```
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
```

```
data = pd.read_csv('/content/drive/MyDrive/clickbait_data.csv')
```

```
data.head()
```

	headline	clickbait
0	Should I Get Bings	1
1	Which TV Female Friend Group Do You Belong In	1
2	The New "Star Wars: The Force Awakens" Trailer...	1
3	This Vine Of New York On "Celebrity Big Brothe...	1
4	A Couple Did A Stunning Photo Shoot With Their...	1

```
data.tail()
```

	headline	clickbait
31995	To Make Female Hearts Flutter in Iraq, Throw a...	0
31996	British Liberal Democrat Patsy Calton, 56, die...	0
31997	Drone smartphone app to help heart attack vict...	0
31998	Netanyahu Urges Pope Benedict, in Israel, to D...	0
31999	Computer Makers Prepare to Stake Bigger Claim ...	0

```
data.shape
```

```
(32000, 2)
```

```
data.isnull().sum()
```

```
headline     0
clickbait    0
dtype: int64
```

```
data["clickbait"].value_counts()
```

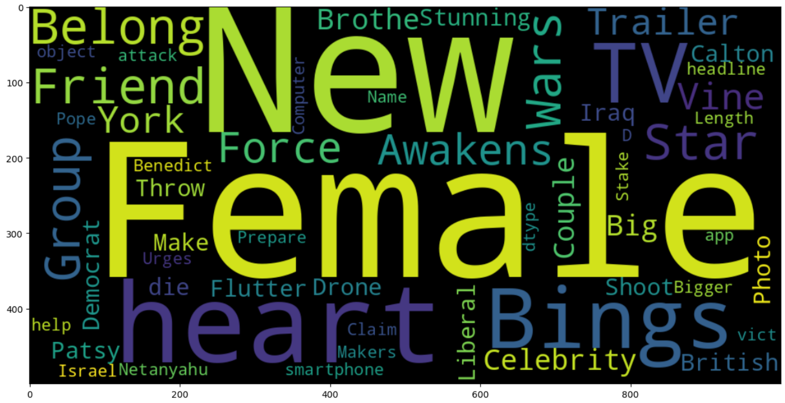
```
0    16001
1    15999
Name: clickbait, dtype: int64
```

Dataset consists Total 32000 data and The clickbait and not clickbait data is around 50:50 %

Also there is no empty cell and datatype of each data is all 'ok' in dataset so data cleaning is not required !!

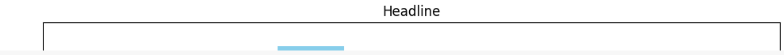
```
fig= plt.subplots(figsize=(19, 5))
g2 = plt.pie(data["clickbait"].value_counts().values,explode=[0,0],labels=data['clickbait'].value_counts().index, autopct='%1.1f%%',color
from wordcloud import WordCloud,STOPWORDS
plt.figure(figsize = (15,15))
wc = WordCloud(max_words = 1000 , width = 1000 , height = 500).generate(str(data.headline))
plt.imshow(wc , interpolation = 'bilinear')
```

```
<matplotlib.image.AxesImage at 0x7f4f495c0d00>
```

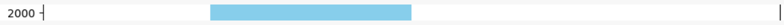


```
fig,ax1=plt.subplots(figsize=(12,8))
text_len=data[data['clickbait']==0]['headline'].str.split().map(lambda x: len(x))
ax1.hist(text_len,color='SkyBlue')
ax1.set_title('Headline')
```

```
Text(0.5, 1.0, 'Headline')
```

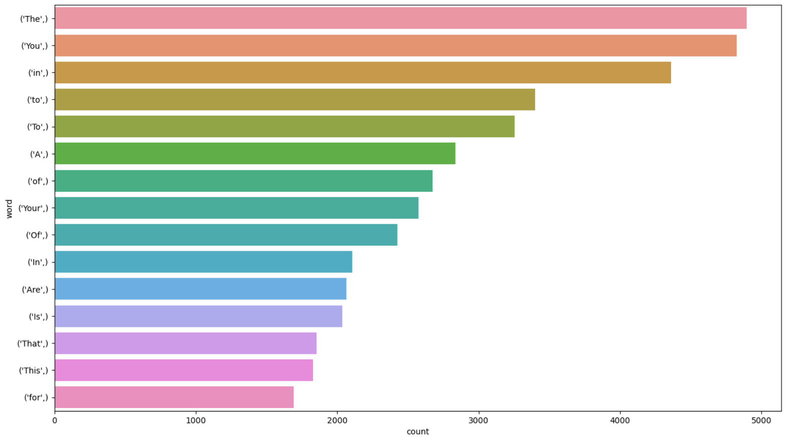


```
import nltk
import seaborn as sns
def draw_n_gram(string,i):
    n_gram = (pd.Series(nltk.ngrams(string, i)).value_counts())[:15]
    n_gram_df=pd.DataFrame(n_gram)
    n_gram_df = n_gram_df.reset_index()
    n_gram_df = n_gram_df.rename(columns={"index": "word", 0: "count"})
    print(n_gram_df.head())
    plt.figure(figsize = (16,9))
    return sns.barplot(x='count',y='word', data=n_gram_df)
```



