

# BDA CASE STUDY ON GOOGLE ANALYTICS

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**Topic:** Study and experimentation of Google Analytics

**Case Study Objectives:**

1. Study and explore Google Analytics
2. Learn the metrics of the Google Analytics
3. Implement and generate report using Google Analytics

## 1. Introduction to Data Analytics and its importance.

Data analytics is a rapidly growing area of expertise. According to data experts Domo, it's estimated that for every individual on earth, around 1.7MB of data is created every second, the equivalent of the average mobile web page. What's more, this data is growing at a nearly exponential rate, meaning that almost 90% of all data has been created in the last two years.

With the staggering amounts of data being produced, analysing and understanding this information can bring all kinds of benefits. Below, we've outlined just a few examples of how data analytics can be used. It can:

- Help us make informed decisions and manage risk
- Help all kinds of organisations be proactive in their approach, anticipating the needs of the people they serve.
- Add a detailed level of personalisation to products, services, medicine, and more.
- Help businesses optimise processes, highlight opportunities, and reduce costs.

- Provide information about current and future trends.

## **2.Introduction to Google Analytic**

Google Analytics is a free web analytics service offered by Google. It helps website and app owners (both organisations and individuals) track and report on all kinds of data from their users. Google purchased the web statistics analysis company Urchin in 2005, forming Google Analytics shortly after. Since its launch, it's grown to become the most widely used web analytics software on the internet.

The service provides a wide range of tools that are useful for getting an insight into how people use websites. With relatively little technical knowledge, users can gain a comprehensive and easy-to-understand glimpse at a variety of relevant factors.

## **3.Importance of Google analytics**

With Google Analytics, you can gain an understanding of what your marketing activity should be, how your campaigns are performing, and what your customers tend to respond to. The tool gives you the chance to get detailed layers of information related to your online channels. You can then plan and adjust your approach and understand if it's working and what needs changing.

One of the most useful things about GA is that, once set up, it takes relatively little effort to get detailed reports. Daily, weekly, monthly, and annual statistics about a variety of factors can be automatically generated and shared with key stakeholders within an organisation. You can also review information at any time to monitor the impact of campaigns, channel improvements, or website changes

## **4.Uses of Google Analytics**

### **1) Benchmarking**

Another one of the most useful aspects of Google Analytics is the benchmarking data. Essentially, this gives businesses the chance to compare their data with others in the same

industry. Not only does this allow them to track their performance, but it can provide valuable insight when it comes to things like identifying trends across the industry.

## 2) Visitor data

Internet traffic is a valuable resource for companies with a website. The goal for many online businesses is to drive as many relevant visitors to their site as possible. With GA, you can get an idea of how many people visit during specific time frames, where they've arrived from, how long they stay, and where they leave. All of these factors are valuable when it comes to making technical and marketing choices.

## 3) Compatibility

When it comes to things like content design, data analysis can play a significant role. Google Analytics gives insights into how customers are accessing your site or app. Given how prominent smartphones are these days, it's vital that websites are compatible with a range of different devices, screens, and internet browsers. Businesses need to know *how* their users browse, and in turn, how to create content that serves those users.

## 4) Marketing optimisation

In our post on an introduction to digital marketing, we looked at the various forms of online marketing channels. As well as promotional activity on a company's own website, there is also scope for things like pay-per-click advertising, social media campaigns, emails, and other forms of paid media. Google Analytics provides valuable information about how these marketing efforts are performing and how they can be improved.

## 5) Content optimisation

There are all kinds of online content, used for all manner of purposes. As well as written words and images, there are also things like videos, infographics, podcasts, and visual stories (like Snapchat content). Whether you're paying to promote this content or hoping it performs well organically, you can track and test how well it's doing. With things like Analytics' A/B testing, you produce multiple variants of the same content and see which your audience responds to best.

## 6) Performance measurement

As well as understanding in general terms how visitors are using your website, app, or social media activity, Google Analytics also gives you measurable metrics on how useful these interactions are. We'll get into specific terms further on in our introduction to Google Analytics, but essentially you can measure what percentage of users are having meaningful/desirable interactions with your site.

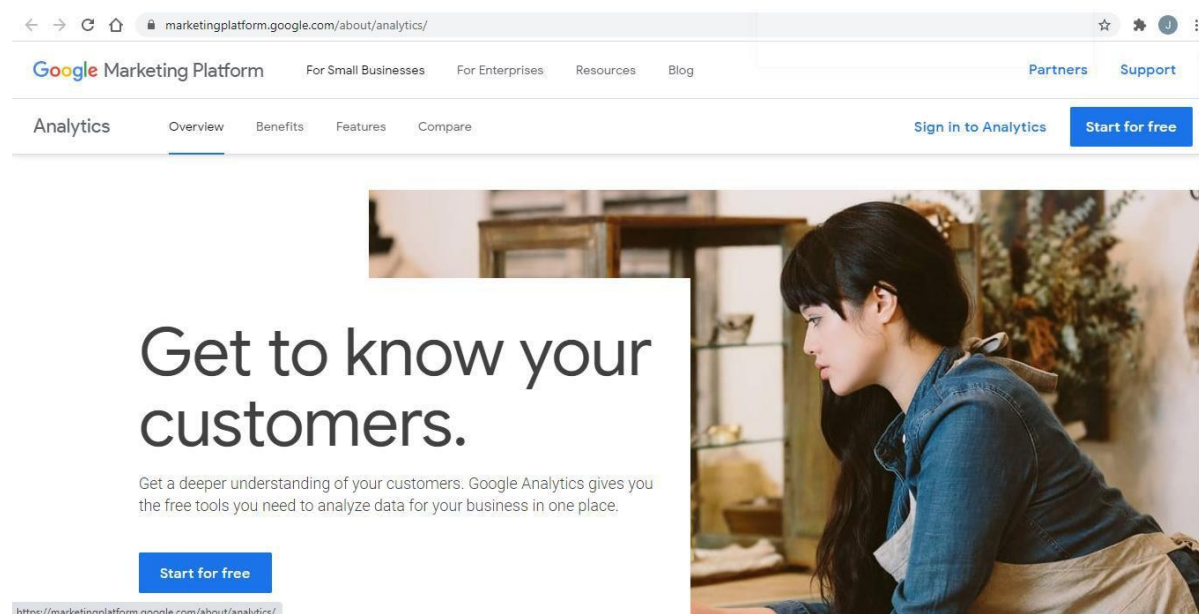
## 7) Setting goals

Of course, with the metrics associated with all of the points above, you can also use Google Analytics to set goals and drive decision making. Whether you're trying to achieve a certain number of visitors, a percentage of users who make a purchase, or the number of newsletter signups, you can track your goals. What's more, you can then use this data to inform your decisions going forward.

## 5.Steps to create google analytics account

Step 1: Open the Google Analytics page on your web browser.

Step 2: Click the Create an Account button on the top right corner of the page, which will take you to the login area.



Step 3: Enter your Google account's username and password, and click the Sign In Button.

If you do not already have a Google account or would like to create a new one to use with Analytics, click on the Sign Up button located on the top right corner of the page.

Step 4: Once you have logged into you Google account, you will be taken to the page where you can sign up for Google Analytics. Click the Sign Up button to start using the service.

