Assignment for Data Analyst

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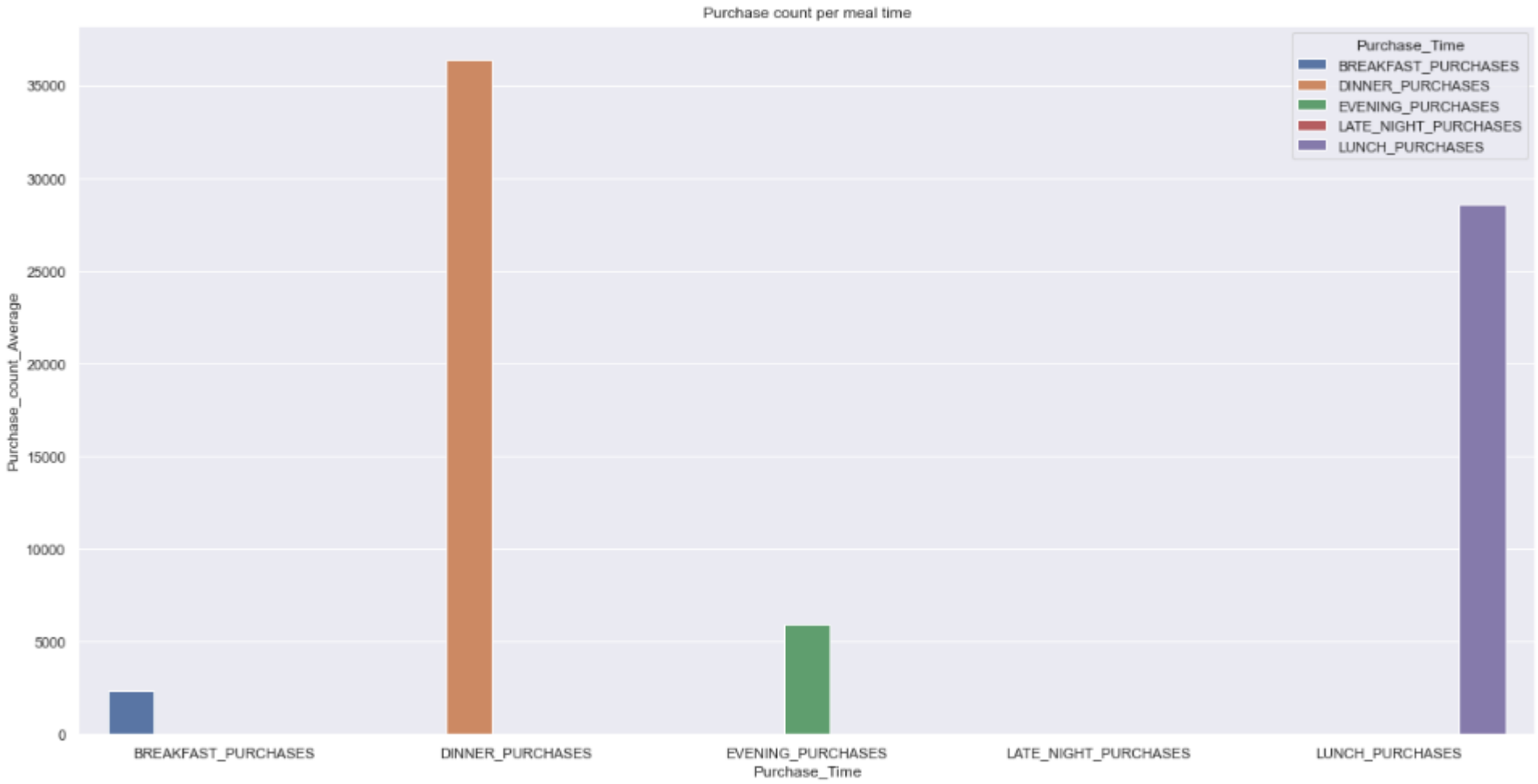
Explore the data

- Notice that the dataframe date column is not a datetime type and the user_id is an integer so we will start first by changing the type of these columns so that it represents the data correctly
- Check for null values and whether this would impact our analysis negatively or not
- Check the value counts of the REGISTRATION COUNTRY to get a quick image of which country has the most customers
- Go deeper into PURCHASE COUNT_BY_STORE_TYPE

Explore the data

Look at the line chart we can see that customers purchase the most using the web platform, followed by IOS and Android that are almost equally popular modes of purchase

