In [60]:
```
!pip install tweepy
```

```
Requirement already satisfied: tweepy in c:\users\86395\anaconda3\lib\site-packages (4.13.0)
Requirement already satisfied: oauthlib<4,>=3.2.0 in c:\users\86395\anaconda3\lib\site-packages (from tweepy) (3.2.
1)
Requirement already satisfied: requests-oauthlib<2,>=1.2.0 in c:\users\86395\anaconda3\lib\site-packages (from tweep
y) (1.3.1)
Requirement already satisfied: requests<3,>=2.27.0 in c:\users\86395\anaconda3\lib\site-packages (from tweepy) (2.2
8.2)
Requirement already satisfied: charset-normalizer<4,>=2 in c:\users\86395\anaconda3\lib\site-packages (from requests
<3,>=2.27.0->tweepy) (3.1.0)
Requirement already satisfied: idna<4,>=2.5 in c:\users\86395\anaconda3\lib\site-packages (from requests<3,>=2.27.0-
>tweepy) (2.10)
Requirement already satisfied: urllib3<1.27,>=1.21.1 in c:\users\86395\anaconda3\lib\site-packages (from requests<3,
>=2.27.0->tweepy) (1.25.11)
Requirement already satisfied: certifi>=2017.4.17 in c:\users\86395\anaconda3\lib\site-packages (from requests<3,>=
2.27.0->tweepy) (2020.6.20)
```

In [61]:
```
!pip install textblob
```

```
Requirement already satisfied: textblob in c:\users\86395\anaconda3\lib\site-packages (0.17.1)
Requirement already satisfied: nltk>=3.1; python_version >= "3" in c:\users\86395\anaconda3\lib\site-packages (from
textblob) (3.5)
Requirement already satisfied: tqdm in c:\users\86395\anaconda3\lib\site-packages (from nltk>=3.1; python_version >=
"3"->textblob) (4.50.2)
Requirement already satisfied: click in c:\users\86395\anaconda3\lib\site-packages (from nltk>=3.1; python_version >
= "3"->textblob) (7.1.2)
Requirement already satisfied: regex in c:\users\86395\anaconda3\lib\site-packages (from nltk>=3.1; python_version >
= "3"->textblob) (2020.10.15)
Requirement already satisfied: joblib in c:\users\86395\anaconda3\lib\site-packages (from nltk>=3.1; python_version
>= "3"->textblob) (0.17.0)
```

In [62]:
```
import tweepy
from textblob import TextBlob
import pandas as pd
import numpy as np
import re
import matplotlib.pyplot as plt
```

In [63]:
```
config = pd.read_csv("C:/Users/86395/Desktop/Config.csv")
```

In [64]:
```
twitterApiKey= config['twitterApiKey'][0]
twitterApiSecret=config['twitterApiSecret'][0]
twitterApiAccessToken=config['twitterApiAccessToken'][0]
twitterApiAccessTokenSecret=config['twitterApiAccessTokenSecret'][0]
```

In [65]:
```
auth=tweepy.OAuthHandler(twitterApiKey,twitterApiSecret)
auth.set_access_token(twitterApiAccessToken,twitterApiAccessTokenSecret)
twitterApi=tweepy.API(auth,wait_on_rate_limit=True)
```

In [66]:
```
twitterAccount = 'KamalaHarris'
```

In [77]:
```
tweets = tweepy.Cursor(twitterApi.user_timeline,
                       screen_name=twitterAccount,
                       count=None,
                       since_id=None,
                       max_id=None,train_user=True,exclude_replies=True,contributor_details=False,
                       include_entities=False).items(1000);
```

In [78]:
```
df = pd.DataFrame(data=[tweet.text for tweet in tweets],columns=['Tweet'])
```

```
Unexpected parameter: include_entities
Unexpected parameter: train_user
Unexpected parameter: contributor_details
Unexpected parameter: include_entities
Unexpected parameter: train_user
Unexpected parameter: contributor_details
Unexpected parameter: include_entities
Unexpected parameter: train_user
Unexpected parameter: contributor_details
Unexpected parameter: include_entities
Unexpected parameter: train_user
Unexpected parameter: contributor_details
Unexpected parameter: include_entities
Unexpected parameter: train_user
Unexpected parameter: contributor_details
Unexpected parameter: include_entities
Unexpected parameter: train_user
Unexpected parameter: contributor_details
Unexpected parameter: include_entities
Unexpected parameter: train_user
```

In [79]:
```
df.head()
```

Out[79]:

	Tweet
0	As extremist elected officials continue to att...
1	RT @VP: Extremists in the Florida State Legisl...
2	Assault weapons have no place on the streets o...
3	RT @VP: The 5th Circuit issued a decision disr...
4	RT @VP: Health care is a right, not a privileg...