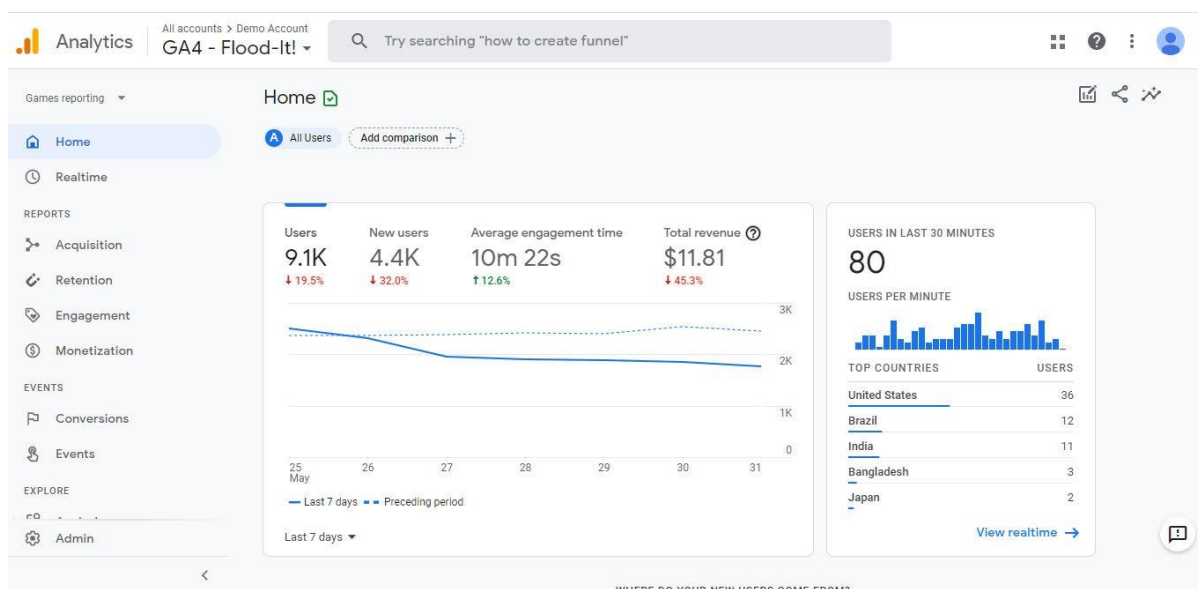
Step 5: On the next page, you can select the preferred tracking destination and choose a tracking method. This essential code will conveniently report detailed information about the customers who visit your website.

Step 6: After selecting the tracking method, you can correctly set up the web property by filling in some basic information about the website.

Step 7: After entering the required profile information about your site, you can control whom you want to share the GA data with. You're presented with the choice of: Share with other Google products only, Share anonymously with Google and others, and/or share with Google account specialists. Check or uncheck the optional boxes under Data Sharing Settings.

Step 8: Next, click on the Get Tracking ID button on the bottom of the page.

Step 9: A pop-up window will appear. Read through and accept the Google Terms and Conditions by clicking on the I Accept button.



## 6. Key Terms in Google Analytics

### 1. Metrics

A metric is a quantitative measurement that is paired with a dimension. So for example, for the dimension Device Category (the type of device used to access your website), you will have values for metrics such as the number of users, the average time they spent, how many

pages they visited, and more. These metrics are quantifiable and can be used to compare and contrast performance.

## **2.Users**

One of the key metrics in Analytics is users. This term is used to measure the visitors who have initiated a session with your website. It's usually the first metric you'll see when you log into your Google Analytics account. The difference between new users and returning users is whether Google's tracking cookie (a small piece of stored data) is present on the device.

## **3.Sessions**

A session refers to a group of user interactions over a certain amount of time. So, if a user visits your website and spends several minutes loading a few different pages, clicking on some calls to action, and making a purchase, this counts as one session. You can use this data to find out how many sessions your users have and over how long a time period. In turn, this can inform your marketing strategy for attracting new users.

## **4.Bounce Rate**

The term 'bounce' is used to describe when a user visits a website page and then takes no further action. So, a user might arrive at one of your pages from a Google search, scroll through some content, but not click on any of the other elements of the page before leaving your site. The bounce rate refers to the percentage of sessions that result in a bounce. Metrics exist for both your website overall and specific pages. It's a useful data set for understanding how particular pages on your site are performing.

## **5.Exit Rate**

This term is related to bounce rates in the sense that it has to do with where visitors leave your website. For example, a user may navigate to your website, click on some links, get through to a particular page, and then leave the site. Here, the page that they leave on is

attributed with the 'exit'. However, if the user arrives and leaves on the same page, this is a bounce. So, every bounce is an exit, but not vice versa.

## **6. Conversion rate**

As any introduction to Google Analytics will tell you, one of the key metrics for marketers is conversion rate. Essentially, this is a measure of how many visitors complete a specific business objective you are tracking. It's one of the central metrics for many kinds of marketing analytics, as it shows how effective your efforts are. A conversion could be something like making a purchase, signing up for a newsletter, or sharing a post on social media. The conversion rate is the number of visitors who take that action.

## **7. Acquisition**

Acquisition reports focus on how people find your website, often referring to the source (such as a search engine, social media, or another website) and the medium (such as paid advertising, web referral, or organic search). This dimension is particularly useful for finding out how things like your paid marketing and search engine optimisation (SEO) are working.

## **7. Google Analytics Metric Structure**

**Acquisition Metrics:** These metrics focus on volume of users coming to your website.

- Users
- New Users
- Sessions

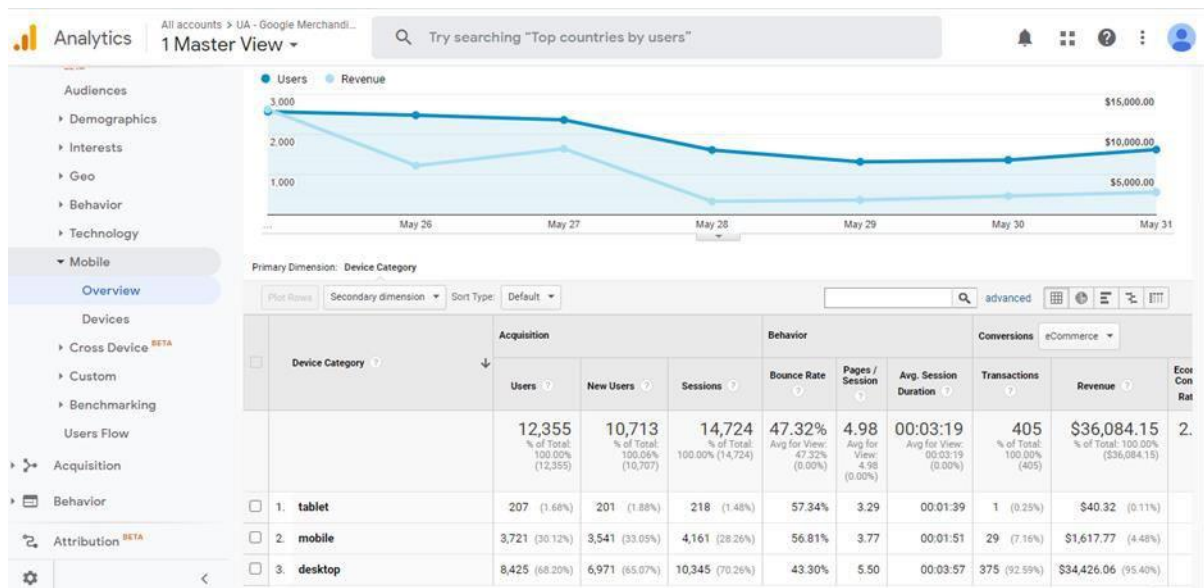
**Behavior Metrics:** These metrics focus on how well users engage on your website.

- Bounce Rate
- Pages / Sessions
- Avg. Session Duration

**Conversion Metrics:** These metrics focus on the Goals.

- Goal Conversion Rate
- Goal Completions
- Goal Value

## **OUTPUT:**



## 8.GENERATING REPORTS , VISUALISATION AND THEIR ANALYSIS

### 1. Technology Report

This report will help you analyze the user based on the technology they use to visit your website.