Explore the data

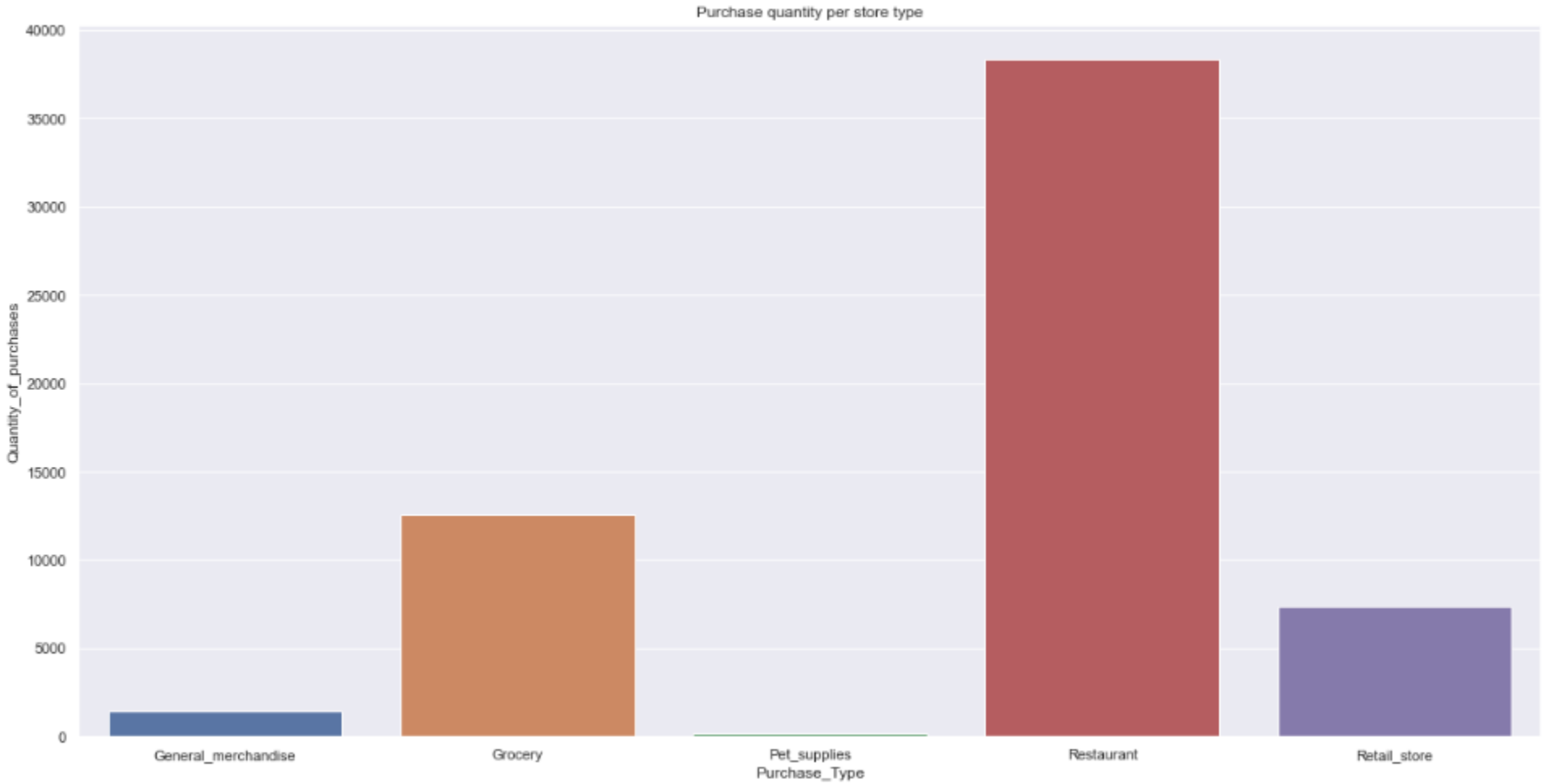


Most users purchase at dinner and lunch time.

Opens possibilities to provide products that would sell for breakfast and other times.

