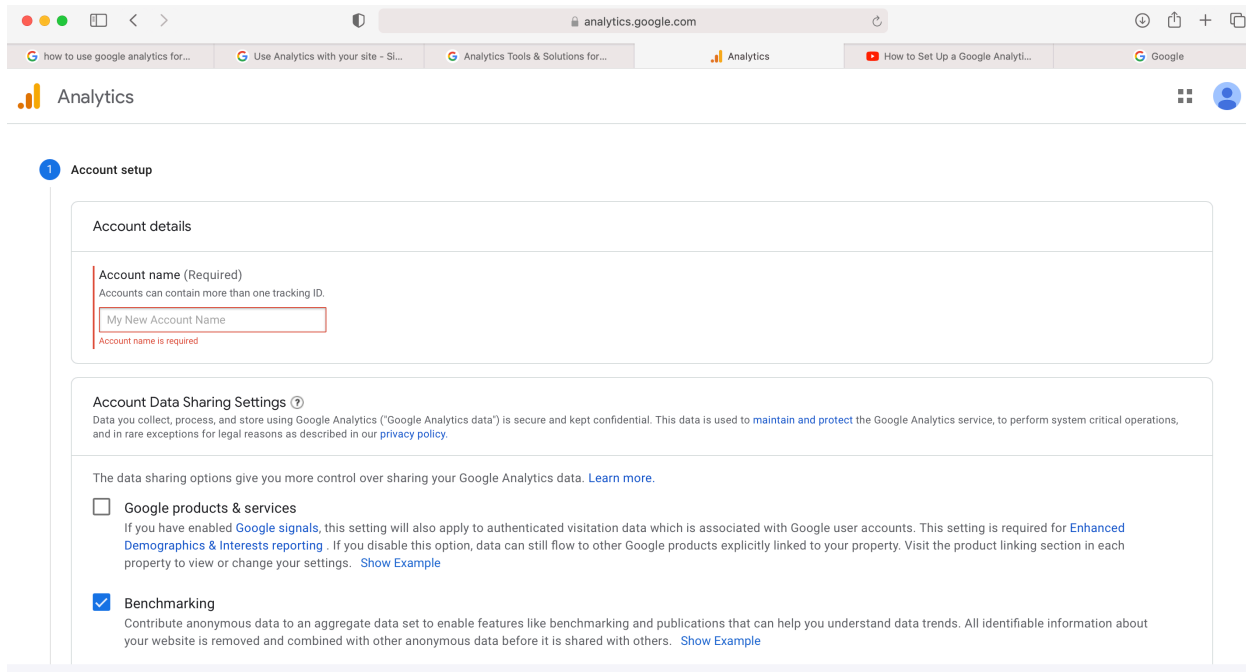


Google and Facebook Analytics

section 1= Google Analytics.

First we need to set up a Google analytics account. Then provide an account name. After that we need to configure the data-sharing setting. Add the data stream with the url of the website and a



The screenshot shows the 'Account setup' page in Google Analytics. The page is titled '1 Account setup' and contains two main sections: 'Account details' and 'Account Data Sharing Settings'.