It will contain stats segmented by

- Browser
- OS

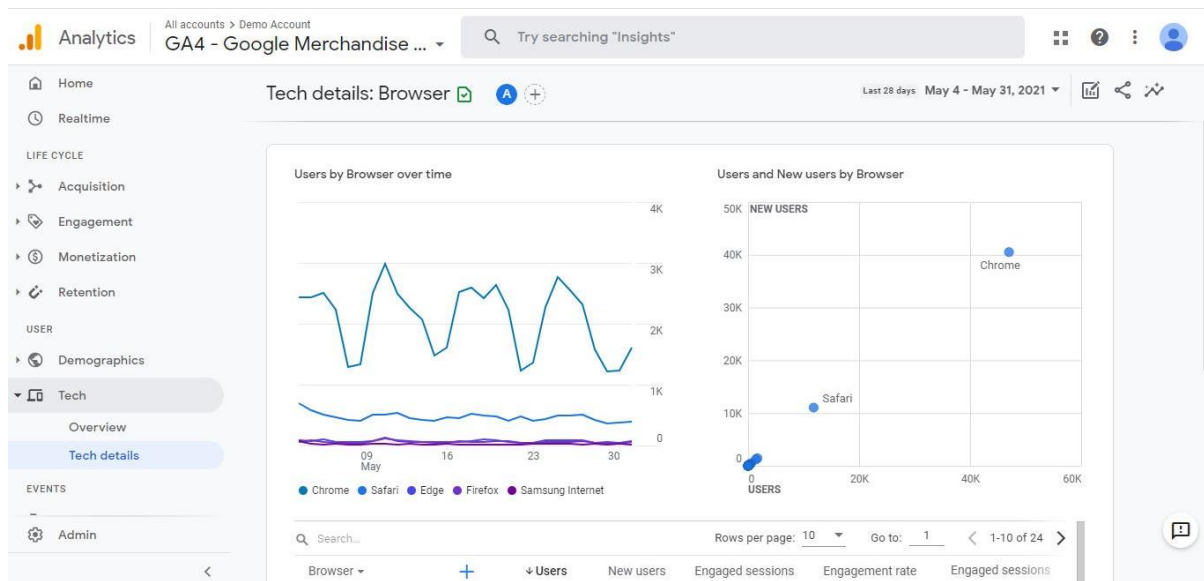
### 1.Browser Report

Step 1: Navigate to browser and Os reports

Step 2:Click on the E Commerce tab

Step 3:Note down top three web browsers in terms of traffic





Analytics GA4 - Google Merchandise ...

Tech details: Browser

Last 28 days May 4 - May 31, 2021

Browser	Users	New users	Engaged sessions	Engagement rate	Engaged sessions per user
Totals	63,510	55,988	78,937	90.38%	1.24
1 Chrome	47,004	40,508	59,737	89.46%	1.27
2 Safari	11,813	11,032	13,435	93.8%	1.14
3 Edge	1,675	1,436	1,985	89.54%	1.19
4 Firefox	1,380	1,200	1,633	90.02%	1.18
5 Samsung Internet	573	505	682	96.88%	1.19
6 Opera	311	280	368	95.34%	1.18
7 Android Webview	277	245	264	99.25%	0.95
8 Internet Explorer	256	252	264	99.25%	1.03

## RESULT:

From the data and visualization below the majority of traffic came from Chrome browser followed by Safari and then Edge.

Analytics GA4 - Google Merchandise ... Try searching "Insights"

Home Realtime

LIFE CYCLE

- Acquisition
- Engagement
- Monetization
- Retention

USER

- Demographics
- Tech**
  - Overview
  - Tech details**

EVENTS

Admin

Tech details: Browser

Last 28 days May 4 - May 31, 2021

Rows per page: 10 Go to: 1 1-10 of 24

Browser	Engaged sessions per user	Average engagement time	Event count	Conversions	Total revenue
			All events	All events	
Totals	1.24 Avg 0%	1m 49s Avg 0%	1,518,248 100% of total	74,967 100% of total	\$261,016.68 100% of total
1 Chrome	1.27	2m 06s	1,254,529	57,866	\$251,492.32
2 Safari	1.14	1m 00s	183,947	12,229	\$6,774.82
3 Edge	1.19	1m 16s	31,509	1,590	\$557.94
4 Firefox	1.18	1m 13s	24,744	1,393	\$1,927.60
5 Samsung Internet	1.19	1m 13s	8,190	547	\$190.00
6 Opera	1.18	0m 46s	4,556	301	\$0.00
7 Android Webview	0.95	0m 43s	2,983	245	\$0.00
8 Internet Explorer	1.03	0m 10s	1,849	266	\$74.00

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Step 4: Sort the data according to revenue

Analytics GA4 - Google Merchandise ... Try searching "Insights"

Home Realtime

LIFE CYCLE

- Acquisition
- Engagement
- Monetization
- Retention

USER

- Demographics
- Tech**
  - Overview
  - Tech details**

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## RESULT:

Now from the sales perspective the majority of website sales came from Chrome followed by Safari and then Edge.

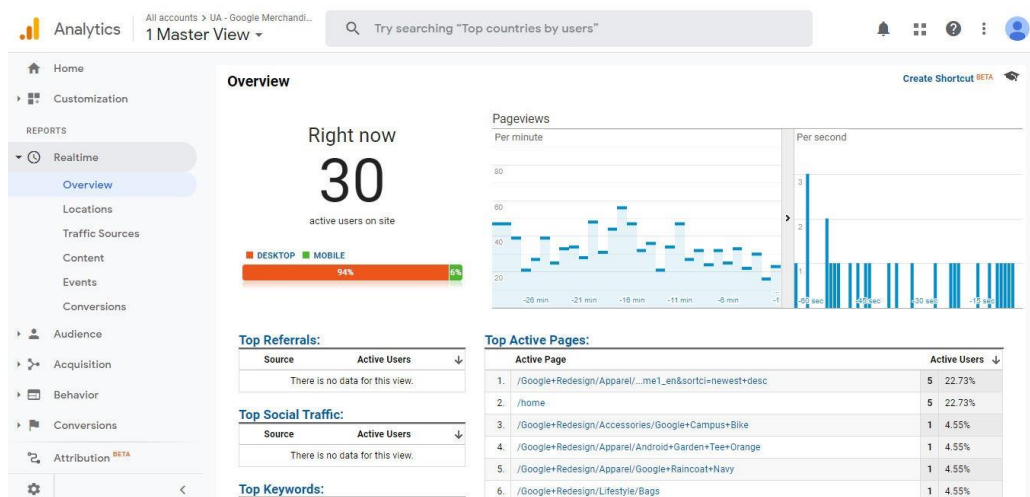
## 2.Real time reports

Real-time reports in google analytics can show you live users, events and goals occurring on your website.

They can also help you test if your google analytics tracking code is working or not.You can see various reports in this category:

- **Overview Report**

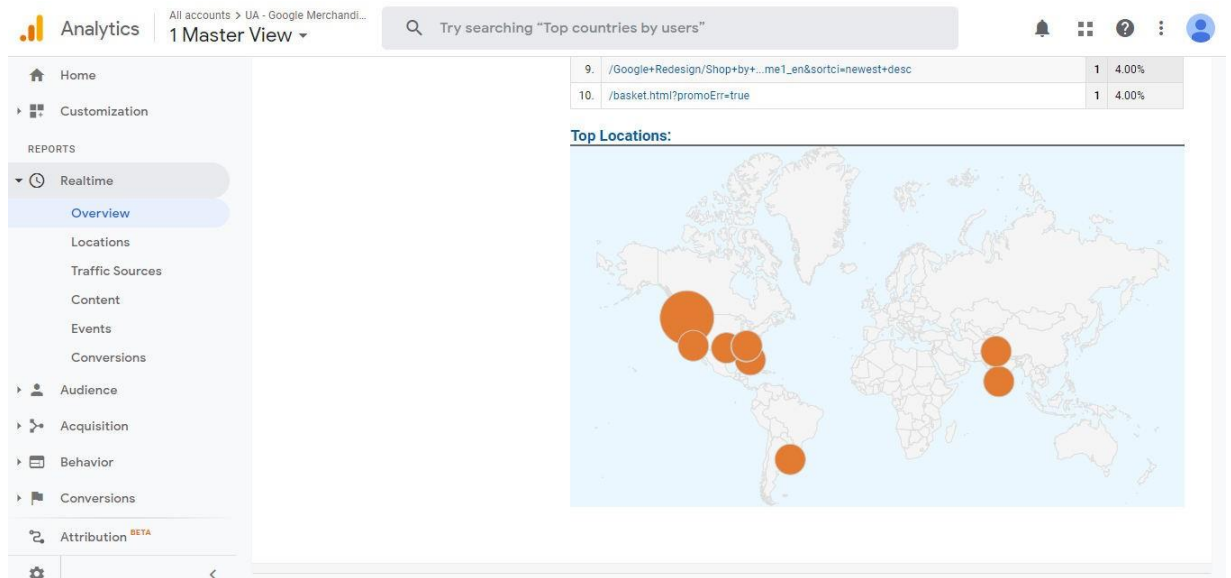
- **OUTPUT:**



- **RESULT**

:The overview section tells us the total number of active users we have on our site, there are 30 active users, it also provides information about pageviews per minute and per second. It also displays top active pages which are used by most of the users .Google apparel ad home sites have 5 users followed by Google Design having 1 user and others.

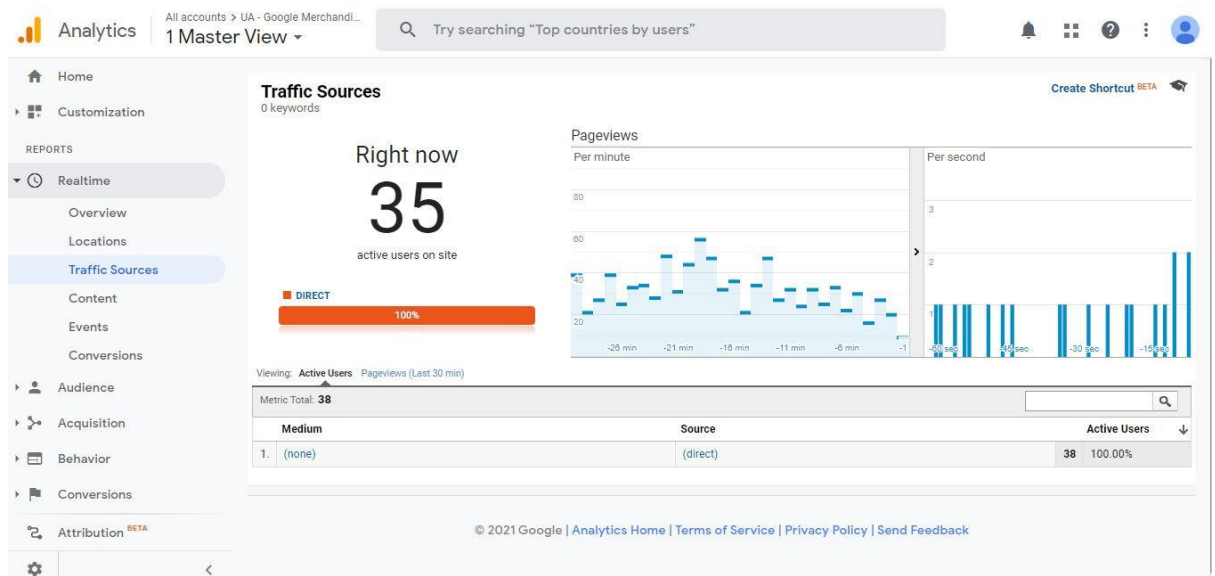
- **Location**



## RESULT :

The location tells us to which place the active user belongs. Here the America consist of more active users followed by asia.

## • Traffic Sources



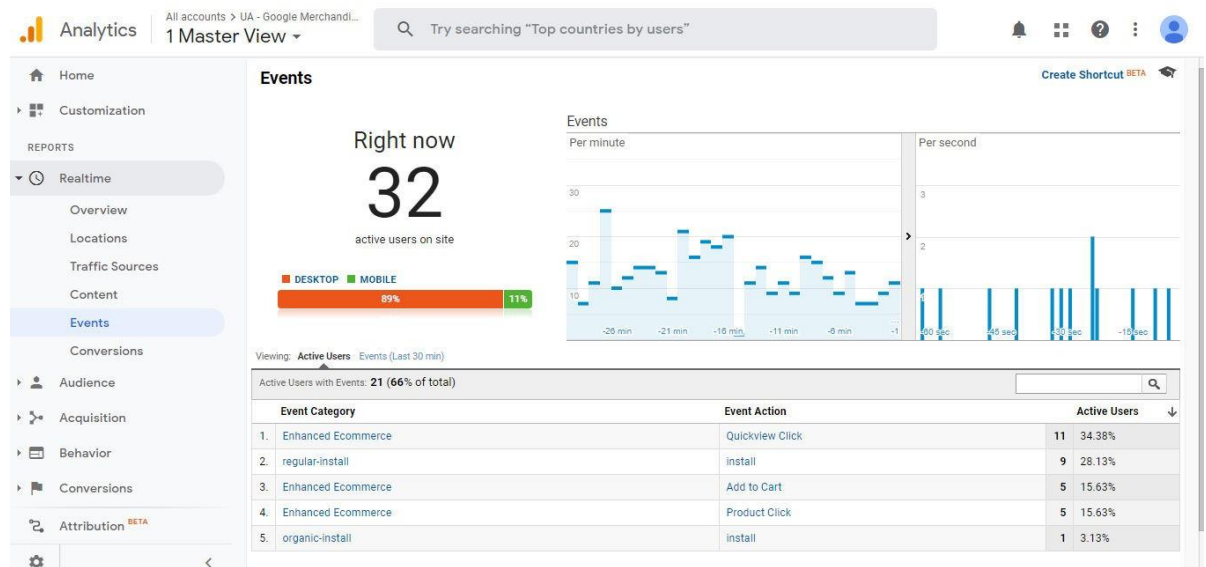
The Google Analytics “Traffic Sources” section can help ecommerce marketers understand how well campaigns are working and how better to invest in site content, advertising, or other forms of engagement.

1. Direct traffic. Direct traffic represents those visitors that arrive directly and immediate on your site by: (1) typing your URL into the browser’s address bar; (2) clicking on a bookmark; or (3) clicking on a link in an email, SMS, or chat message.
2. Referring traffic. Referring site traffic, which is sometimes called referrer traffic or referral traffic, counts those visitors that click a link on another site and land on your site. Referral traffic can be indicative of social media marketing success.
3. Search engine traffic. Search engine traffic is that traffic that comes from visitors clicking on links on a search results page for any search engine — whether Google, Bing, Yahoo!, Blekko, or similar.

### RESULT :

There are 35 active users which are from direct traffic source which means they have arrived directly on the site URL.

- Content
- Events



Events in Google Analytics are user interactions on your website that cannot be tracked as pageviews within a session. Any activity that users take on a page of your website is considered an 'event' or 'event hit'.

For example:

- Button clicks
- Clicks on outbound links
- Form submissions
- Video plays and watch time
- File downloads

**RESULT :** There are 32 active users where 89% prefer desktop and 11% mobile . The report shows that 34.38%(11 users) of active users belong to Enhanced Category with Quickview action, followed by 28.13% for regular install and other categories.

- **Conversions**

You can view this report to verify your Goals Setup.

- If your goals are not getting tracked in real time here, they will not be reflected in your normal reports.
- 

### **3. Audience Reports**

Audiences in Analytics are users that you group together based on any combination of attributes that is meaningful to your business.

#### **1. Overview Report**

The overview report gives a summary of some of the important metrics of your website. These metrics are Acquisition & Engagement Metrics.