However it also tells us that most of our sales come from dinner and lunch so we can optimise our app to make good deals during those times

Explore the data

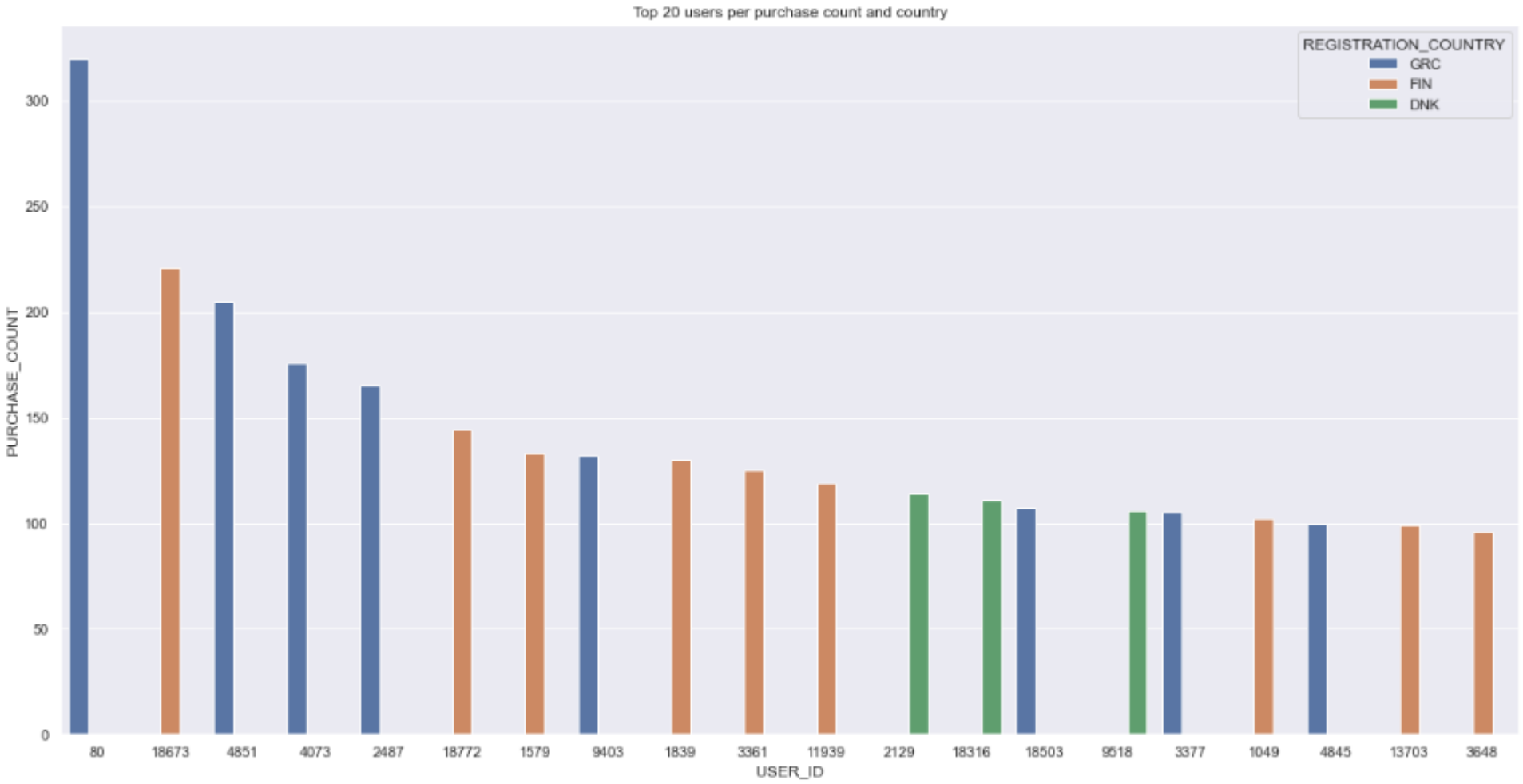


We can see on the chart that most of the orders come from restaurants and groceries then come at second place.

That could be caused by not having enough options for the other stores types.

That means we could increase the variety of general merchandise, pet supply and retail store products available for purchase.