Account details

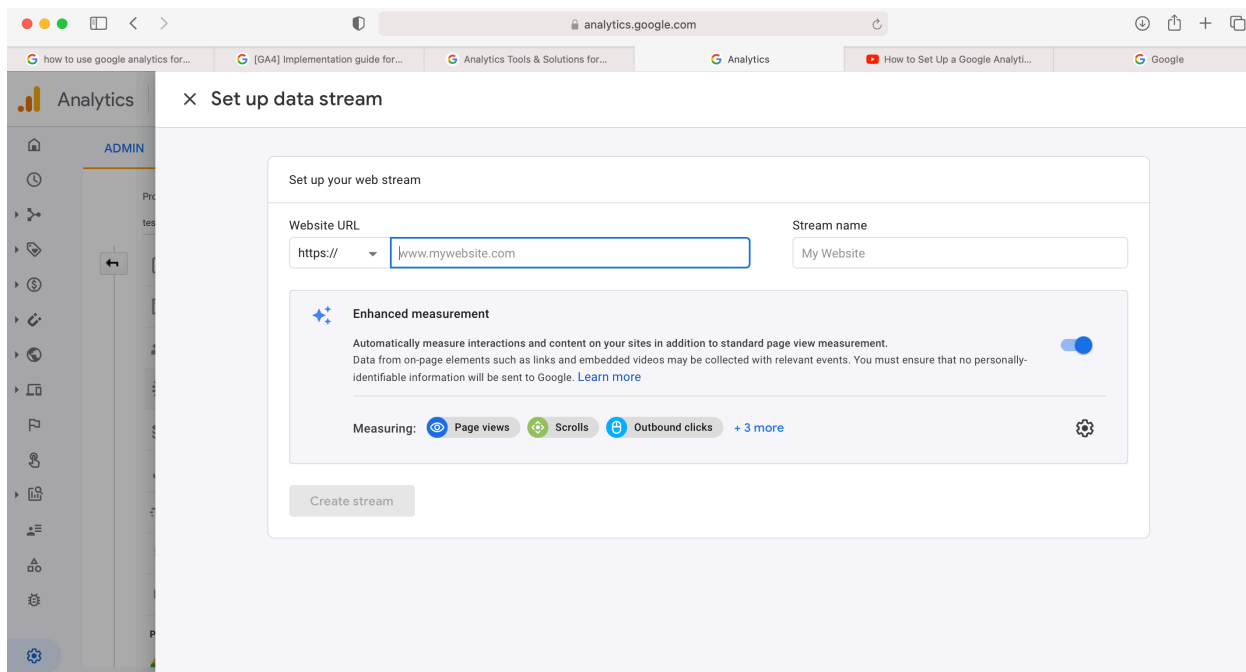
- Account name (Required)**: A text input field with the value 'My New Account Name'. Below the field, a red error message states 'Account name is required'.

Account Data Sharing Settings

Data you collect, process, and store using Google Analytics ("Google Analytics data") is secure and kept confidential. This data is used to [maintain and protect](#) the Google Analytics service, to perform system critical operations, and in rare exceptions for legal reasons as described in our [privacy policy](#).

The data sharing options give you more control over sharing your Google Analytics data. [Learn more](#).

- ☐ **Google products & services**
If you have enabled [Google signals](#), this setting will also apply to authenticated visitation data which is associated with Google user accounts. This setting is required for [Enhanced Demographics & Interests reporting](#). If you disable this option, data can still flow to other Google products explicitly linked to your property. Visit the product linking section in each property to view or change your settings. [Show Example](#)
- ☒ **Benchmarking**
Contribute anonymous data to an aggregate data set to enable features like benchmarking and publications that can help you understand data trends. All identifiable information about your website is removed and combined with other anonymous data before it is shared with others. [Show Example](#)



The screenshot shows the 'Set up data stream' page in Google Analytics. The page is titled 'Set up your web stream' and contains the following fields and sections:

Website URL: A dropdown menu showing 'https://' and a text input field with the value 'www.mywebsite.com'.

Stream name: A text input field with the value 'My Website'.

Enhanced measurement: A section with a blue star icon. It contains the text: 'Automatically measure interactions and content on your sites in addition to standard page view measurement. Data from on-page elements such as links and embedded videos may be collected with relevant events. You must ensure that no personally-identifiable information will be sent to Google. [Learn more](#)'. To the right of this text is a toggle switch that is currently turned on (blue).

Measuring: A section with three icons and labels: 'Page views' (blue icon), 'Scrolls' (green icon), and 'Outbound clicks' (blue icon). To the right of these is a '+ 3 more' link and a gear icon.

Create stream: A button at the bottom of the form.

Now Stream has been created.

Web stream details

STREAM URL: <https://testing-310621.uc.r.appspot.com> | STREAM NAME: **test2** | MEASUREMENT ID: **G-7X5FRFYW67**

STREAM ID: 2443416246 | STATUS: Receiving traffic in past 48 hours. [Learn more](#)

Enhanced measurement

Automatically measure interactions and content on your sites in addition to standard page view measurement. Data from on-page elements such as links and embedded videos may be collected with relevant events. You must ensure that no personally-identifiable information will be sent to Google. [Learn more](#)

Measuring: ☒ Page views ☒ Scrolls ☒ Outbound clicks [+ 3 more](#)

Tagging Instructions

Use one of the following to start collecting data.

