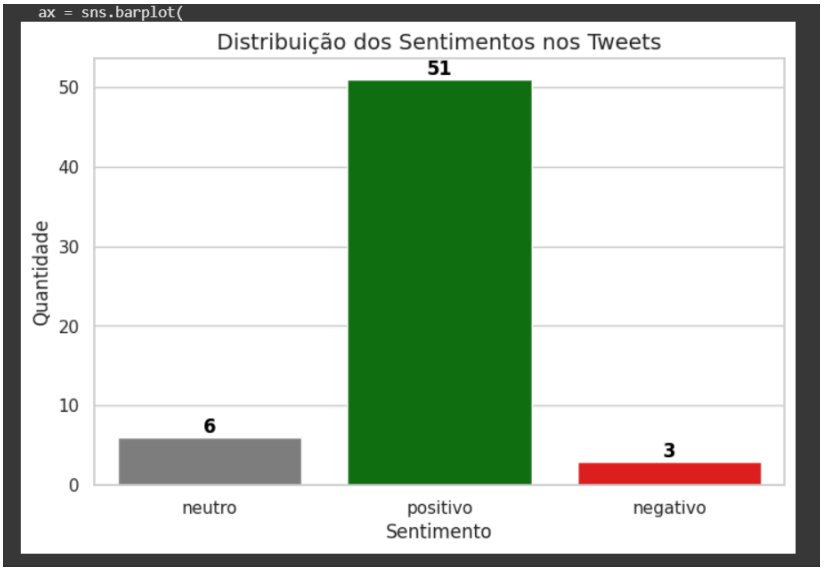
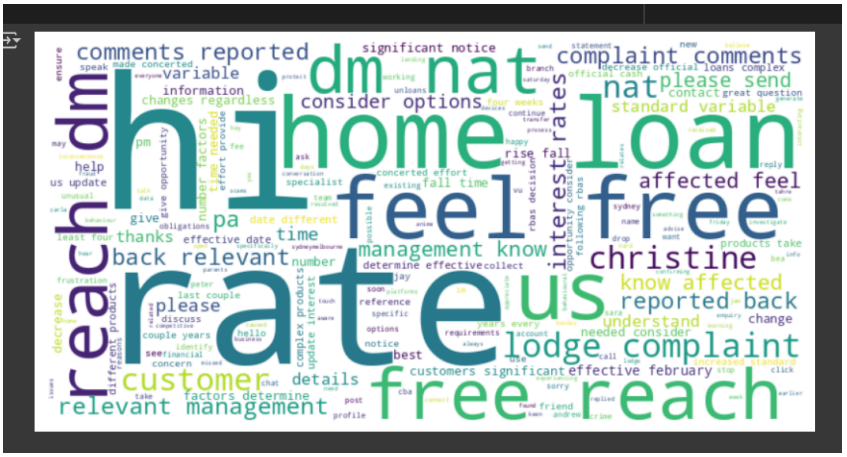
Once you extract the tweets via the API


```
[{'id': 1892345151638688103,
  'text': '@vunguye50157456 IF you would like a reference for the complaint, feel free to reach out on a DM. ^Nat'},
 {'id': 1892340646620611065,
  'text': '@vunguye50157456 if you would like me to lodge a complaint for you so your comments can be reported back the relevant management, and they know how you have bee
feel free to reach out on a DM. ^Nat'},
 {'id': 1892334530134229099,
  'text': '@vunguye50157456 Hi tehre Vu, our Lending specialists are always open to having a conversation should you need talk more about your requirements., please speak
branch, or call us on 132224 from 8am - 7pm, Monday - Friday 9am - 2pm, Saturday (Sydney/Melbourne Time). ^Nat'},
 {'id': 1892329593182597164,
  'text': '@vunguye50157456 @RBAInfo Hi Vu. I can appreciate everyone wants a competitive rate. If your parents would like to discuss their home loan options or believe sc
was missed, please advise them to reach out to us on 132224 so our Home Loan specialist can investigate. ^Don'},
 {'id': 1892319989774110964,
  'text': '@Anima237 More info can be found here: \nhttps://t.co/VwZzM42AYS ^Don'},
 {'id': 1892319925404127331,
  'text': "@Anima237 The reasons why we may collect and process this information is to generate a 'behavioural profile' that relates specifically to you, which we can use
identify unusual behaviour."},
 {'id': 1892319883058422165,
  'text': '@Anima237 Hi Anima, I hear your concerns, and we are working hard to protect customers from fraud and scams. We collect specific data related to how you use you
when interacting with our platforms.'},
 {'id': 1892149203310399780,
  'text': '@vrsinfo13 Hi there, thanks for getting in touch. Can you please send us a DM confirming your enquiry? Thanks. ^Del'},
 {'id': 1892045563534901669,
  'text': '@darrenrrrrr Hi Darren. The change applies to all Variable Home Loans. We will notify customers of any further changes to our interest rates. ^Don'},
 {'id': 1892000700185641265,
  'text': '@astormeer Hi AR. So we can provide you specific details of your home loan repayments, please contact us on 132224 or visit a branch. ^Don'},
 {'id': 1891849806164918744,
```