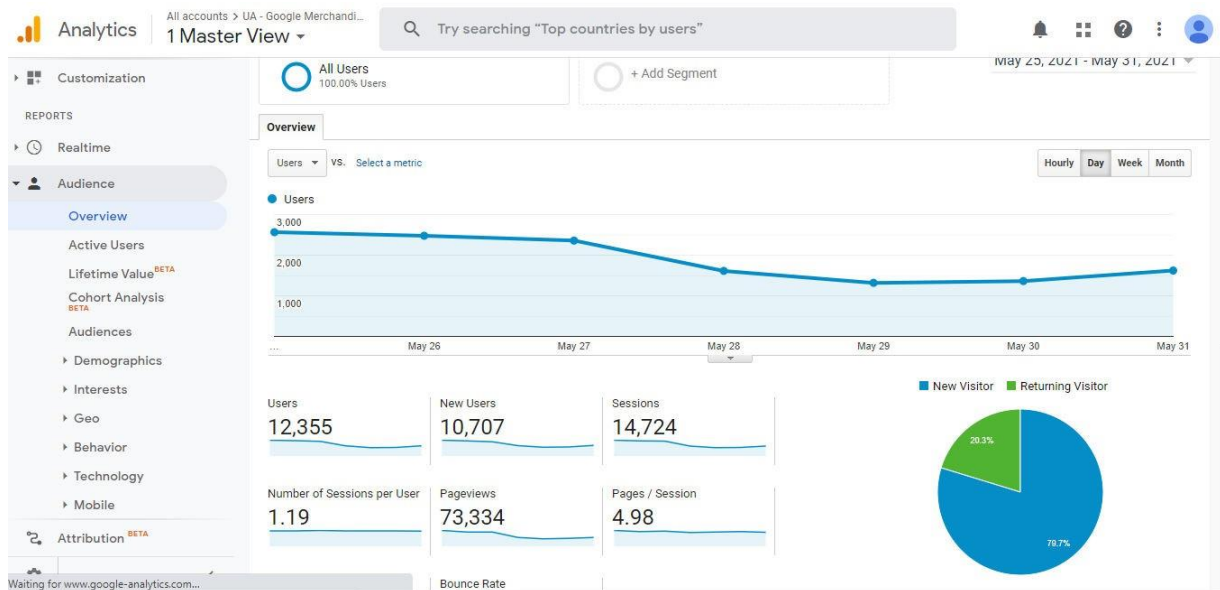
##### **Acquisition Metrics**

- Users

- New Users
- Sessions

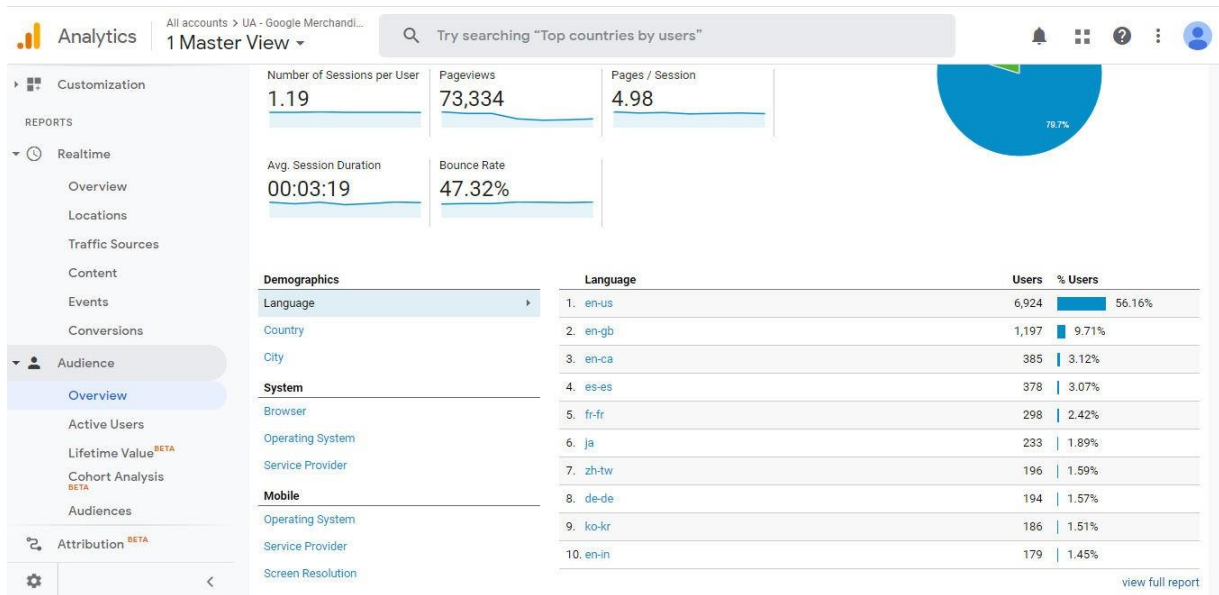
## Engagement Metrics

- Sessions / User
- Pageviews
- Pages / Sessions
- Avg. Session Duration
- Bounce Rate



## RESULT :

The report shows that there are 12,355 Users in all out of which 10,707 are new users . Total number of sessions are 14,724. The total no sessions per users are 1.19. There are total 73,334 pageviews and 4.98 pages per sessions. New visitors are 79.7% and returning visitors are 20.3% .



## RESULT :

The average session Duration are 00:03:19 and Bounce Rate is 47.32%. In language section 56.76% people uses English language of US followed by 9.71% people using en-gb.

## 4.Geo Report

As the name suggests, Geo reports will give you the location data of the users based on their IP addresses.

There's also a browser language report included in the geo report. This is useful if you have international users on your website.



Analytics

All accounts > UA - Google Merchandi...

1 Master View

Try searching "Top countries by users"

Audiences

Demographics

Interests

Geo

Language

Location

Behavior

Technology

Mobile

Cross Device

Custom

Benchmarking

Users Flow

Acquisition

Behavior

Attribution

Analytics

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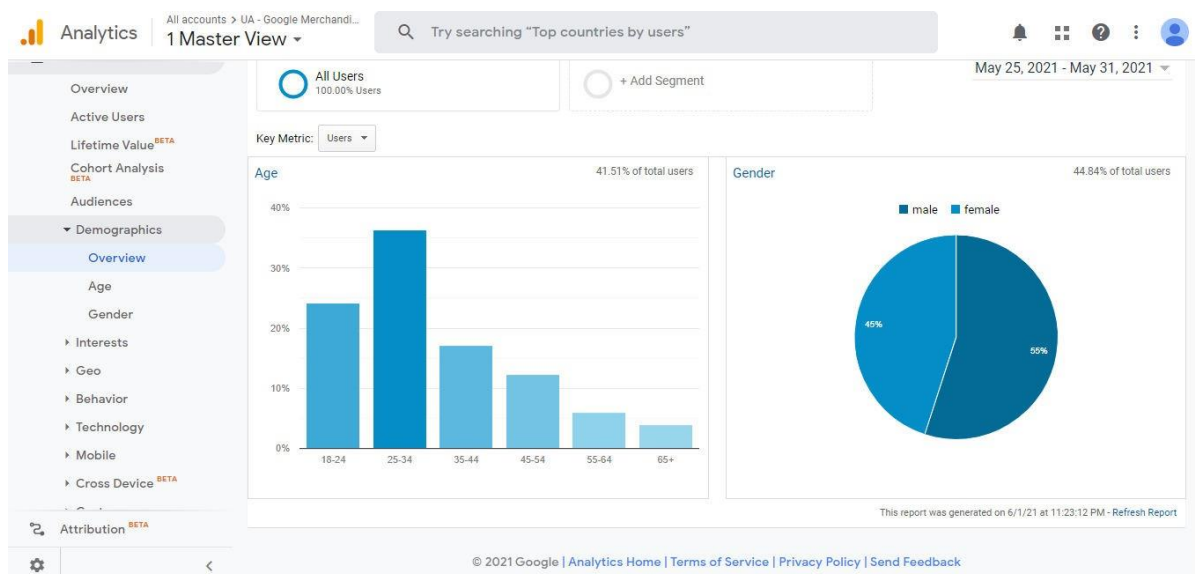
Attribution

## RESULT :

In the report above majority of users belong to United States i.e 38.49% followed by India 8.88% then Canada 7.15% and all other countries. Similarly language section shows that most of the users(6,924) use en-us language and the least preferred one is en-in used by 179 users only.