[Add new on-page tag](#) | [Use existing on-page tag](#)

Global site tag (gtag.js) Use this if you're using a website builder or CMS-hosted site. Add the Analytics tag to your website to begin seeing data in your property.

Copy the global site tag into the **<head>** section of your HTML. Or, if you use a website builder (e.g. WordPress, Shopify, etc), [copy the global site tag into your website builder's custom HTML field](#).

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

Automatically measure interactions and content on your sites in addition to standard page view measurement. Data from on-page elements such as links and embedded videos may be collected with relevant events. You must ensure that no personally-identifiable information will be sent to Google. [Learn more](#)

Measuring: ☒ Page views ☒ Scrolls ☒ Outbound clicks [+ 3 more](#)

Tagging Instructions

Use one of the following to start collecting data.

[Add new on-page tag](#) | [Use existing on-page tag](#)

Global site tag (gtag.js) Use this if you're using a website builder or CMS-hosted site. Add the Analytics tag to your website to begin seeing data in your property.

Copy the global site tag into the **<head>** section of your HTML. Or, if you use a website builder (e.g. WordPress, Shopify, etc), [copy the global site tag into your website builder's custom HTML field](#).

```
<!-- Global site tag (gtag.js) - Google Analytics -->
<script async src="https://www.googletagmanager.com/gtag/js?id=G-7X5FRFYW67"></script>
<script>
  window.dataLayer = window.dataLayer || [];
  function gtag(){dataLayer.push(arguments);}
  gtag('js', new Date());

  gtag('config', 'G-7X5FRFYW67');
</script>
```

Google Tag Manager

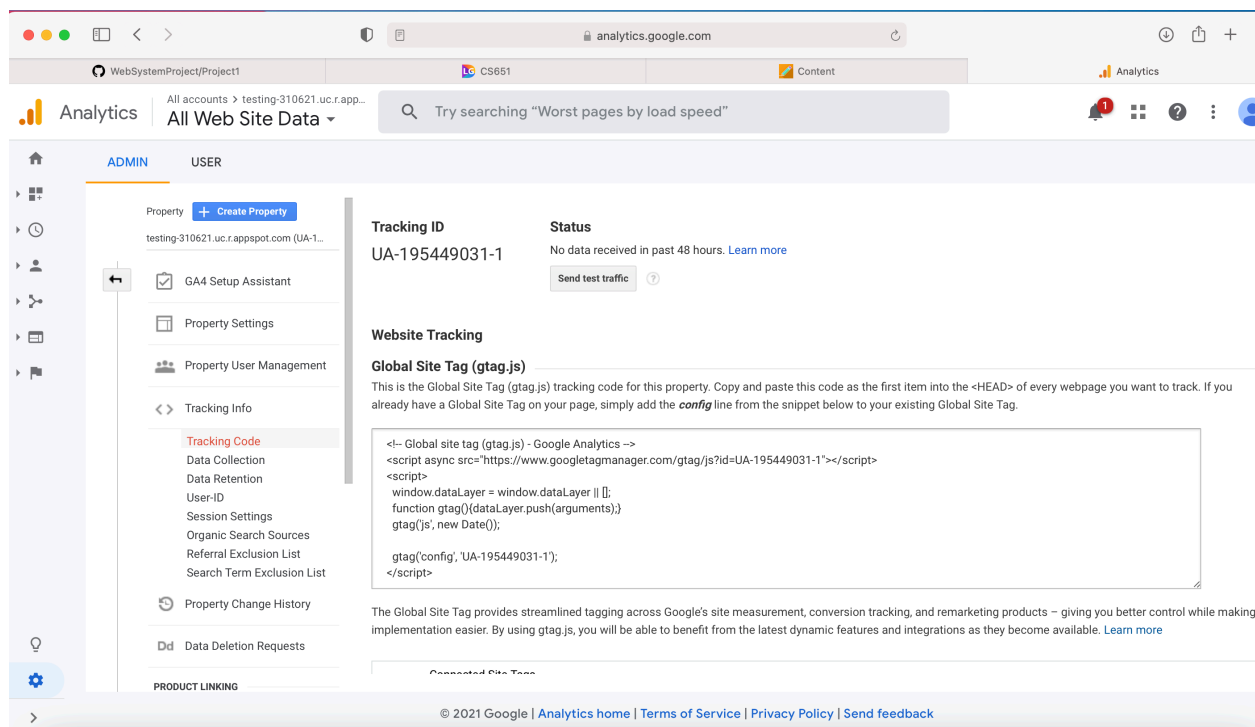
Add and maintain tags through a web interface to send data to Google Analytics, as well as other Google and non-Google tools.