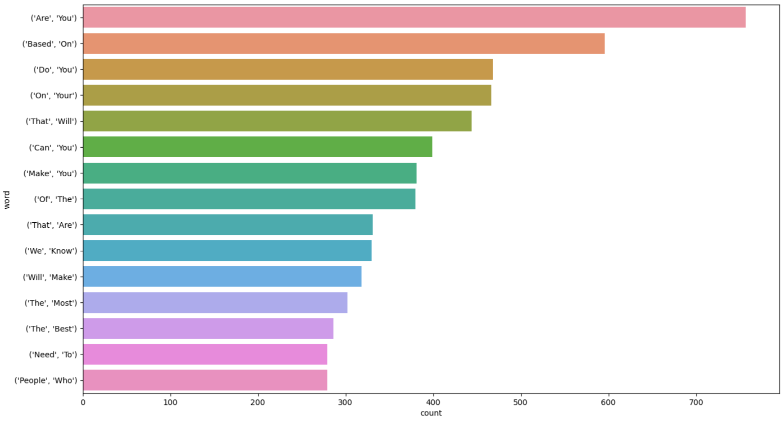
```
texts = ' '.join(data['headline'])
string = texts.split(" ")
draw_n_gram(string,1)
```

```
      word  count
0  (The,)   4894
1  (You,)   4824
2   (in,)   4360
3   (to,)   3401
4   (To,)   3254
<Axes: xlabel='count', ylabel='word'>
```



```
texts = ' '.join(data['headline'])
string = texts.split(" ")
draw_n_gram(string,2)
```

```
           word  count
0    (Are, You)    757
1  (Based, On)    596
2     (Do, You)    468
3    (On, Your)    466
4  (That, Will)    444
<Axes: xlabel='count', ylabel='word'>
```

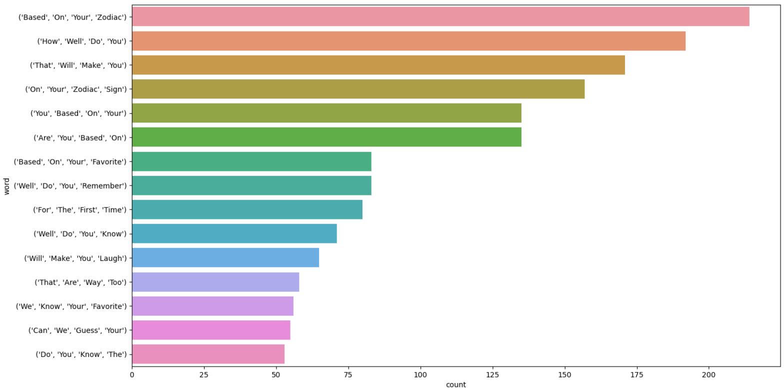


```
texts = ' '.join(data['headline'])
string = texts.split(" ")
draw_n_gram(string,3)
```

```
                  word  count
0     (Based, On, Your)    440
1     (Will, Make, You)    243
2    (That, Will, Make)    222
3    (On, Your, Zodiac)    214
4  (Your, Zodiac, Sign)    207
```

```
texts = ' '.join(data['headline'])
string = texts.split(" ")
draw_n_gram(string,4)
```

```
                       word  count
0  (Based, On, Your, Zodiac)    214
1       (How, Well, Do, You)    192
2    (That, Will, Make, You)    171
3   (On, Your, Zodiac, Sign)    157
4     (You, Based, On, Your)    135
<Axes: xlabel='count', ylabel='word'>
```



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