## 5. Demographic Report

This report will give you the information about the age-gender & interests of the website user. This would be useful to tailor the ads to specific audience demographics & interests having higher conversion rates.

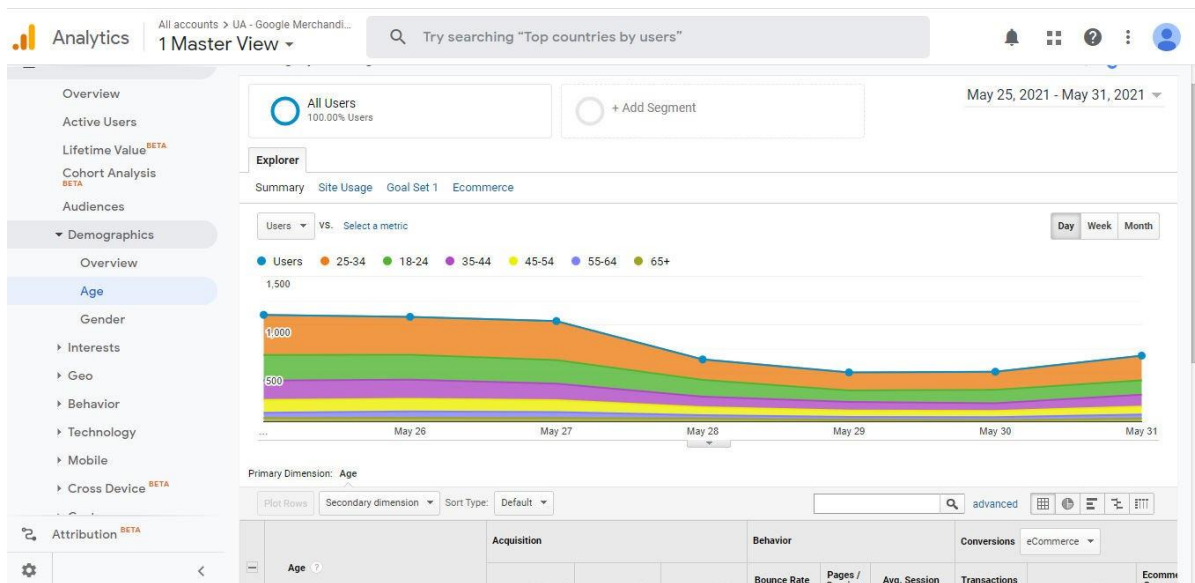


### RESULT :

In the above report there are two graphs , the first one is bar graph which shows the different classes of age groups and the users belonging to them. There are total 41.5 % of total users out of which 36 % of users belong to age group between 25-34, 20% of them belongs to 18-24,18% of users belong to age group between 35-44 and So on. Only 8% of total users are above 65 years.

The second visualization is a pie chart which depicts the number of males and females .

There are 55% of females and 45% of males in total.



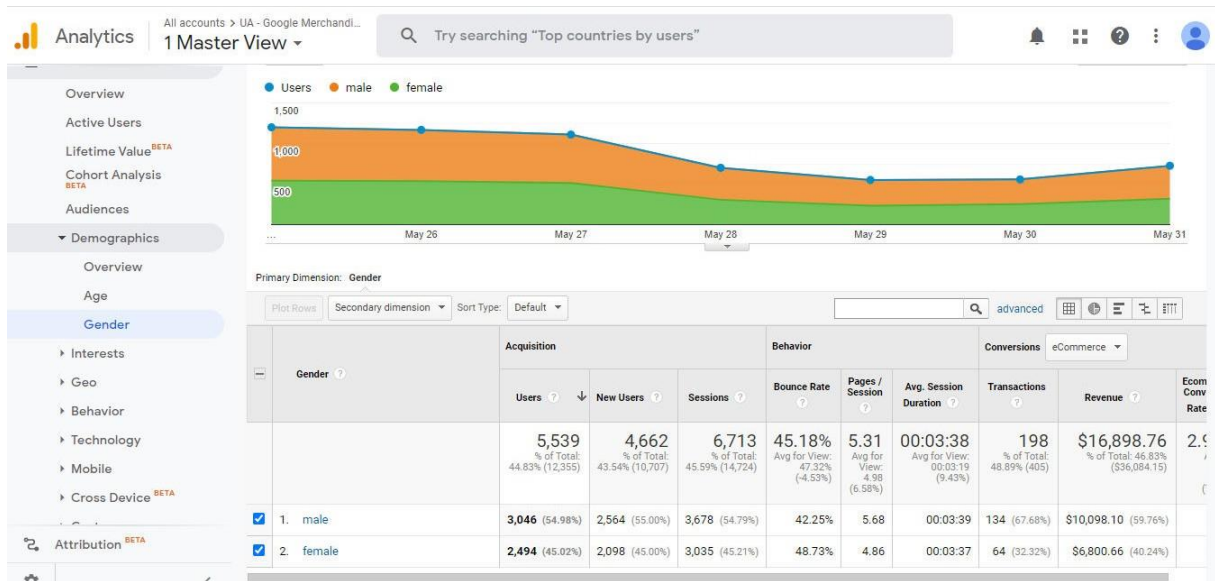
## RESULT

The above graph is day wise report of users from 26 May to 31 May. It shows the total number of users which are active on each day between 26 May to 31 May. The highest number of users active on 26 May are 1000 which belongs to age group between 25-34 and least number of users active on the same day are above 65 years. The total number of active users belonging to age group 25-34 goes on decreasing day by day.

Primary Dimension: Age		Acquisition			Behavior			Conversions		
Age		Users	New Users	Sessions	Bounce Rate	Pages / Session	Avg. Session Duration	Transactions	Revenue	Econ Conv Rate
All Users		5,127 (41.50% of Total: 12,355)	4,295 (40.11% of Total: 10,707)	6,242 (42.39% of Total: 14,724)	44.92% (Avg for View: 47.32% (-5.08%))	5.36 (Avg for View: 4.98 (7.71%))	00:03:41 (Avg for View: 00:03:19 (10.90%))	193 (% of Total: 47.85% (405))	\$16,610.78 (% of Total: 46.03% (\$36,084.15))	3.0
<input checked="" type="checkbox"/>	1. 25-34	1,863 (36.33%)	1,528 (35.58%)	2,309 (36.99%)	42.36%	5.69	00:03:47	78 (40.41%)	\$7,774.18 (46.80%)	
<input checked="" type="checkbox"/>	2. 18-24	1,238 (24.14%)	1,066 (24.82%)	1,515 (24.27%)	46.73%	5.10	00:03:29	42 (21.76%)	\$2,913.84 (17.54%)	
<input checked="" type="checkbox"/>	3. 35-44	882 (17.20%)	717 (16.69%)	1,055 (16.90%)	42.75%	5.44	00:03:47	38 (19.69%)	\$2,330.04 (14.03%)	
<input checked="" type="checkbox"/>	4. 45-54	634 (12.36%)	539 (12.55%)	758 (12.14%)	46.31%	4.98	00:04:02	21 (10.88%)	\$1,953.76 (11.76%)	
<input checked="" type="checkbox"/>	5. 55-64	306 (5.97%)	263 (6.12%)	362 (5.80%)	52.76%	5.73	00:02:48	9 (4.66%)	\$600.00 (3.61%)	
<input checked="" type="checkbox"/>	6. 65+	205 (4.00%)	182 (4.24%)	243 (3.89%)	51.44%	4.21	00:03:34	5 (2.59%)	\$1,038.96 (6.25%)	

## RESULT

The above table gives us the total no. of users belonging to different age groups. Majority of users belong to age group between 25-34.