Additional Settings

Add the Global site tag(tag.js) in all the frontend jsp file. This will stream analytics data from the web browser to google analytics server.

Server Side Analytics

Created a tracking ID to use in the server side.



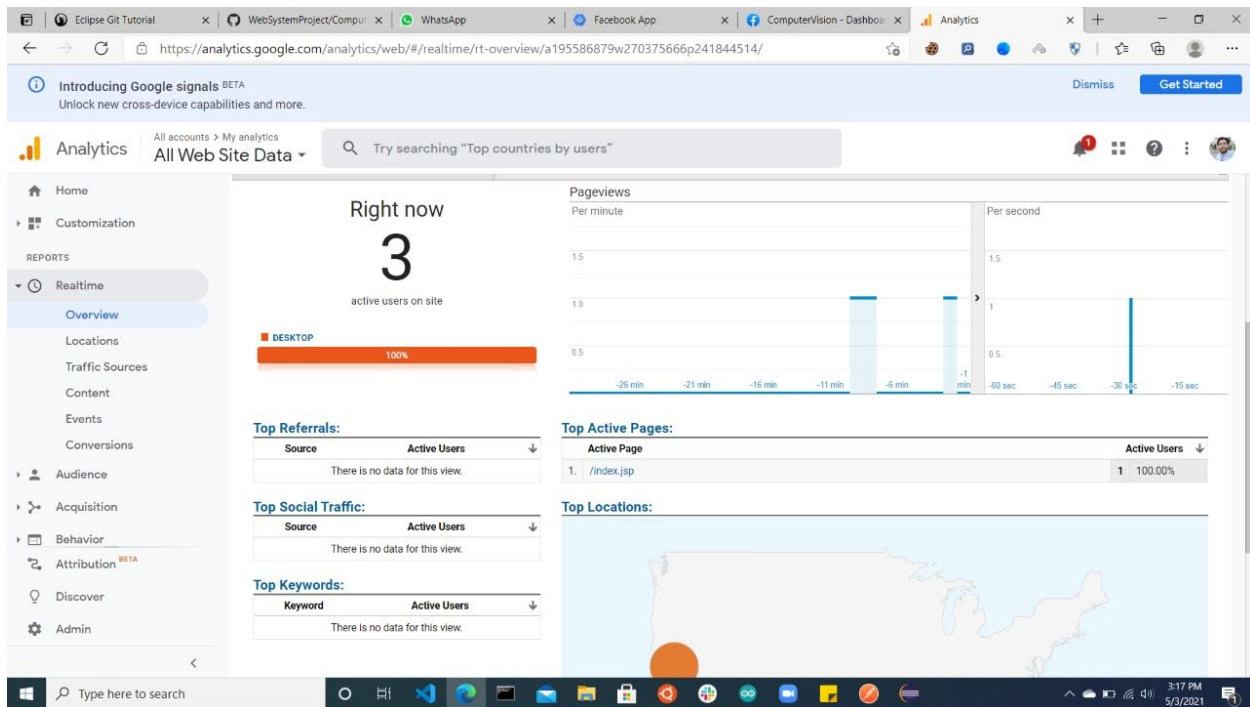
The screenshot displays the Google Analytics web interface. The browser address bar shows 'analytics.google.com'. The page title is 'All Web Site Data'. The left sidebar contains a navigation menu with options like 'ADMIN', 'USER', 'Property', 'GA4 Setup Assistant', 'Property Settings', 'Property User Management', 'Tracking Info', 'Tracking Code', 'Data Collection', 'Data Retention', 'User-ID', 'Session Settings', 'Organic Search Sources', 'Referral Exclusion List', 'Search Term Exclusion List', 'Property Change History', 'Data Deletion Requests', and 'PRODUCT LINKING'. The main content area shows the 'Tracking ID' as 'UA-195449031-1' and the 'Status' as 'No data received in past 48 hours. Learn more'. Below this, the 'Website Tracking' section displays the 'Global Site Tag (gtag.js)' code snippet. The code is as follows:

```
<!-- Global site tag (gtag.js) - Google Analytics -->
<script async src="https://www.googletagmanager.com/gtag/js?id=UA-195449031-1"></script>
<script>
  window.dataLayer = window.dataLayer || [];
  function gtag(){dataLayer.push(arguments);}
  gtag('js', new Date());

  gtag('config', 'UA-195449031-1');
</script>
```