In [80]:
```
def cleanUpTweet(txt):
    txt = re.sub(r'@[A-Za-z0-9]+','',txt)
    txt = re.sub(r'#','',txt)
    txt = re.sub(r'RT : ','',txt)
    txt = re.sub(r'https?:\/\/[A-Za-z0-9\.\/]+','',txt)
    return txt
```

In [81]:
```
df['Tweet']=df['Tweet'].apply(cleanUpTweet)
```

In [82]:
```
def getTextSubjectivity(txt):
    return TextBlob(txt).sentiment.subjectivity
```

In [83]:
```
def getTextPolarity(txt):
    return TextBlob(txt).sentiment.polarity
```

In [84]:
```
df['Subjectivity']=df['Tweet'].apply(getTextSubjectivity)
df['Polarity']=df['Tweet'].apply(getTextPolarity)
```

In [85]:
```
df.head(1000)
```

Out[85]:

	Tweet	Subjectivity	Polarity
0	As extremist elected officials continue to att...	0.000000	0.000000
1	Extremists in the Florida State Legislature ha...	0.500000	0.500000
2	Assault weapons have no place on the streets o...	0.900000	0.400000
3	The 5th Circuit issued a decision disregarding...	0.000000	0.000000
4	Health care is a right, not a privilege. And t...	0.535714	0.285714
...	...	...	...
995	1️⃣ Increased Support for Hospitals \n 2️⃣ Robu...	0.800000	0.400000
996	More than 200 million Americans have been full...	0.500000	0.500000
997	Happy Holidays! Earlier this month, and I inv...	0.750000	0.500000
998	Vaccines are free, convenient and save lives. ...	0.800000	0.400000
999	The maternal mortality crisis has been a big p...	0.100000	0.000000

In [86]:
```
df = df.drop(df[df['Tweet']==''].index)
```

In [87]:
```
df.head(1000)
```

	Tweet	Subjectivity	Polarity
0	As extremist elected officials continue to att...	0.000000	0.000000
1	Extremists in the Florida State Legislature ha...	0.500000	0.500000
2	Assault weapons have no place on the streets o...	0.900000	0.400000
3	The 5th Circuit issued a decision disregarding...	0.000000	0.000000
4	Health care is a right, not a privilege. And t...	0.535714	0.285714
...	...	...	...
995	1️⃣ Increased Support for Hospitals \n 2️⃣ Robu...	0.800000	0.400000
996	More than 200 million Americans have been full...	0.500000	0.500000
997	Happy Holidays! Earlier this month, and I inv...	0.750000	0.500000
998	Vaccines are free, convenient and save lives. ...	0.800000	0.400000
999	The maternal mortality crisis has been a big p...	0.100000	0.000000

1000 rows × 3 columns

In [88]:
```
def getTextAnalysis(a):
    if a<0:
        return "Negative"
    elif a==0:
        return "Neutral"
    else:
        return "Positive"
```

In [89]:
```
df['Score']=df['Polarity'].apply(getTextAnalysis)
```

In [90]:
```
df.head(1000)
```

Out[90]:

	Tweet	Subjectivity	Polarity	Score
0	As extremist elected officials continue to att...	0.000000	0.000000	Neutral
1	Extremists in the Florida State Legislature ha...	0.500000	0.500000	Positive
2	Assault weapons have no place on the streets o...	0.900000	0.400000	Positive
3	The 5th Circuit issued a decision disregarding...	0.000000	0.000000	Neutral
4	Health care is a right, not a privilege. And t...	0.535714	0.285714	Positive
...	...	...	...	...
995	1️⃣ Increased Support for Hospitals \n 2️⃣ Robu...	0.800000	0.400000	Positive
996	More than 200 million Americans have been full...	0.500000	0.500000	Positive
997	Happy Holidays! Earlier this month, and I inv...	0.750000	0.500000	Positive
998	Vaccines are free, convenient and save lives. ...	0.800000	0.400000	Positive
999	The maternal mortality crisis has been a big p...	0.100000	0.000000	Neutral

1000 rows × 4 columns

In [91]:
```
positive=df[df['Score']=='Positive']
print(str(positive.shape[0]/(df.shape[0])*100)+'% of positive tweets')
pos=positive.shape[0]/df.shape[0]*100
```

```
49.4% of positive tweets
```

In [92]:
```
negative=df[df['Score']=='Negative']
print(str(negative.shape[0]/(df.shape[0])*100)+'% of Negative tweets')
neg=negative.shape[0]/df.shape[0]*100
```