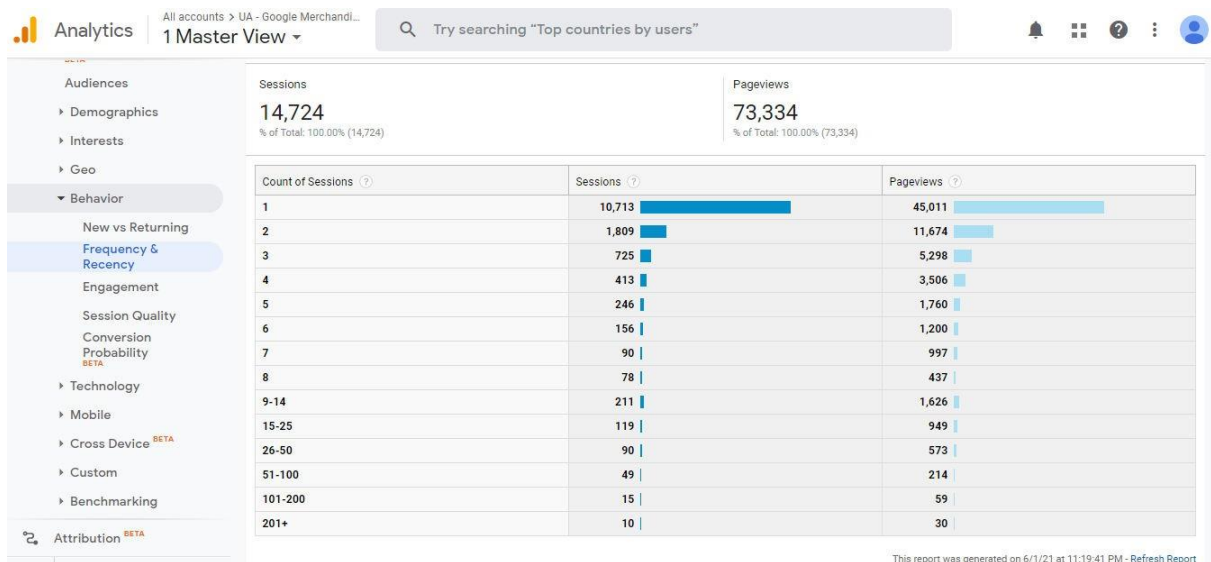
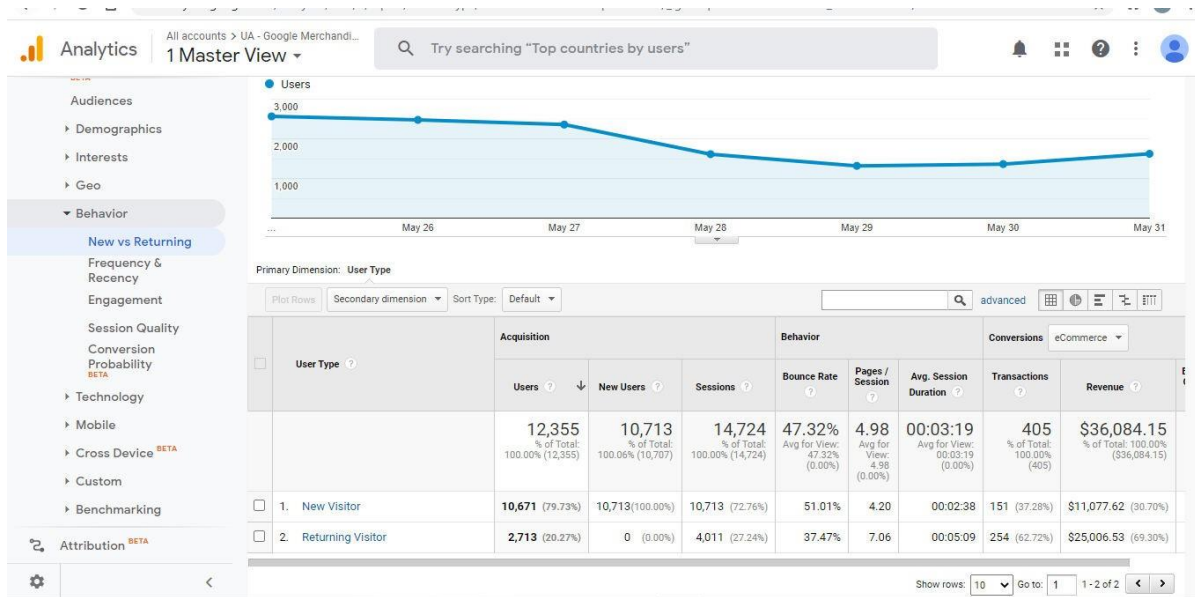
## RESULT :

Under Demographic report there is gender report which tells us about the total number of males and females.

## 6.Behavior Report

This is one of the important reports in google analytics. It will give you stats for the new & returning users & also their stickiness to your website.

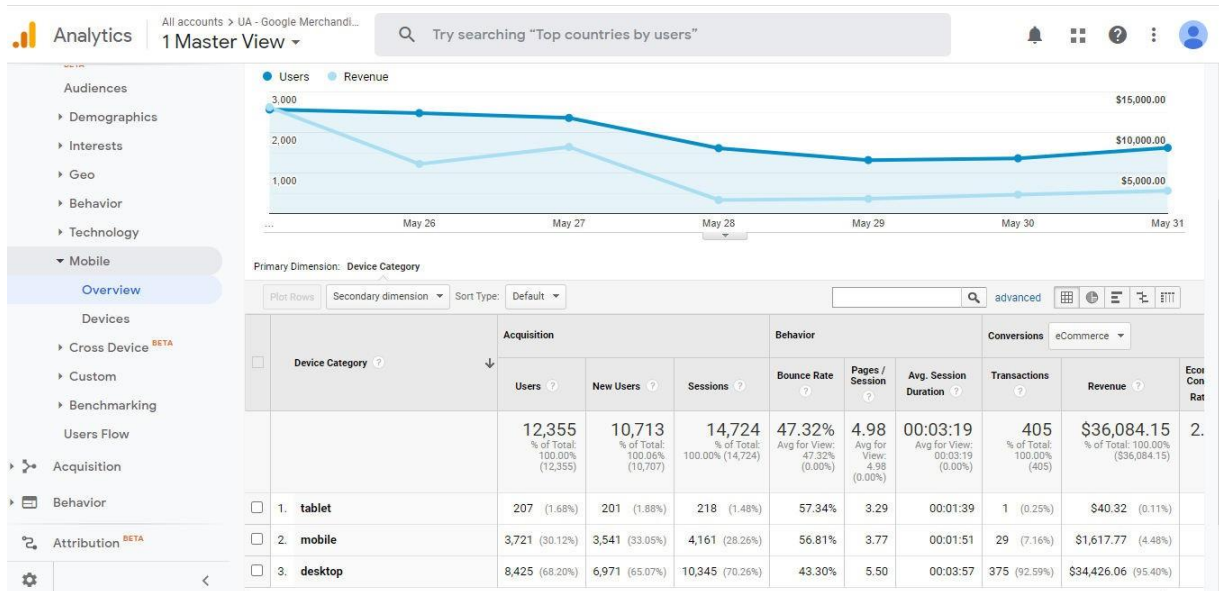




The behaviour reports tells us about the quality of sessions their frequency ,number of page reviews and compares the new and returning visitors.

## 7.Mobile Report

Mobile Report contains the stats related to different types of mobile devices, Mobile OS & more.