The footer of the page shows '© 2021 Google | Analytics home | Terms of Service | Privacy Policy | Send feedback'.

1.1.a: metric 1- provide a graphs/plots/visualizations:



1.1.b: interpret the metric 1's trends:

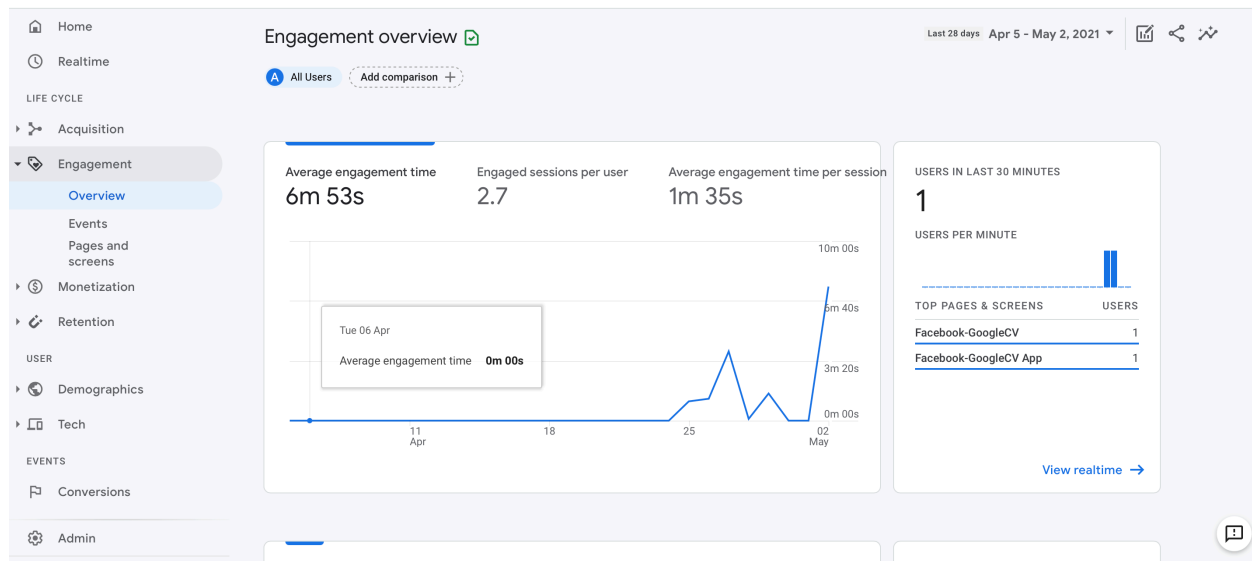
This shows the total number of user accessing the url. The may vary as it depends upon the total number of user using it. It also shows that whether users are accessing the url in the mobile or desktop.

1.1.c: limitations of metric 1

Google analytics works by loading the javascript code. When the application is loaded, the analytics code sends data to the Google analytics server. But, many web browsers do not allow some javascript code to run. So they may be blocked by some web browsers. It also uses cookies to track user for analytics. Many web browser blocks cookies. That is why all users cannot be tracked with this.