Explore the users

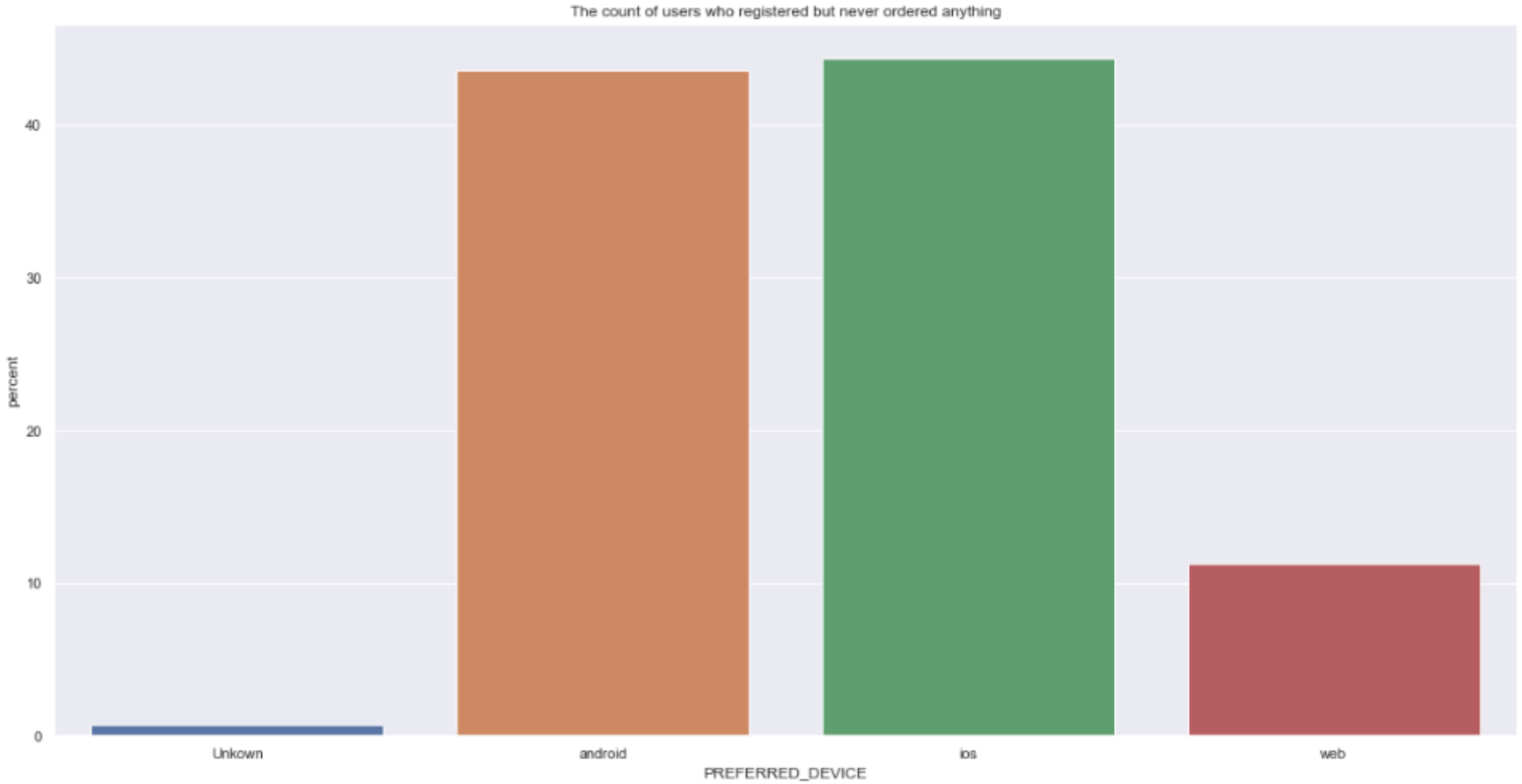


In this chart we can have a view of all users by country and **see the most loyal customers**

Maybe we can offer them special treatment (points and offers)so that we can make sure they have a good experience with us and increase our engagement

Explore the users

Take a look on users who registered but never ordered anything



Users who use the web have the less purchases. Users with Android and IOS who didn't purchase anything when combined will have the 87% and for the web, we have 11%.

Let’s go deeper

What could be the reason behind this. Is it that the Android and IOS app doesn't provide a great experience or does the app keep crushing in their phones?

Can we encourage users to use the web as that might make it easier for them to purchase?

Should we send them exclusive offers through emails and texts? **There are many possible solutions to reactivate these users that we can draw from these charts.**

Explore the users

MOST_COMMON_WEEKDAY_TO_PURCHASE	
Friday	9694
Monday	10259
Saturday	10066
Sunday	10758
Thursday	11518
Tuseday	10737
Wednesday	10509