## RESULT

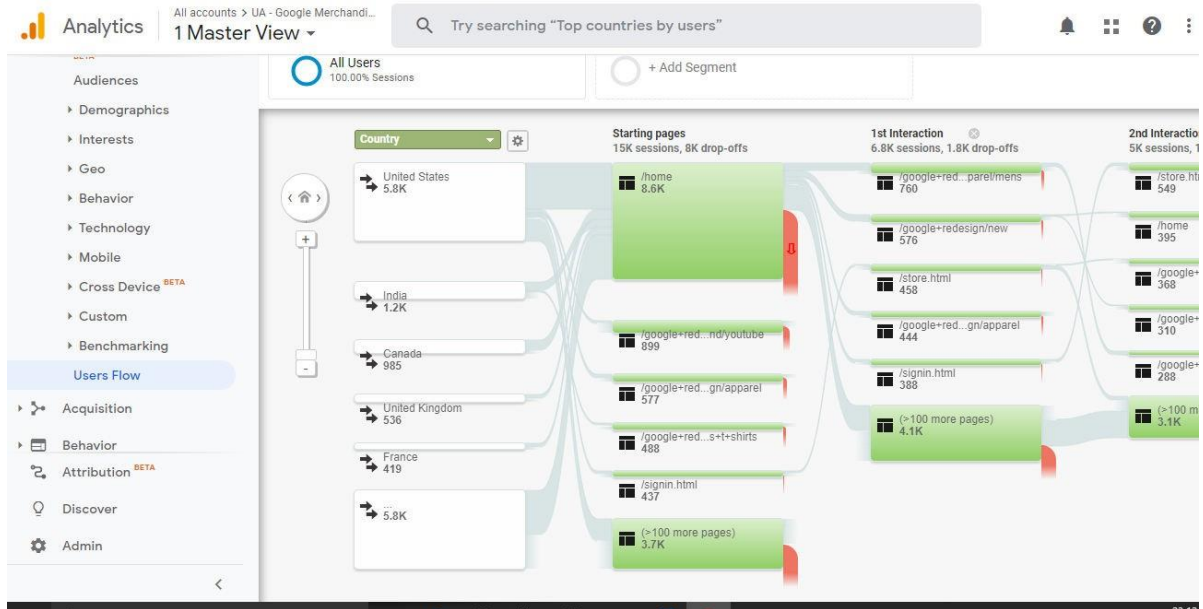
This is the Mobile overview report which tells the total number of users using different device categories. Around 68.90% of total users prefer using Desktop followed by 30.12% of users using Mobile and least number of users i.e around 1 % prefer using Tablets.

Now from the sales perspective the majority of website sales came from Desktop followed by Mobile and then Tablet.



## 8. Benchmarking Report

This report will provide valuable insights from other competitor websites. It will help you compare some of the metrics with the industry standards.



## 9. Acquisition Reports

Acquisition Reports in Google Analytics will answer queries related to “Users: While entering the website”.

- Where did we acquire users from?
- What was the Channel?
- What were the keywords/search queries of acquired users?



- What was the cost of acquisition?
- & so on...

Acquisition reports focus on “How you acquire users” & its related information.

some of the reports available are:

#### 1.) Overview Report

This report will give you the summary of Acquisition, Behavior & Conversion metrics for different channels.

#### 2.) All Traffic Report

All Traffic report will give you stats related to the different source, medium, channels, referrals & more...

You can use this report to gain the overall view of where your users are coming from.

#### 3.) Adwords Report

Adwords reports will give you stats related to your Google Adwords. You will need to integrate your AdWords account with analytics before you start getting the data.

#### 4.) Search Console Report

In this report, you'll get Google search console/webmasters data.

Similar to AdWords, you'll need to integrate Google search console to Google Analytics

#### 5.) Social Report

Social Reports will give you stats related to users referred by the social networks.

#### 6.) Campaign Report

This report useful when you are using UTM tags in your ad URLs.

These report will give you stats related to users referred by particular campaigns. Also, you can compare performance for a different keyword.

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# Google Analytics Audience Overview

Continent



Region



Channel



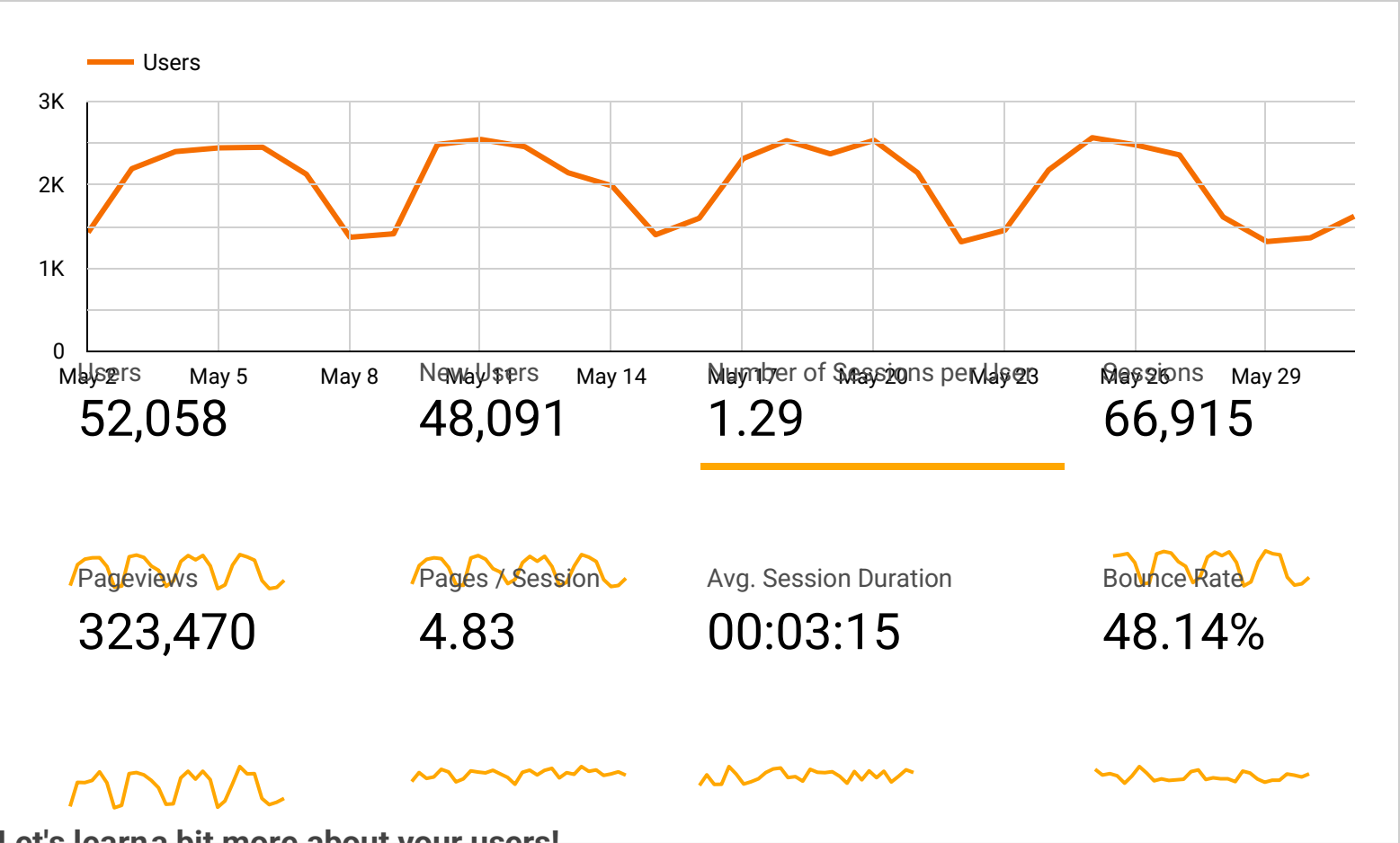
Device



May 2, 2021 - May 31, 2021



Your audience at a glance



Let's learn a bit more about your users!

