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Chapter 6 - Final Project (Data Analytics Plan for Game Company)

The goal of this final project is to combine and apply the skills learned throughout this Data Collection module.

The task:

The company you work for is launching a new strategy game, where players must figure out different ways to complete increasingly difficult levels. The game has in-app purchases, and players can buy additional tools to help them complete the levels. The goal of the company is to grow the player base and maximise in-app purchases. Consider - how can the company leverage digital analytics?

You decide to make a proposal for your boss to use Google Analytics. To succeed, you will first need to describe how you can leverage digital analytics and what you can learn from the data. Next, specifically for Google Analytics, describe:

- What audiences could be useful to create
- What events might be useful to track
- What conversions would be valuable
- What reports would be of particular interest (standard or within the explore tool)
- Any other methods of value that could be applied with GA4

Next, explain exactly how you would go about collecting this digital data by formulating a data collection plan.

Finally, within GA4, create relevant audience, event and conversion configurations to include at the end of your proposal to the boss, to convince her you are prepared to start collecting the data. Use descriptive names (and description for audiences) to make it clear what data your configuration will be collecting. Include screenshots of the custom configurations the end of the proposal.

(30 marks)

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Proposal: Leveraging Digital Analytics to drive growth of Game App

Executive summary

The company is launching a new strategy game app which aims to build an engaged player base and maximize in-app purchases.

To achieve this target, we need in-depth user behaviour insights to optimize the player experience, tailor marketing efforts, and boost conversions.

Thus, we will outline how implementing **Google Analytics 4 (GA4)** will provide crucial data needed to make informed marketing decisions that drive user acquisition, retention, and monetization.

Problem Statement

Without implementation of digital analytics, the company will lack crucial user insights.

Some of the key issues are:

- Lack of visibility into how much users play the game.
- Inability to identify the most effective user acquisition sources or channels.
- Missing demographic data crucial for understanding our target audience.
- Absence of in-app purchases tracking, leaving us in dark on the revenue earned.

Solution

1.0 Leveraging Digital Analytics

Implementing analytics will provide the data needed to understand and optimize the game app across few key areas:

(i) Acquisition

By tracking key conversions such as app installs and screen views, we can analyze effectiveness of marketing channels, social referrals channels and influencers driving traffic. This allows us to put more focus on the most converting sources and optimize spending.

(ii) Engagement

Tracking events around level progression and completion rates provides insights into how well users are engaging with the game app. This also enables identifying obstacles in gameplay to optimize the user experience.

(iii) Monetization

In-app purchase tracking helps analyze our conversion funnel. This helps evaluate the performance of specific promotions and offerings.

2.0 Data-driven marketing with Google Analytics

As marketers, we want the tracking of app visitors to be easy while giving valuable insights for strategic and tactical planning. Therefore, we propose to set up Google Analytics 4 to track user data on the game app.

Below are some key aspects to configure Google Analytics 4:

2.1 What audiences are useful to create?

The company shall identify the most important groups of people that matter for the business. Thus, we propose to set up GA4 Audiences to reach and look for app visitors with common traits like gender, age, or country through marketing. Plus, GA4 Audiences could serve as targeted user groups for Google ads. More information on GA4 Audiences here!

Here are important audience groups for the new strategy game:

Audience name	**Reason to track**
All users	To have a baseline understanding of overall users
Intermediate users	To understand user activity beyond onboarding
Expert users	To analyze how your most engaged users use the app
Purchasers	To look for common triggers that could encourage purchases.
7-day inactive users	To look for common triggers that some users become inactive or churned.

2.2 What events might be useful to track?

Events are the user interactions on the app that we can measure and analyze. For our strategy game, here are the key events that the company should track:

Event name	**Reason to track**
level_up	To measure level completion through the game and see where players may be getting stuck. Used to segment user base to Audiences in GA4 as follows: - Intermediate users (=level up until Level 30), and - Expert Users (=level up beyond Level 30+)
app_remove	As the proxy of app uninstall to measure churn.

2.3 What conversions would be valuable?

Conversions are the key actions the users take that convert them into players, and customers. For our strategy game, here are the conversions (or KPI) that the company should track:

Conversion name	**Reason to track**

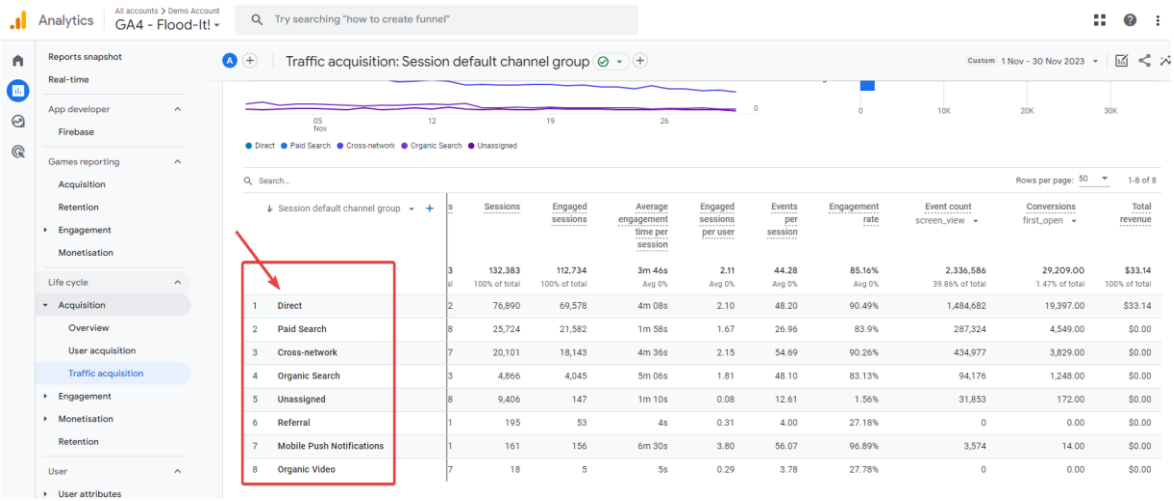
first_open	As the proxy of app installs
screen_view	As the measure of app traffic
in_app_purchase	As the measure of the revenue generated

2.4 What reports would be of particular interest?

There are a few GA4 reports the company will be interested in.

(i) Traffic acquisition report

This traffic acquisition details how users are finding your website. It could include data on organic search, paid search, social media referrals, direct traffic, and more. Understanding these channels helps optimize the marketing efforts.

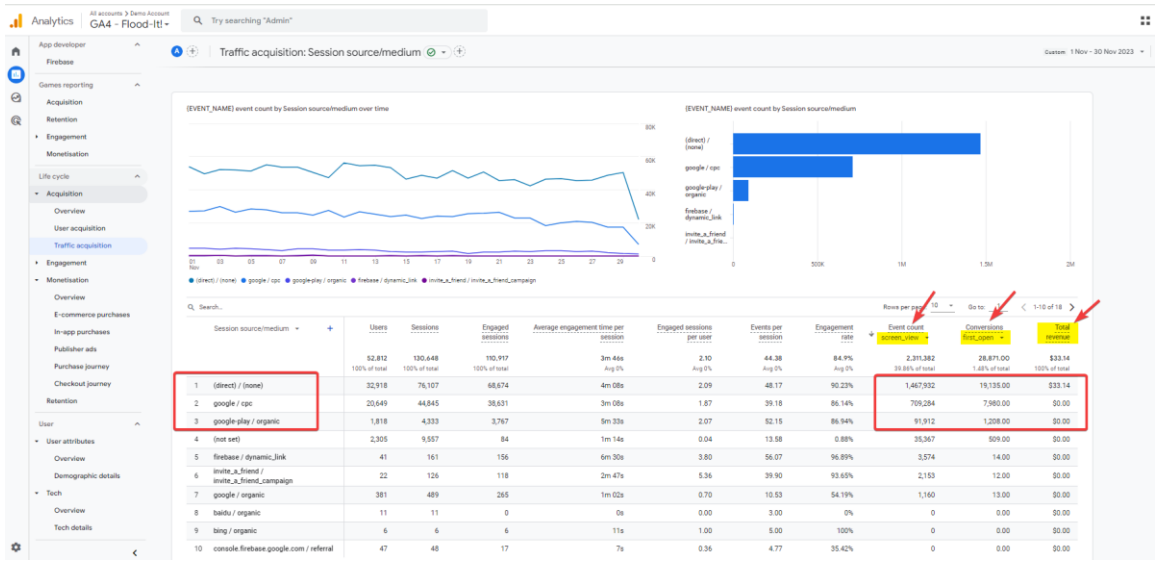


Source: GA4 – Flood-It! Demo Account

This traffic acquisition report is also useful when we wish to track the performance of the individual influencers who bring traffic to the game app.

For example, imagine we are collaborating with a gaming influencer named John who shares a link for his followers to download the app: www.example.com/download?utm_source=influencerjohn. Since we're tagging the link with utm_source=influencerjohn, you can see how much traffic and app installs (via *first_open* event) that John brought after switching the "Session default channel group" dimension to "Session source/medium" dimension in the traffic acquisition report.

Using this report, the company could take action to allocate more of its budget to the influencer who brings more traffic and revenue.