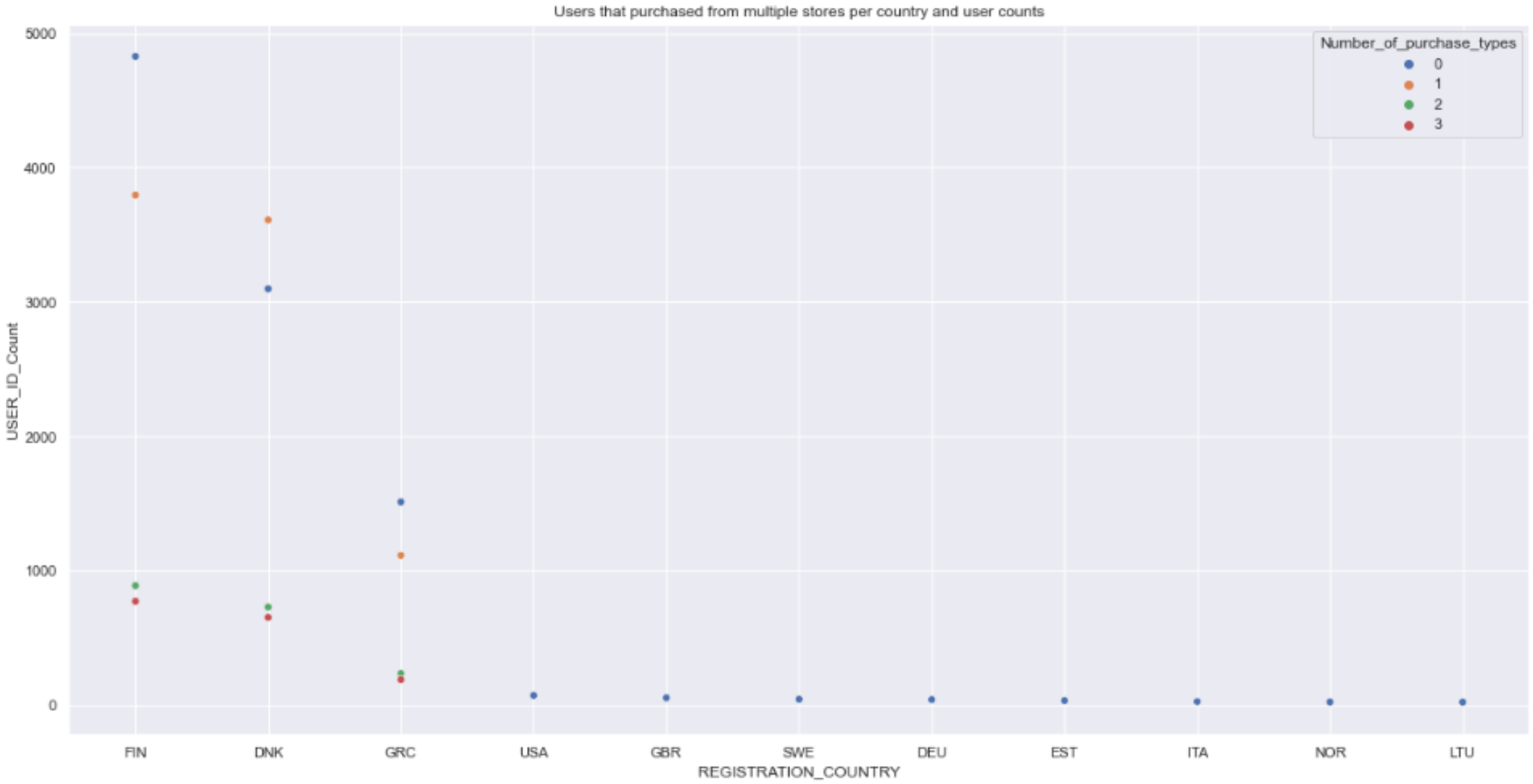
There are no significant differences in the purchase count per weekday, **but the lowest is Friday and highest is Thursday**

	Number_of_purchase_types	USER_ID_Count	PURCHASE_COUNT
0	0	9955	0
1	1	8557	18206
2	2	1856	28730
3	3	1615	26605

Number_of_purchase_type =column that will sum the number of purchase type per users

- **Amongst the users who do make a purchase, most users purchase from one store type only. However the users who buy from more than one store type place a lot more orders.**
- **We could try and market more store types to our users as this might help us in reactivating users and increasing our sales. Maybe the other users didn't find something of interest so if we offer them other varieties we might be able to reactivate them.**
- **Also for users who only purchase once we can try to target them to purchase from different types of store**

Explore the users



We can see that most users who purchase from 1 store or more are in Finland and Denmark, perhaps most of the marketing and varieties offered only take place in Finland and Denmark. This is something that can be addressed for other countries, maybe use a similar strategy to that of Finland and Denmark.