1.2.a: metric 2- provide a graphs/plots/visualizations:

Engagement Overview



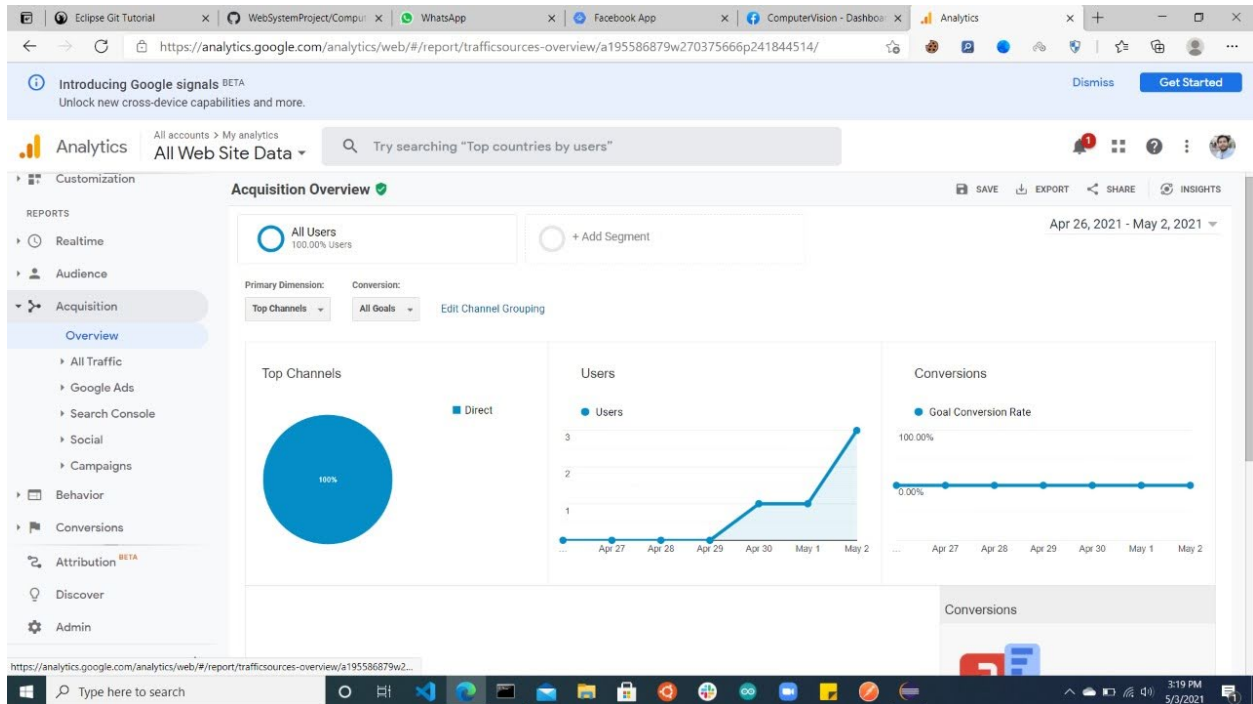
1.2.b: interpret the metric 2's trends:

This metric measures the time that a group of visitors spent on the website. It also provides engaged session per user. It calculates the average engagement time per session. The information can be helpful to analyze the predefined parameters that engage users to the website.

1.2.c: limitations of metric 2:

We cannot analyze much with these informations. Though we can add advanced parameters to view engagement of the user, however we cannot apply parameters like e-commerce, goals, etc. These also applies to the report.

1.3.a: metric 3- provide a graphs/plots/visualizations:



1.3.b: Interpret the metric 3's trends:

The acquisition traffic is very useful. It provide us information about the traffic sources and conversions. It finds all source of traffic that help us to analyze that which source provides high traffic to our application. These information help to analyze how our website acquires users.

1.2.c: limitations of metric 3:

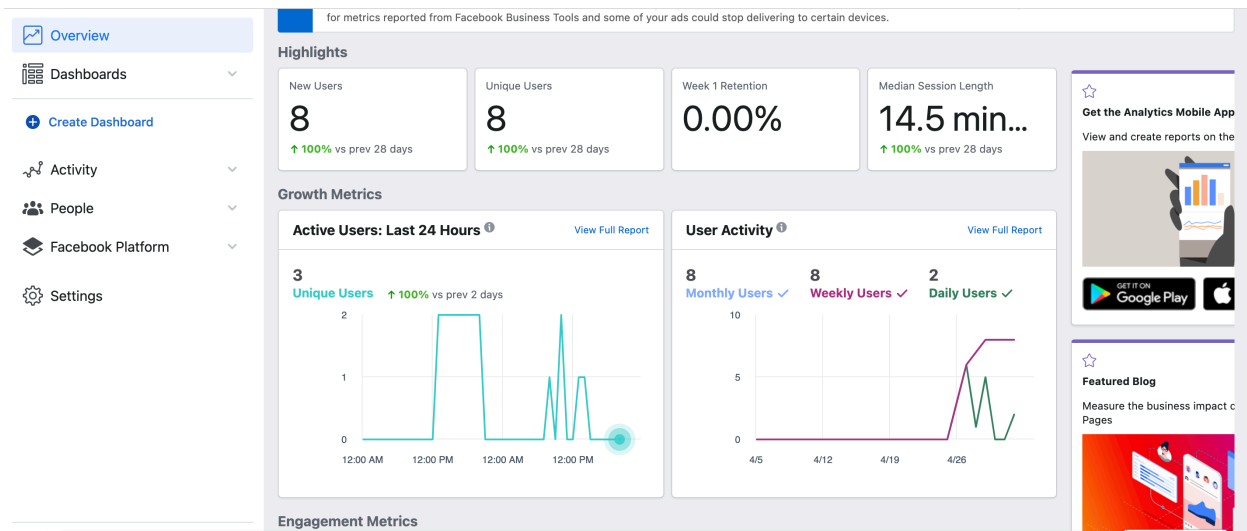
This information provided by this metric may not be very accurate. Analytics companies may not rely fully on this metric.

Section 2= Facebook Analytics

Facebook analytics is very helpful tool that can help to understand how users interact with our Facebook application. To use Facebook Analytics, user must have admin privileges. If we use Facebook SDK for javascript and implement features like Facebook login, Like button, etc. this means we already are using Facebook analytics.

2.1.a: metric 1- provide a graphs/plots/visualizations:

Growth Metrics



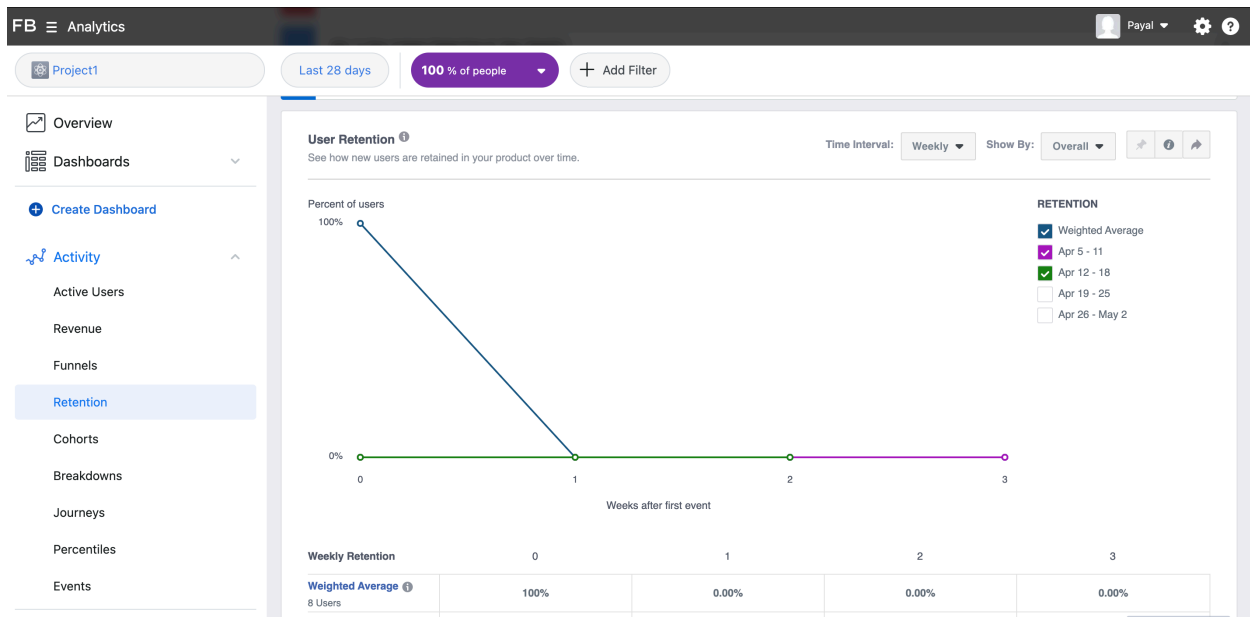
2.1.b: Interpret the metric 1's trends:

The graph tells about the total number of active users. This is quite helpful to analyze number of users interacting with the application. This is helpful to know how many users are interacting with our application in last 24 hours. We can also know unique users interacting with our application. We can also analyze user activity monthly, weekly and daily basis. With this information we can understand at what time we need to post anything so that maximum number of users will use it.