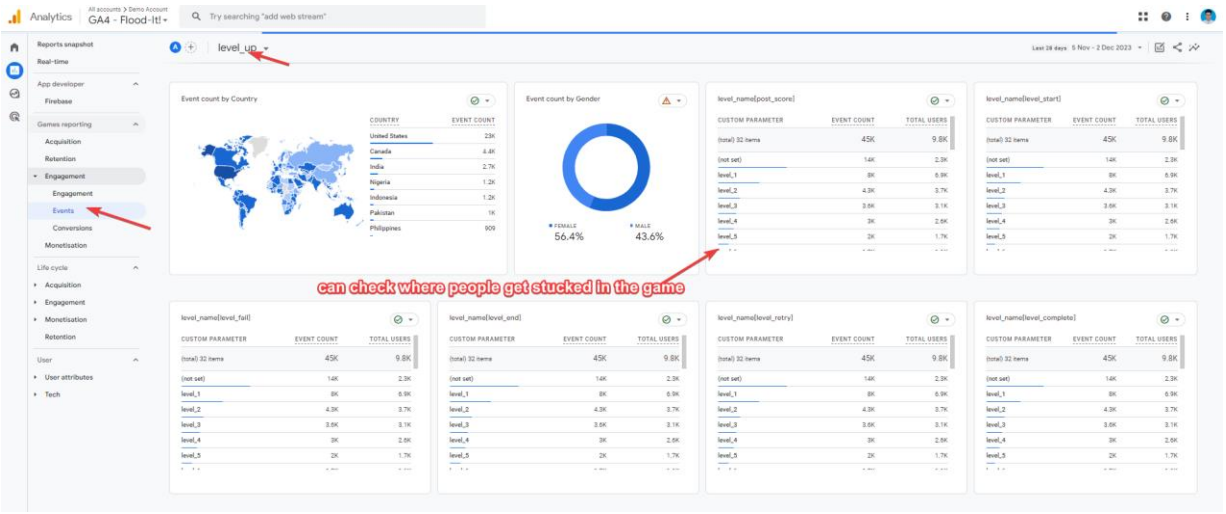
Source: GA4 – Flood-It! Demo Account

(Note: please feel free to switch to other events and conversions to be tracked other than screen_view and first_open)

(ii) Events Report

For product teams, they may also use Google Analytics 4 to check which level most people are getting stuck in and leave the game. With this info, they could optimize the gaming experience for the users.

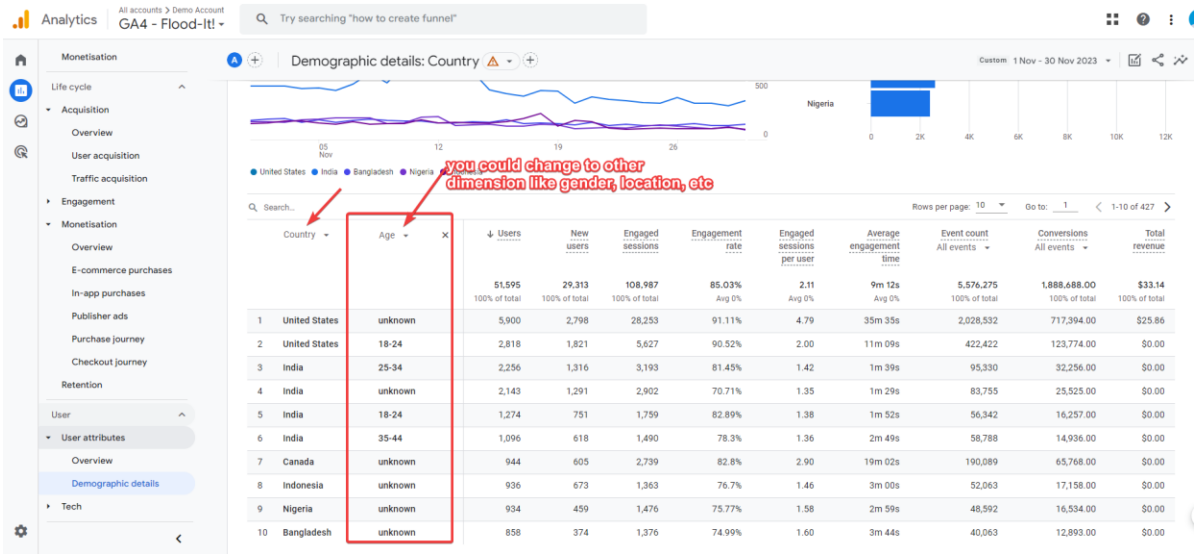
For example, they could investigate if lowering the game difficulty (perhaps level 7) could increase engaged users with the data provided by Google Analytics.



(iii) Demographic details Report

The Demographic details Report provides key characteristics about the people who use the app, including a user's language, interests, location, age, and gender. This is valuable to know the current customer and where the potential customer may come from in the future.