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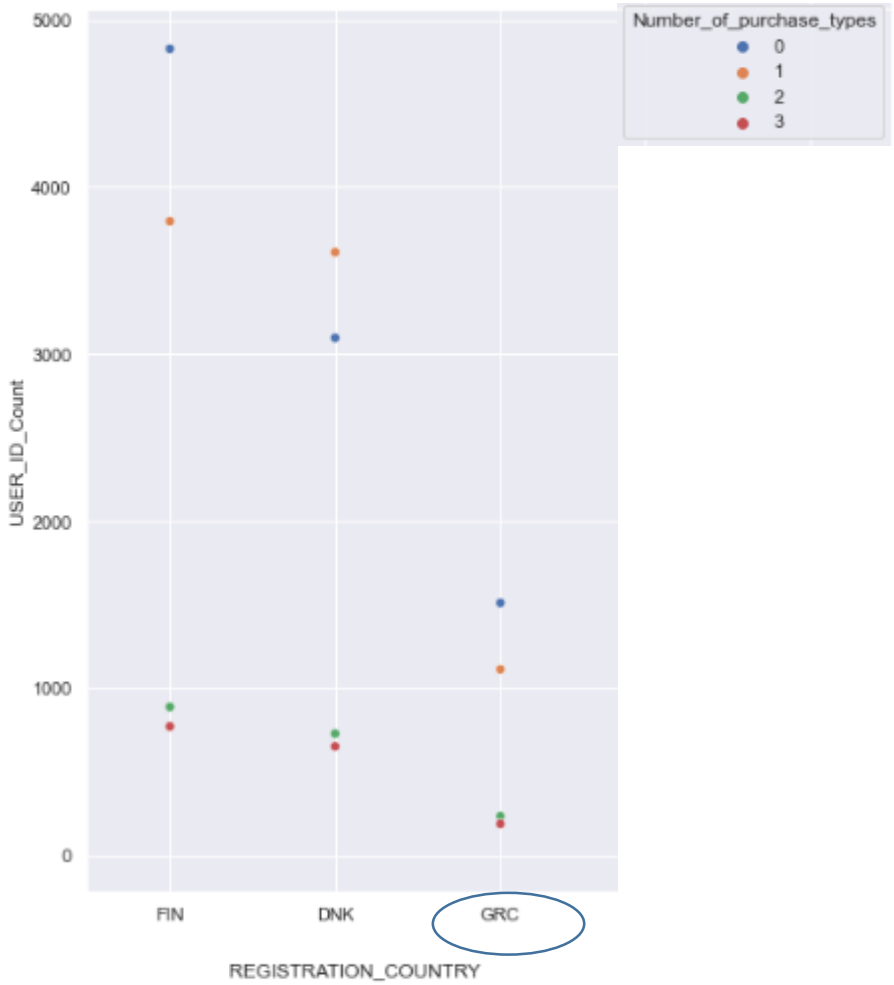

We can see that most users who purchase from 1 store or more are in Finland and Denmark, perhaps most of the marketing and varieties offered only take place in Finland and Denmark. This is something that can be addressed for other countries, maybe use a similar strategy to that of Finland and Denmark.

This could activate the users who reside in countries with very low rates. Although it could be that the strategies used only work for Finland and Denmark.

If Wolt is going to a different market, there will be a need to understand more about that market.
Another possible solution is to work with fewer countries if we are losing more money there than making money, until we have the right resources to allocate here.

We can start first by improving the purchase counts in Greece because we have a decent number of purchases there per store type and user counts, but the market is lacking in comparison to Finland and Denmark. We have a better chance to improve our service there given that we have already an established user base that we can expand on.

Afterwards

Why this approach might be better than the non-analytical one:

- The ability to dig into the data and create new features from existing columns will allow for more customized information. For example, breaking down purchases by store type into multiple columns for further segmentation.
- Replacing missing values with appropriate values, such as the mean, helps you better interpret and visualize the results.
- Segmenting the data by tools like Tableu will only let you see what's already been done for you, but with analytics, we can get deeper into the data, and that can take longer than the time you've invested in it.

Afterwards

Limitations and other possible analysis

- There other columns that can be explored, such as first and last purchase date, but these were not used for this project. It would be nice to explore the other columns to see if we could find other solutions to supplement this project
- Clustering models could have been used such as Kmeans clustering to segment the data but given that this assignment is made for analysts I decided to not use any Machine Learning models. This will let us group users using multiple features and compare it to the segmentation we created for this project.
- I didn't test differences statistically, for example Android\IOS against web users.