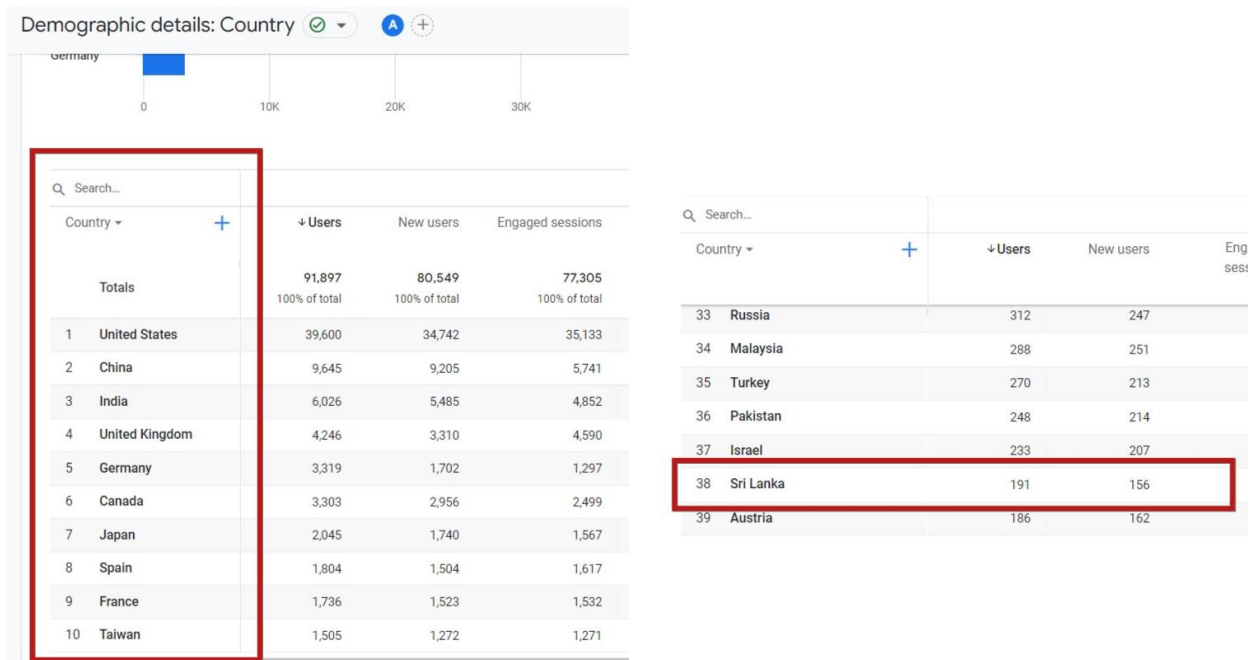

Figure 20 : Users by country in Google merchant webstore

The objective is simple gain more users by reaching out more in many countries as possible.

- The total number of Sri Lankan users as of 15th April to 12th May should be increase up to 2000 during the time period of the next 6 months. To archive this running and ad campaign in Sri Lanka introducing the website should be done and the process must be monitored every 2 weeks.

3) Average engagement time per session is low

The average engagement time is 1 minute and 44 seconds which is a better time as it shows that users have stayed long enough on the website. But compared to that the average engagement time per session is at 1 minute and 15 seconds which is some what of low. The session times per user should be high as the longer the session is active the more user would interact with the website such as browse products, view details etc. The session time is low

maybe because of the less instructiveness of the website and many would just leave without browsing in other pages on the website.
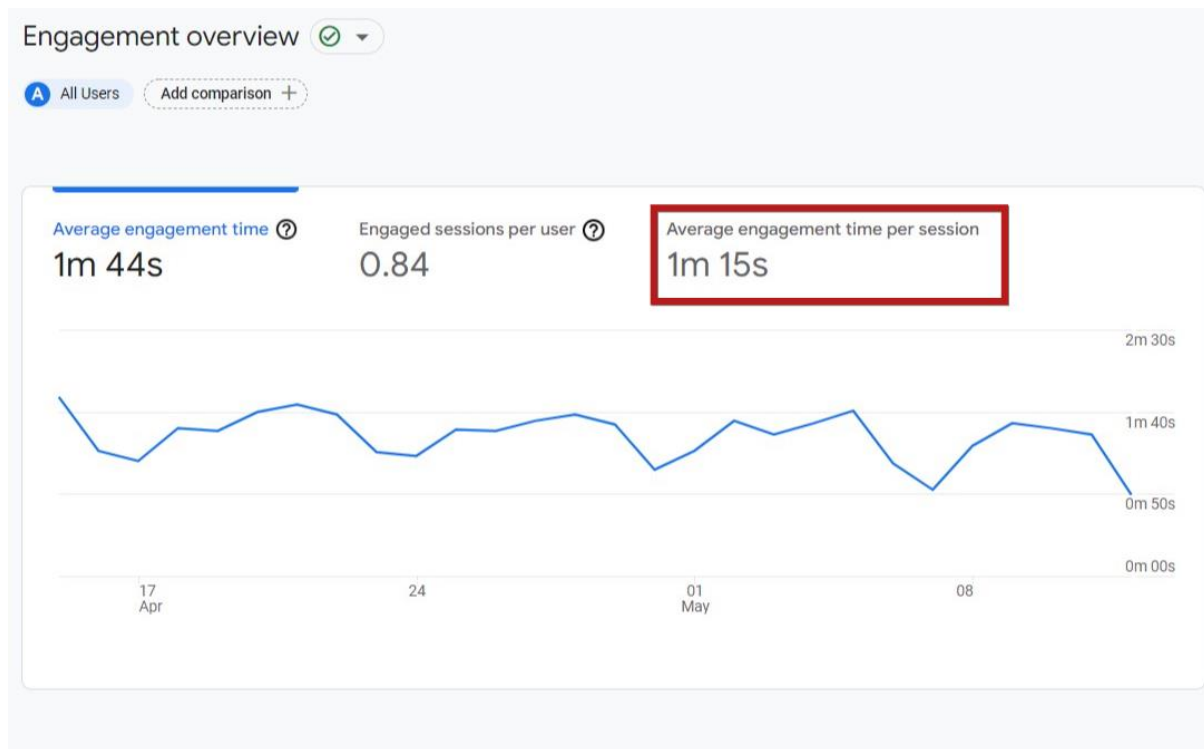

Figure 21 : User engagement time in Google merchant webstore

The objective for this is to somewhat increase the average engagement time per session.

- The average engagement time per session as of 15th April to 12th May 2022 should be increased up to 1 minute and 30 seconds during the time period of the next 6 months. To archive this the website should be more interactive for that having a gamification like user loyalty points giving process. The change should be done and be monitored every 2 weeks.

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