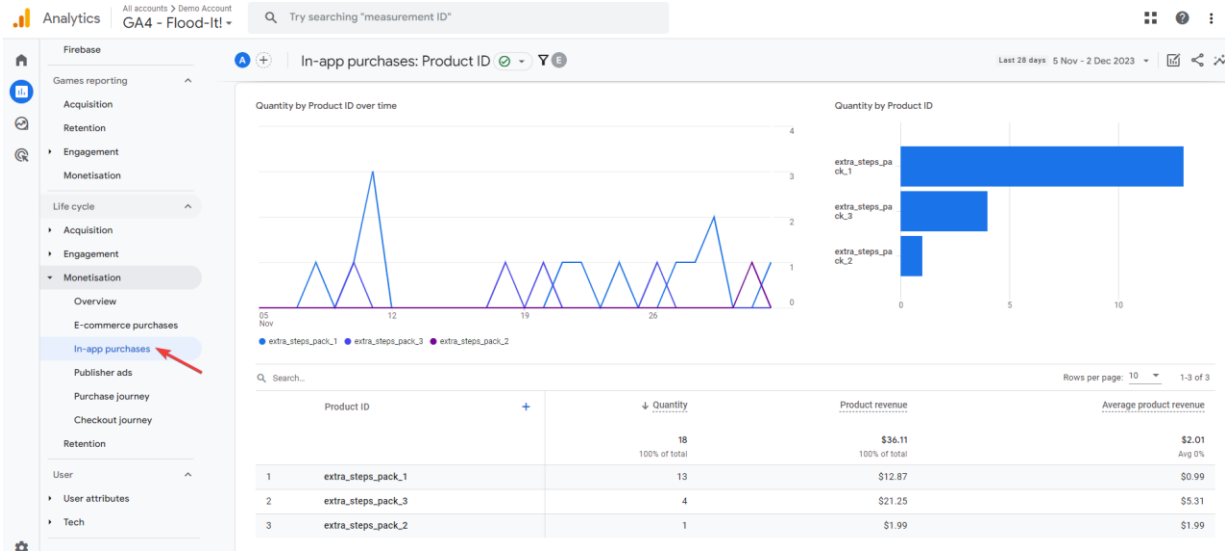
For example, with this report, we could see if the younger generation are more likely to play the strategy game and pay for it. You could use this insights to define our target audience for marketing purpose.



Source: GA4 – Flood-It! Demo Account

(iv) Monetization In-app purchases

The In-app purchases report provides info about which product or offerings has generated the most revenue from the paying users.

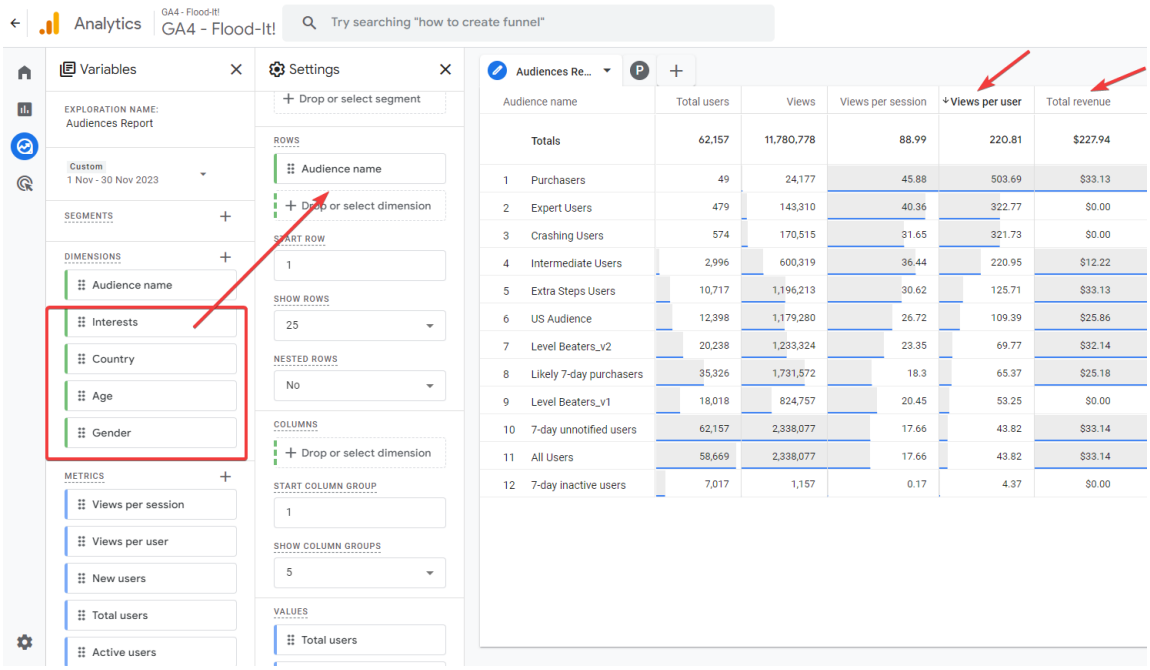


Source: GA4 – Flood-It! Demo Account

(v) Audiences report (made via Exploration report)

The Audiences Report provides information about the demographics, interests, and geographic locations of your website visitors.

