Advanced Google Analytics

1.Google Analytics app + Web

- Google analytics has recently announced a new upgrade to the platform known as Google Analytics 4.
- It is based on machine learning.
- Google automatically predicts about your customer behavior.
- GA4 has a different interface.
- Reporting is now Realtime, lifecycle, users and events.
- In lifecycle, you will see reporting of Acquisition, engagement, Monetization and retention.
- In engagement, you will see all the events that how the users are engaging with your site and app.
- In monetization, you will see all e-commerce data, revenues and coupons.
- Retention means new and returning users.
- User has all the demographic data.
- Tech has all the tech data like operating systems and browsers etc.
- To upgrade to GA4, go to admin settings then in property column, click on upgrade to GA4
- Create property-->give it a name of "GA 4 New property".
- Select reporting time zone
- Click next
- Select industry category.
- Select your desired options and create this property.
- Create a "data string" now.
- Choose a platform for your data string.
- Select web.
- Create data string by giving your URL and your site name in stream name.
- Create stream
- Set up a google site tag now.
- Copy the global site tag to copy in your website.
- There is a measurement id in new GA4.
- Now when you click home, you will see "G 4 a new property"
- **Analysis-->analysis hub**

- You can select **path analysis** to see the path users are making to your website.
- Audience-->click new audience and you can create new customized audience.
- Under the suggested audience, you can for example select "technology" and segment your users by web or mobile technologies.

2. Measuring Data

- Add the tracking data to every webpage of your website.
- Hit types are page tracking, event tracking, ecommerce tracking, social interaction.
- Each hit is set in the package and send in google analytics. These packages are called **"payload".**
- Each hit type has its own specific hit data type. Each hit will also include basic key insight e.g., browser language, page name and screen resolution.
- When users arrive on your page with your tracking info, google assigns him a unique code.
- Unique client id (cid) means a unique user.
- If a new Id is detected, a new user record is created.
- If an ID exists, the user is considered to be returning.
- If a user removes cookies and comes from other devices this unique client id will be lost. Only solution is to track users across devices, is to use user-id.
- **User-ID** tracks the same user across multiple devices.
- You must generate the unique ID.
- It requires a programmatic solution.

3. views

- Views ae subsets of the analytic property and they allow you to apply unique configuration settings and filters.
- Define your busines objectives.
- Define how you will measure those outcomes.
- Macro conversion are broad goals and micro conversion supports the macro-conversion.

- Macro conversions are e.g. purchasing a product, start a free trial and fil out a lead form.
- Micro conversion is like subscribe a newsletter, watch a video, chat with agent.
- Measurement plan should be according to that e.g. business objectives, strategies and tactics, key performance indicators (KPIS), segments and KPI targets.
- Admin-->select the account and property-->create view
- Select the type of data website or mobile app
- Give the view a name e.g, organic data
- Select the reporting time zone.
- Create view.
- Now in view column, you would be able to see view name "organic data".
- After creating a view, select the view from admin settings.
- Now you can customize it.
- Leave the default page blank. (it's better).
- You can select the currency like US dollars.
- Admin-->view-->user management.

4.Filters

- All data automatically appears in all views, unless filtered.
- Filters refine your data.
- There are 2 types of filters pre-defined filters and custom filter.
- Predefined are already created by google.
- Custom filter is designed and created by you.
- Example of predefined filters are **"exclude traffic",** specifically filters out data based on parameters set. **"include traffic", sh**ows only the data matching the parameters set.
- Custom filters are "**include/exclude**" like based on field and pattern. "**lowercase/upper case**" converts the contents of a field.
- Search and replace, advanced are custom filters too.
- Test them v good before viewing them.
- Admin-->view-->filters-->add a filter
- Filter order is matter so assign filter order accordingly.

- Commonly referred to as regex, "regular expression" is used to describe a search pattern.
- \ the next character should be interpreted literally.
- . Match any single character.
- D shorthand for [0-9]
- * 0 or more of any character
- ^ starts with
- | creates an OR match
- $ ends with
- [a-z] creates a list.

5. View Filters

- Admin-->view-->filters
- Always first "test view"
- Add filter
- Give it a name
- Then u can choose between filter types of predefined or custom.
- Select b/w exclude and include.
- Then select traffic from IP addresses.
- Select expression.
- And you will create "**exclude office traffic**" filter.
- Add filter-->filter name e.g exclude staging traffic
- Select custom filter type
- Filter field-->post name
- Then write the pattern using regex.
- In similar way you can create other filters.
- You can create upper case/lower case filters so that case sensitivity is not a issue to evaluate traffic.
- Fikter limitations are they are destructive, takes up to 24 hrs.
- Field specified must exist.

6. Events

- behavior>Events-->overview
- Top events are designed by event category and event action

- You can also see event by pages.
- Behavior—events-->event flow report
- Adding google analytic events to your site needs some code/ developer help.
- Some e-commerce site helps in creating events.
- Google tag manager helps in creating events.