2.1.c: limitations of metric 1:

We cannot visualize data of yearly users. Though we can estimate unique users however, we cannot predict the actual number of generic users interacting with our application.

2.2.a: metric 2- provide a graphs/plots/visualizations: User Retention



2.2.b: Interpret the metric 2's trends:

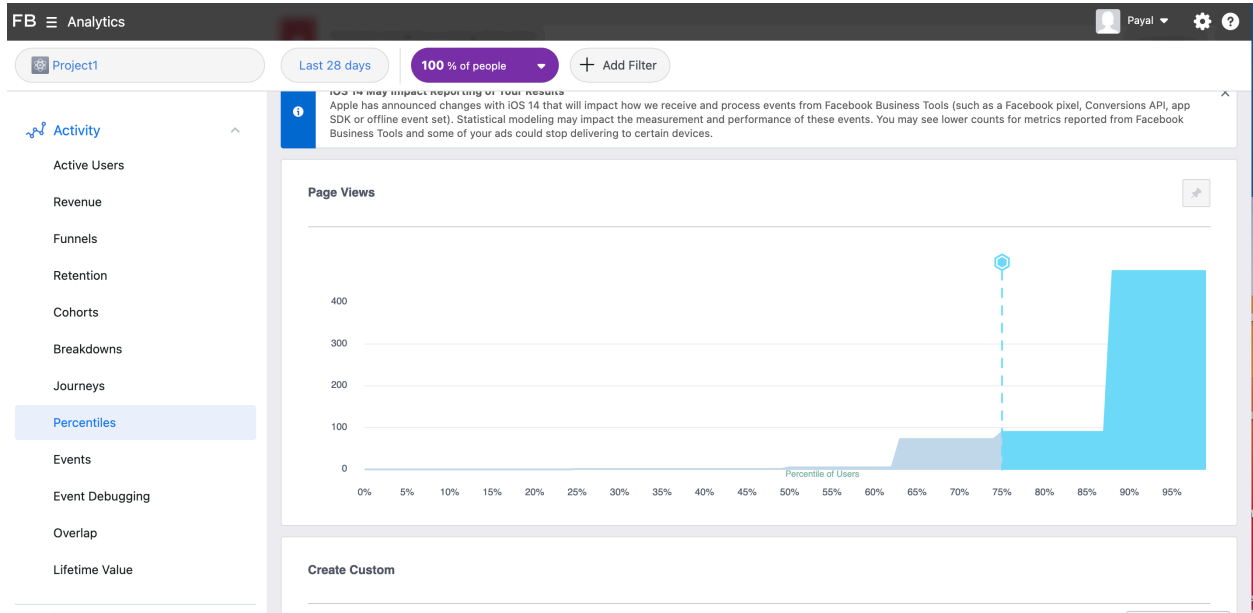
This metric provides information about the amount of time that user watch the contents of our application. It also provide information on how many people are again using the application after their first interaction. This information can be seen daily, weekly or monthly basis.

2.2.c: limitations of metric 2:

Though this metric provide information about average time spent on the app however, it do not provide information on what features or pages user spent time the most.

2.3.a: metric 3- provide a graphs/plots/visualizations:

Percentiles



2.3.b: Interpret the metric 3's trends:

This provides information like which group of users are actively using our application. It provides information on page view.

2.3.c: limitations of metric 3:

This do not provide much information on pages. This information might help the analytics companies to analyze better.

section 3: Compare Google & Facebook analytics

Google analytics provides more informations but they are harder to implement than Facebook analytics. We do not need to use a huge script to implement it.

Facebook can easily track user as it uses user tracking technique. However, Google analytics uses cookies to track. They cannot track users with ease compare to Facebook analytics.

Facebook analytics can easily track users across the devices that user use. For example if a user is using Facebook application and the user switches to tablet, desktop or other devices to use the application, Facebook can easily track it.

Google analytics uses cookies that make it more operational on the websites.