

In [131]:

```
1 import pandas as pd
2 import snsrape.modules.twitter as sntwitter
3 import numpy as np
4 import matplotlib.pyplot as plt
5 import seaborn as sns
6
7 import nltk
8 from nltk.corpus import stopwords
9 from nltk.tokenize import word_tokenize
10 from nltk.stem import WordNetLemmatizer
11 from nltk.stem.porter import PorterStemmer
12
13 import string
14 import re
15 import textblob
16 from textblob import TextBlob
17
18 from wordcloud import WordCloud, STOPWORDS
19 from emot.emo_unicode import UNICODE_EMOJI
20
21 lemmatizer = WordNetLemmatizer()
22 from wordcloud import ImageColorGenerator
23 from PIL import Image
24
25 import warnings
26 %matplotlib inline
27
28 from sqlalchemy import create_engine
29 import pymysql
```

In [132]:

```
1 #MYSQL CONNECTIONS
2
3 mysql_user = "root"
4 mysql_password = "Shreya1604"
5 mysql_database = "airline_passenger_satisfaction"
6 mysql_host = "127.0.0.1"
7 port = 3306
8
9 sqlEngine = create_engine(f'mysql+pymysql://{mysql_user}:{mysql_password}@{mysql_host}:{port}/{mysql_database}')
10 dbConnection = sqlEngine.connect()
```

In [133]:

```
1  #FIND AIRLINE NAMES FROM TWITTER TEXT
2
3  def airlineName(tweet):
4      text = (tweet.content).lower()
5      print(f"\ntweet id --> {text}")
6      print(type(text))
7      airline = [];
8
9
10
11     if(("@qatar" in text) and ("qatar") not in airline):
12         airline.append("qatar")
13     elif(("@british" in text) and ("british_airways") not in a
14         airline.append("british_airways")
15     elif(("@lufthanza" in text) and ("lufthanza") not in airli
16         airline.append("lufthanza")
17     elif(("@lemirates" in text) and ("emirates") not in airlir
18         airline.append("emirates")
19     elif(("@singapore" in text) and ("singapore_airways") not
20         airline.append("singapore_airways")
21
22
23     airline_str = ''.join(str(x) for x in airline)
24     return airline_str
```

```

In [137]: 1 #ITERATE THROUGH TWEETS USING SNSCRAPE
          2
          3 keywords = "(airlines or airline or flight or airways)"
          4 tweet_user = []
          5 tweets = []
          6 tweet_tags = []
          7 tweet_mentions = []
          8 airlines = []
          9
         10 tweet_airline = []
         11
         12 for i, tweet in enumerate(sntwitter.TwitterSearchScrapper(keywords))
         13
         14     if i >= 1000:
         15         break
         16     else:
         17         airline_name = airlineName(tweet)
         18         tweet_user_id_str = (str)(tweet.id);
         19         print(type(tweet.date))
         20         print(f"tweet id --> {tweet.user.id}")
         21
         22         tweet_user.append([tweet_user_id_str,tweet.user.username,t
         23         tweets.append([tweet_user_id_str,tweet.content,tweet.user.
         24         tweet_tags.append([tweet.hashtags])
         25         tweet_mentions.append([tweet_user_id_str,tweet.mentionedUs
         26         airlines.append([airline_name,tweet.user.username,tweet.co
         27

```

tweet id --> jet airways ceo replies to man asking for refund for 2019 cancelled flight - ndtv.
even i too have payment of 4 tickets yet to be refunded, since you started operating the airline its your duty to pay or give the tickets of four free.

<class 'str'>

<class 'datetime.datetime'>

tweet id --> 1403302627052564485

tweet id --> @im_hiteshshah @ukhomeoffice @barbadosseo @british_airways 1) did you have a visa to your destination - whether us or caribbean?

2) were both legs of your flight - india to lhr and onward with the same airline + departing from the same terminal?