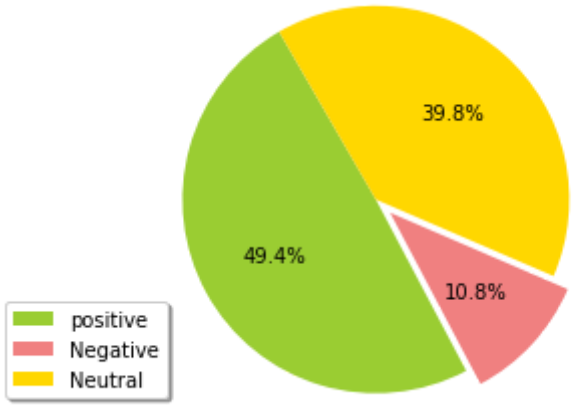
```
10.8% of Negative tweets
```

In [93]:
```
Neutral=df[df['Score']=='Neutral']
print(str(Neutral.shape[0]/(df.shape[0])*100)+'% of Neutral tweets')
neutral=Neutral.shape[0]/df.shape[0]*100
```

```
39.800000000000004% of Neutral tweets
```

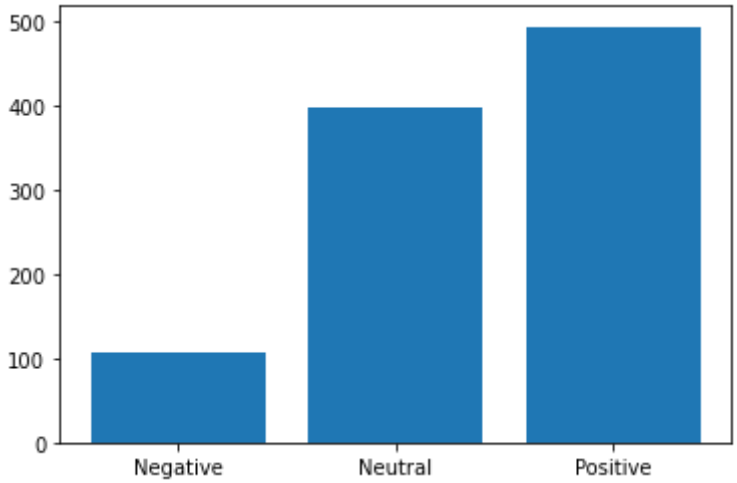
In [94]:
```
explode=(0,0.1,0)
labels='positive','Negative','Neutral'
sizes=[pos,neg,neutral]
colors=['yellowgreen','lightcoral','gold']
```

In [95]:
```
plt.pie(sizes,explode=explode,colors=colors,autopct='%1.1f%%',startangle=120)
plt.legend(labels,loc=(-0.05,0.05),shadow=True)
plt.axis('equal')
plt.savefig('Sentiment_Analysis.png')
```

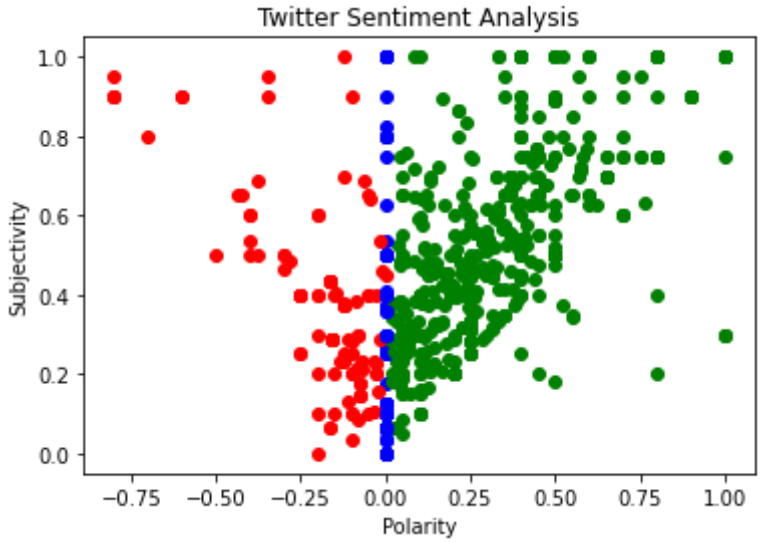


In [96]:
```
labels = df.groupby('Score').count().index.values
values = df.groupby('Score').size().values
plt.bar(labels,values)
```

Out[96]:
```
<BarContainer object of 3 artists>
```



In [97]:
```
for index, row in df.iterrows():
    if row['Score']=='Positive':
        plt.scatter(row['Polarity'],row['Subjectivity'],color='green')
    elif row['Score']=='Negative':
        plt.scatter(row['Polarity'],row['Subjectivity'],color='red')
    elif row['Score']=='Neutral':
        plt.scatter(row['Polarity'],row['Subjectivity'],color='blue')
plt.title('Twitter Sentiment Analysis')
plt.xlabel('Polarity')
plt.ylabel('Subjectivity')
plt.show()
```



In [99]:
```
df.to_excel("C:\\Users\\86395\\Desktop\\NewTwitter.xlsx")
```

In [ ]:
```
```