You can create a function that identifies the sentiment of tweets, to do sentiment analysis.



You can create a word cloud to identify page trends, like this:



Another important point would be to obtain the replies to the tweets and analyze their sentiments: based on a Commonwealth tweet, how are people responding? Positively, neutrally or negatively?

How many of the replies are requests/complaints? These tweets can help identify areas for improvement.

In addition, it is possible to analyze the engagement response based on the type of post: how do followers respond when posting about a new service from the company? how do

they respond when posting a photo about sports? This will help you understand which content generates the most return on your Twitter page, through metrics such as likes, shares, clicks and even analyzing the content of the responses.
This can help direct the content posted on the Commonwealth Bank page.
More of it can be seen in the notebook created below:
https://colab.research.google.com/drive/1HF_Zgjac9Zy9hpbstE_kXHGOomA71x90?authuser=0#scrollTo=F-BoSJvPbLZ6

Answer: Examine CommBank's most popular tweets. Which tweets get the most engagement? Are there identifiable trends in when these tweets are posted? Are there any similar qualities about the text of the tweets themselves? This information can provide valuable marketing insight.

- Evaluate sentiment in CommBank's Twitter replies and quote retweets. Are people generally reacting positively or negatively to various tweets? What can we learn about their reaction?
- Examine user tweets that directly mention CommBank.Is there positive or negative feedback that we can address? Can we summarise user opinion?
- Look at the relationships between views, likes, and reblogs for CommBank tweets. If there are tweets that get high views but low likes and reblogs, can we identify factors that make users more likely to interact?
- Explore the user profiles of accounts that interact with CommBank's Twitter. Can we extract any marketing insight from this audience?

Database design:
tweets table:
PK id (str) -> The unique identifier of the requested Tweet
text (str) ->The actual UTF-8 text of the Tweet
FK author_id (str) -> The unique identifier of the User who posted this Tweet
conversation_id (str) -> The Tweet ID of the original Tweet of the conversation
created_at (date) -> Creation time of the Tweet
in_reply_to_user_id (str) -> If the represented Tweet is a reply, this field will contain the original Tweet's author ID

users table:
PK id (str) -> The unique identifier of this user
name (str) -> The name of the user, as they've defined it on their profile.
username (str) -> The Twitter screen name, handle, or alias that this user identifies themselves with
created_at (date) -> The UTC datetime that the user account was created on Twitter.
protected (boolean) ->Indicates if this user has chosen to protect their Tweets
verified (boolean) -> Indicates if this user is a verified Twitter User.

metrics table (use extensions public_metrics and non_public_metrics):
PK id (str) -> Tweet ID

impression_count (int) -> count of how many times the Post has been viewed (not unique by user
retweet_count (int) -> A count of how many times the Post has been Retweeted. Does not include Quote Tweets
quote_count (int) -> A count of how many times the Post has been Retweeted with a new comment
like_count (int) -> A count of how many times the Post has been liked.
reply_count (int) -> A count of how many times the Post has been replied to
url_link_clicks (int) -> A count of the number of times a user clicks on a URL link or URL preview card in a Post
user_profile_clicks (int) -> A count of the number of times a user clicks on portions of a Post: display name, user name, profile picture
view_count (int) -> A count of how many times the video included in the Post has been viewed. This is the number of video views aggregated across all Posts in which the given video has been posted
{playback_0_count
playback_25_count
playback_50_count
playback_75_count
playback_100_count} (int) -> The number of users who played through each quartile in a video