For example, we could use Audiences report to track the purchasers on our website and see what their common characteristics or triggers (e.g., country, age, or interests) which encourage their purchase. The same concept is applicable to the other audiences, like Intermediate Users, or Expert Users, etc.



Source: GA4 – Flood-It! Demo Account

3.0 Data Collection Plan

- Data the needs to be collected as below:

Audience to create:

Audience name	**Description**
All users	Users who have ever launched the game app.
Intermediate users	Users who completed 10 to 30 levels.
Expert users	Users who completed 30+ levels.
Purchasers	Users who completed 1+ in-app purchases.

Key Events to track, with suggested event parameters:

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<table>
<tr><th>Event name</th><th>Description</th><th>Parameters</th><th>How it's collected in GA4</th></tr>
<tr><td>level_up</td><td>Fires when the user levels up in the game.</td><td><table><tr><th>Name</th><th>Type</th><th>Example value</th></tr><tr><td>level</td><td>number</td><td>5</td></tr><tr><td>character</td><td>string</td><td>Player 1</td></tr></table>Source: GA4 Documentation</td><td>It could be set up via GTAG tracking code</td></tr>
<tr><td>app_remove</td><td>Fires when an application package is removed (uninstalled) from an Android device.</td><td>-</td><td>It's an automatically collected event</td></tr>
</table>

Conversions to track:

Conversion name	Description	How it's collected in GA4
first_open	Fires on the first app open after install. It serves as the proxy for app install (P.S.: Supports measuring ***first_open*** conversions for users who accept Apple's iOS 14 app-tracking prompt.)	It's an automatically collected event
screen_view	Fires when a screen transition occurs in mobile app. The concept is like the page view in website.	It's an automatically collected event
in_app_purchase	when a user completes an in-app purchase, that is processed by the Apple Store or Google Play Store	It's an automaticall y collected event

- Timescale

We propose to take 3 weeks to set up Google Analytics 4 on mobile app for the events and conversions tracking.

- Execution - How and Who will set up the Google Analytics 4

The developer will set up the tracking code of Google Analytics 4 on the mobile app, using Firebase SDK along with GTM for Android/iOS. Meanwhile, the marketer will define which events and conversions to track via GA4 and ask the help from the developer to set up.

- Data Storage Security

In Google Analytics, the company can control who could access to GA4 data. For instance, the administrator of GA4 property can assign the "Marketer" role to its staff, allowing them to manage audiences, events, and conversions in GA4. If you wish to limit editing capabilities for the staff, the "Viewer" role could be assigned instead. These role permissions aim to safeguard GA4 data from accidental or malicious manipulation or deletion by others.

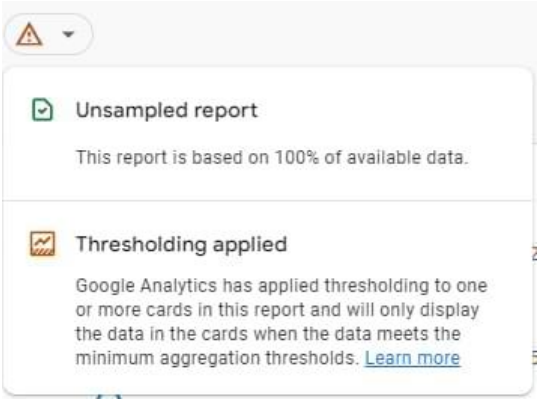
- Privacy Considerations and Remediation

When collecting data, Google Analytics 4 does not log or store IP addresses. In addition, Google Analytics provides controls to disable the collection of granular location and device data on a per-region basis.

- Challenges of data collection with GA4 and Remediation

We might face some challenge when collecting data with Google Analytics 4, as follows:

Data thresholding
If you're looking at the report and the property contains data from Google Signals, Google Analytics will hide rows in the reports with small user numbers. For example, in Traffic Acquisition report, Google Analytics interface will hide some traffic sources generated if it's less than 50 users in that timeframe.



To solve it, you could change **Reporting Identiy to "Device-based".** For more information, please refer here.

- Back-up Plan

We could export GA4 data to Google BigQuery for backup purposes, though it comes with additional costs. Here is the step-by-step guide for the process.