7. Advanced Features

- Behavior-->site search-->overview
- Behavior-->site search-->search terms
- Behavior-->site search-->search pages
- **Set up custom dimensions**
- Sign in to Google Analytics.
- Click **Admin**, and navigate to the **property to which you want to add custom dimensions**.
- In the *PROPERTY* column, click Custom Definitions > Custom Dimensions.
- Click New Custom Dimension.
- Add a Name.
  This can be any string, but use something unique so it's not confused with any other dimension or metric in your reports.
- Select the Scope.
  Choose to track at the Hit, Session, User, or Product level. Read more about scope *and how custom dimensions are processed in our Developer Guide.*
- Check the Active box to start collecting data and see the dimension in your reports right away. To create the dimension but have it remained inactive, uncheck the box.
- Click Create.
- **Creating calculated metrics**
- To create a new calculated metric in Analytics follow these steps:
- Sign in to Google Analytics..
- Click **Admin**, and navigate to the **view you want.**
- In the *VIEW* column, click Calculated Metrics > NEW CALCULATED METRIC
- You'll then see the Add Calculated Metric interface:
- To create a calculated metric you need to populate the following fields and click the Create button when finished.
- Name – Provide a descriptive name (i.e. "Average Order Value"). This will appear in the Metric selector for custom reports.
- External Name – Automatically populated based on the value entered in the Name field and should not be modified. It can be changed from the recommendation during creation but it cannot be changed after it is created. The External Name value must be unique.
- Formatting Type:
  - Integer (with customizable decimal places)
  - Currency (Decimal)

- o Time
- o Float
- o Percentage (with customizable decimal places)
- Formula – Start typing and you'll see a list of predefined metrics which you can use to create a formula. Accepted operators include:
  - o Plus (+)
  - o Minus (-)
  - o Divided by (/)
  - o Multiplied by (*)
  - o Parenthesis
  - o Positive cardinal numbers (0-9), can include decimals
- Using the minus operator as a negative is unsupported (i.e. A-B is supported, but -B+A is not). Formulas are limited to 1024 characters. Up to 5 (Standard) and 50 (360) calculated metrics are supported at the view level.

- **A Custom Channel Grouping** is only visible to the user who created it. To create a Custom Channel Grouping:
- [Sign in to Google Analytics.](#)
- Click **Admin**, and navigate to the **view in which you want to create a Custom Channel Grouping**.
- Under *PERSONAL TOOLS & ASSETS*, click Custom Channel Grouping.
- Click +New Channel Grouping.
- Enter a name for your new channel grouping.
- Click +Define a new channel.
- Enter a name for your new channel.
- Define the rules for the new channel. *These rules are case sensitive*.
  - o From the first drop-down menu, select a dimension.
  - o From the second drop-down menu, select an operator.
  - o In the text field, enter the value you want to use. For example, *Source* contains *plus.google.com*.
  - o Add *AND* and *OR* statements as necessary, then click Done.
- Add and define additional channels.
- Drag the channels to specify the order in which they should apply.
- Click the Save button.

- Create a Content Grouping
- You can create up to five Content Groupings.
- You cannot delete a Content Grouping. You can change the definition or turn it off.
- Sign in to [your Analytics account](#).
- Click **Admin**, and navigate to the **view you want.**
- In the *VIEW* column, click Content Grouping.
- Click +New Content Grouping.
- Enter a name for the new grouping.
- Select the methods you want to use ([tracking code](#), [extraction](#), or [rules](#)) to create Content Groups.

- ## Create a Content Group via the tracking code
- Under *GROUP BY TRACKING CODE*, click Enable Tracking Code.
- Make sure the Enable option is set to On.

- Select an index number (1-5) to identify your Content Grouping.
- Click Done.
- When you modify your tracking code, you use an index number (1-5) to identify the *Content Grouping*, and you use a group name to identify your *Content Group*:
- gtag.js: gtag('config', 'GA_TRACKING_ID', {'content_group<Index Number>': '<Group Name>'});
- analytics.js: ga('set', 'contentGroup<Index Number>', '<Group Name>');
- For example, if you configure a Content Grouping for Clothing identified by the Index Number *1*, and within that you create a Content Group called *Men*, you would update your code as shown:
- gtag.js: gtag('config', 'GA_TRACKING_ID', {'content_group1': 'Men'});
- analytics.js: ga('set', 'contentGroup1', 'Men');
- **Weighted Sort** Weighted Sort sorts percentage columns of data in order of importance instead of simply numerical order. For example, if you sort by *Bounce Rate* in descending order, the rows with 100% bounce rate will appear first, even if these bounce rates are based on only one or two sessions. However, by applying Weighted, you bring those rows with the highest and statistically most significant bounce rates to the top of the list.
- To use Weighted Sort, click the Bounce Rate (or other percentage-based metric) column header in a table. This will sort the rows in the table. Then, above the table, use the *Sort Type* selection menu to select Weighted.
- Weighted Sort is not available when the report includes the percentage metric % Exit.
- **Google analytics debugger plugin** is a chrome extension. This extension loads the debug version of the Google Analytics Javascript for all sites you browse using Google Chrome. It prints useful information to the Javascript console. These messages include error messages and warnings which can tell you when your analytics tracking code is set up incorrectly. In addition, it provides a detailed breakdown of each tracking beacon sent to Google Analytics.To use this extension, You need to follow three steps: 1. Turn it on by clicking its icon to the right of the address bar. 2. Open the Chrome Javascript console to see the messages.   On Windows and Linux, press Control-Shift-J.   On Mac, press Command-Option-J.3. Refresh the page you are on.

8. segmentation

https://support.google.com/analytics/answer/3123951?hl=en