<class 'str'>

<class 'datetime.datetime'>

tweet id --> 1113589350

tweet id --> @british airways @easviet @klm @airfrance all of you hav

In [138]:

```

1 #TABLE TWEET_USER
2 cols_tweet_user = ["twitter_handle","name","profile_image_url","des
3 df_tweets_user = pd.DataFrame(tweet_user, columns = cols_tweet_user
4 #df_tweets_user.sort_values("twitter_handle")
5 display(df_tweets_user)
6
7 result=df_tweets_user.dtypes
8 print(result)
9
10 #APPENDING DATA TO MYSQL DATABASE
11 df_tweets_user.to_sql(con=dbConnection,name='USER',if_exists='appen

```

	twitter_handle	name	profile_image_url	d
0	1591439263706529793	Sanjay59449395	https://abs.twimg.com/sticky/default_profile_i...	Dis
1	1591083176000360450	searchrook	https://pbs.twimg.com/profile_images/119784327...	Gl La:
2	1591070011816579072	AmiA127v1	https://pbs.twimg.com/profile_images/106483264...	
3	1590726567160090624	ClaimDelay	https://pbs.twimg.com/profile_images/106230339...	F Cl pa
4	1590579016565919750	skywayfare	https://pbs.twimg.com/profile_images/157033851...	sk al
...	
995	1346191427869560839	lorrainemking	https://pbs.twimg.com/profile_images/155390790...	P j co
996	1346146336576581632	Samjamben28	https://pbs.twimg.com/profile_images/129460199...	
997	1346117908569628676	faisalsyed22001	https://abs.twimg.com/sticky/default_profile_i...	
998	1346115171165626370	MzNyonjo	https://pbs.twimg.com/profile_images/158159441...	I ju s
				Int
999	1346039126324346882	InfoAboutMayday	https://pbs.twimg.com/profile_images/125558593...	Do I

1000 rows × 6 columns

```
twitter_handle    object
name              object
profile_image_url object
description       object
followers_count   int64
following_count   int64
dtype: object
```

Out[138]: 1000

```
In [140]: 1 #TABLE TWEETS
          2
          3 cols_tweet = ["twitter_handle","tweet_text","profile_image_url","l
          4 df_tweets = pd.DataFrame(tweets, columns = cols_tweet)
          5 df_tweets.sort_values("twitter_handle")
          6 display(df_tweets)
          7
          8 result=df_tweets.dtypes
          9 print(result)
         10
         11 #APPENDING DATA TO MYSQL DATABASE
         12 df_tweets.to_sql(con=dbConnection,name='TWEETS',if_exists='append')
```

	twitter_handle	tweet_text	profile_image_url	like
0	1591439263706529793	Jet Airways CEO Replies To Man Asking For Refu...	https://abs.twimg.com/sticky/default_profile_i...	
1	1591083176000360450	@IM_HiteshShah @ukhomeoffice @BarbadosSeo @Bri...	https://pbs.twimg.com/profile_images/119784327...	
2	1591070011816579072	@British_Airways @easyJet @KLM @airfrance all ...	https://pbs.twimg.com/profile_images/106483264...	
3	1590726567160090624	It's easier to book tickets for #peterkay than...	https://pbs.twimg.com/profile_images/106230339...	
4	1590579016565919750	Jetblue Airlines Booking & Flight Tickets ...	https://pbs.twimg.com/profile_images/157033851...	
...
995	1346191427869560839	International travel is not allowed. It'll be ...	https://pbs.twimg.com/profile_images/155390790...	

996	1346146336576581632	@British_Airways hi BA - quick question, if I ...	https://pbs.twimg.com/profile_images/129460199...
997	1346117908569628676	@British_Airways @maddyscribbles I too receive...	https://abs.twimg.com/sticky/default_profile_i...
998	1346115171165626370	Hello @British_Airways it's actually your flig...	https://pbs.twimg.com/profile_images/158159441...
999	1346039126324346882	@AirCrash_UPS Airlines Flight 6 or Atlantic A...	https://pbs.twimg.com/profile_images/125558593...