4.0 Events, conversions and audiences are ready to go!

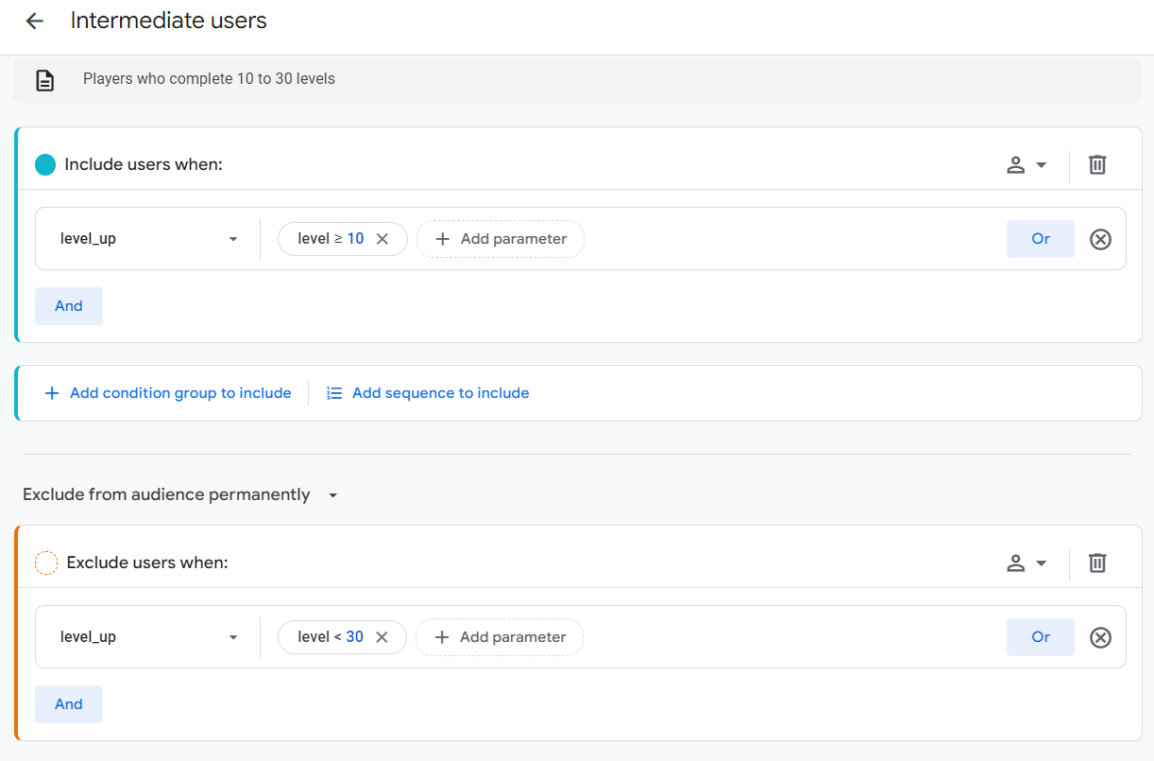
As supporting evidence, below are screenshot detailing configurations of the audiences, events and

conversions needed to be created:

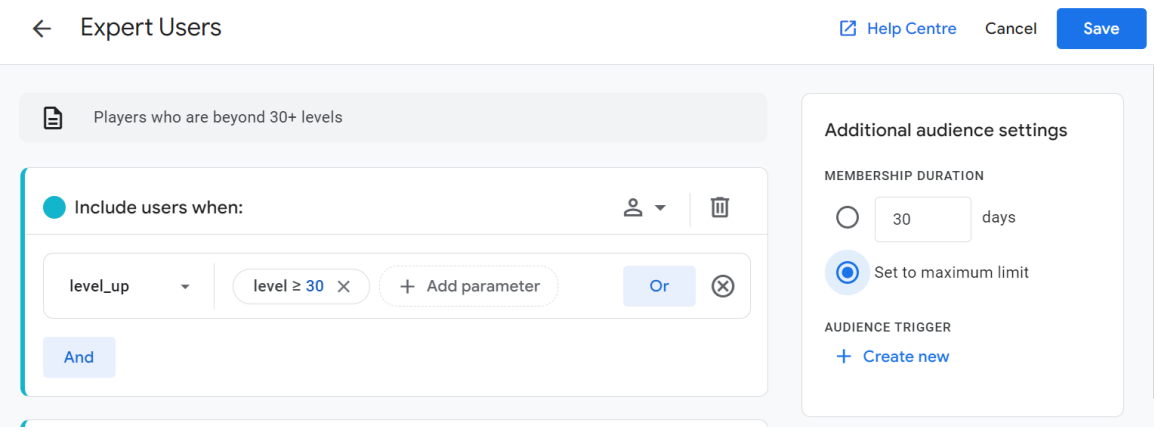
Audience

Here are the configurations for each of the audiences:

- Intermediate users (who complete 10 to 30 levels)