1000 rows × 5 columns

twitter_handle	object
tweet_text	object
profile_image_url	object
like_count	int64
created_at	datetime64[ns, UTC]
dtype:	object

Out[140]: 1000

```

In [142]: 1 #TABLE TWEET TAGS
          2
          3 cols_tweet_tags = ["hashtags"]
          4 df_tweets_tags = pd.DataFrame(tweet_tags, columns = cols_tweet_tag
          5 display(df_tweets_tags)
          6
          7 result=df_tweets_tags.dtypes
          8 print(result)
          9
         10 df_tweets_tags['hashtags'] = df_tweets_tags['hashtags'].astype(str
         11 result=df_tweets_tags.dtypes
         12 print(result)
         13
         14 #APPENDING DATA TO MYSQL DATABASE
         15 df_tweets_tags.to_sql(con=dbConnection,name='TWEET_TAGS',if_exists

```

	hashtags
0	None
1	None
2	None
3	[peterkay]
4	[JetBlueBooking, JetBlueflight]
...	...
995	None
996	None
997	None
998	None
999	None

1000 rows × 1 columns

```

hashtags    object
dtype: object
hashtags    object
dtype: object

```

Out[142]: 1000

```

In [147]: 1 #TABLE MENTIONS
          2
          3 cols_tweet_mentions = ["source_user","target_user"]
          4 df_tweets_mentions = pd.DataFrame(tweet_mentions, columns = cols_t
          5 display(df_tweets_mentions)
          6
          7 result=df_tweets_mentions.dtypes
          8 print(result)
          9
         10 #df_tweets_mentions['source_user'] = df_tweets_mentions['source_us
         11 df_tweets_mentions['target_user'] = df_tweets_mentions['target_use
         12 result=df_tweets_mentions.dtypes
         13 print(result)
         14
         15 #APPENDING DATA TO MYSQL DATABASE
         16 df_tweets_mentions.to_sql(con=dbConnection,name='TWEET_MENTIONS',i

```

	source_user	target_user
0	1591439263706529793	None
1	1591083176000360450	[https://twitter.com/IM_HiteshShah, https://tw...
2	1591070011816579072	[https://twitter.com/British_Airways, https://...
3	1590726567160090624	[https://twitter.com/AerLingus, https://twitte...
4	1590579016565919750	None
...
995	1346191427869560839	None
996	1346146336576581632	[https://twitter.com/British_Airways]
997	1346117908569628676	[https://twitter.com/British_Airways, https://...
998	1346115171165626370	[https://twitter.com/British_Airways, https://...
999	1346039126324346882	[https://twitter.com/AirCrash_]

1000 rows × 2 columns

```

source_user    object
target_user    object
dtype: object
source_user    object
target_user    object
dtype: object

```

Out[147]: 1000

In [149]:

```

1 #AIRLINE TABLE
2
3 cols_airlines = ["airline", "name", "tweet_text", "created_at", "user_
4 df_airlines = pd.DataFrame(airlines, columns = cols_airlines)
5 display(df_airlines)
6
7 df_airlines.to_sql(con=dbConnection, name='AIRLINES', if_exists='app

```

	airline	name	tweet_text	created_at	user_location
0		Sanjay59449395	Jet Airways CEO Replies To Man Asking For Refu...	2022-11-12 14:34:22+00:00	
1	british_airways	searchrook	@IM_HiteshShah @ukhomeoffice @BarbadosSeo @Bri...	2022-11-11 14:59:24+00:00	
2	british_airways	AmiA127v1	@British_Airways @easyJet @KLM @airfrance all ...	2022-11-11 14:07:06+00:00	
3	british_airways	ClaimDelay	It's easier to book tickets for #peterkay than...	2022-11-10 15:22:22+00:00	Manchester, England
4		skywayfare	Jetblue Airlines Booking & Flight Tickets ...	2022-11-10 05:36:03+00:00	McKenzieland, Mississippi, USA
...
995		lorrainemking	International travel is not allowed. It'll be ...	2021-01-04 20:27:02+00:00	Here, there and everywhere
996	british_airways	Samjamben28	@British_Airways hi BA - quick question, if I ...	2021-01-04 17:27:51+00:00	
997	british_airways	faisalsyed22001	@British_Airways @maddyscribbles I too receive...	2021-01-04 15:34:53+00:00	
998	british_airways	MzNyonjo	Hello @British_Airways it's actually your flig...	2021-01-04 15:24:01+00:00	*UG born & bred LDN battered*
999		InfoAboutMayday	@AirCrash_ UPS Airlines Flight 6 or Atlantic A...	2021-01-04 10:21:50+00:00	Central Europe

1000 rows × 5 columns

Out[149]: 1000

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