- Expert users (who are beyond 30+ levels)



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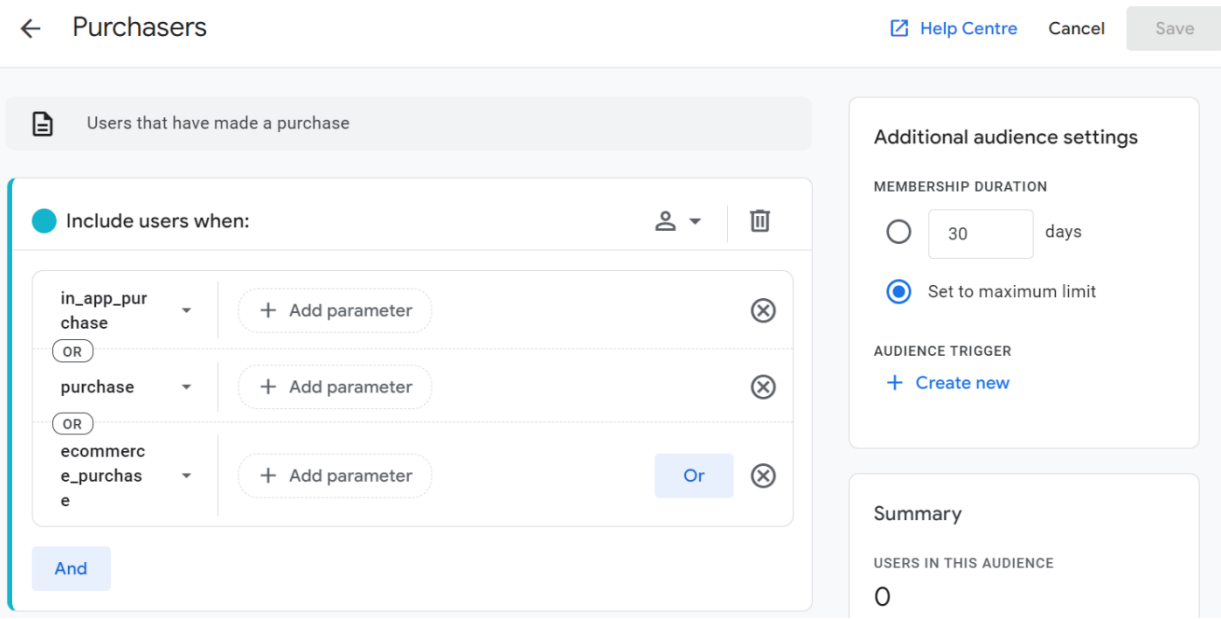
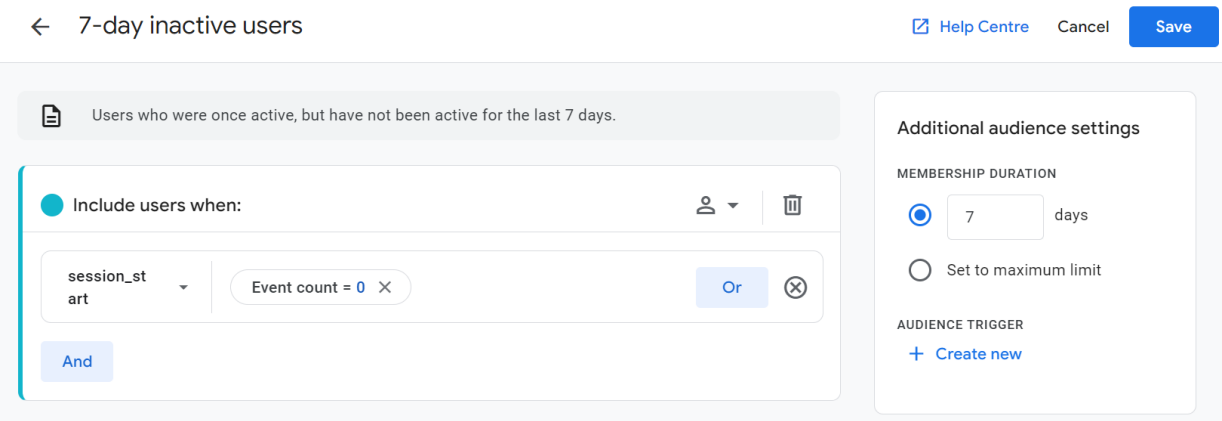
- Purchasers



- 7-day inactive users



And, for Events and Conversions will be created as follows:

<u>Events:</u>

- level_up
- app_remove

<u>Conversions:</u>

- first_open
- screen_view
- in_app_purchase

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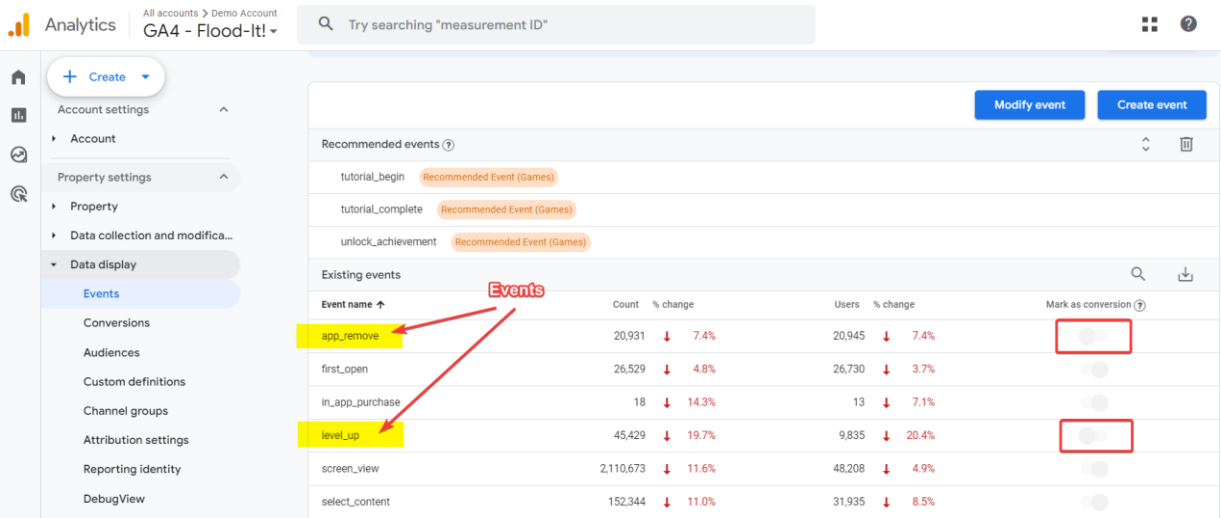

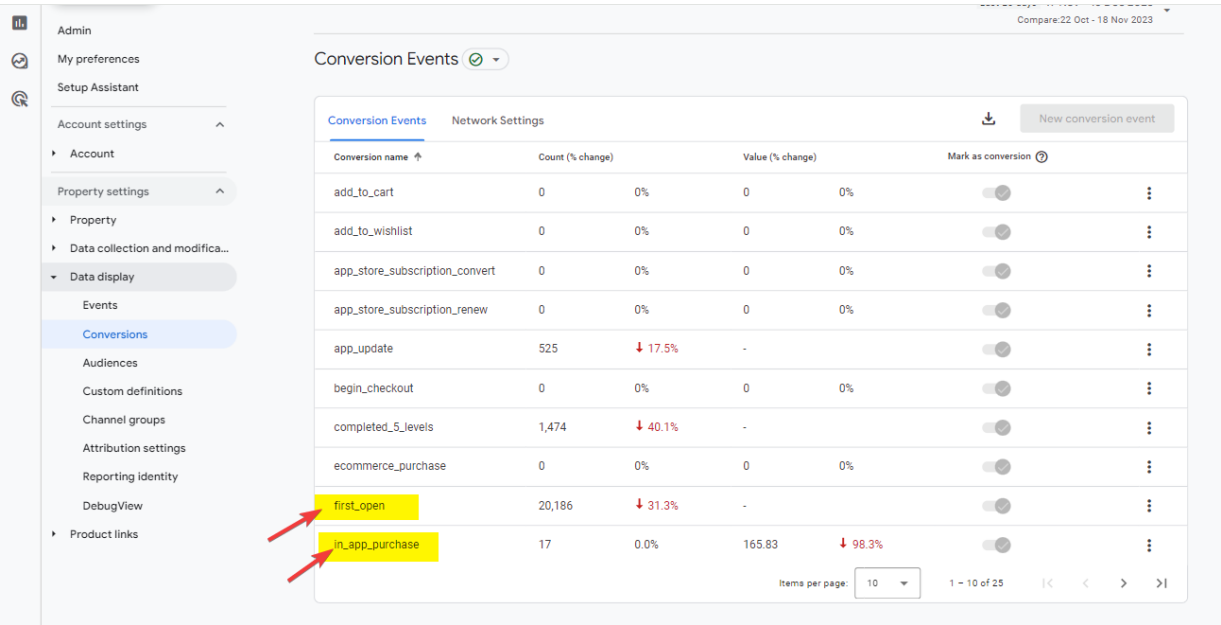

(Note: I used the 'GA4 – Flood It!' Demo accounts for displaying those events and conversions I planned to track. As most of them are automatically collected in the app (as shown in Part 3.0), not on the website, my GA4 property for web tracking doesn't have those events and conversions tracked yet.)