In [3]:
```
pip install pandas
```

Requirement already satisfied: pandas in c:\users\devat\anaconda3\lib\site-packages
(2.1.4)
Requirement already satisfied: numpy<2,>=1.23.2 in c:\users\devat\anaconda3\lib\site
-packages (from pandas) (1.26.4)
Requirement already satisfied: python-dateutil>=2.8.2 in c:\users\devat\anaconda3\li
b\site-packages (from pandas) (2.8.2)
Requirement already satisfied: pytz>=2020.1 in c:\users\devat\anaconda3\lib\site-pac
kages (from pandas) (2023.3.post1)
Requirement already satisfied: tzdata>=2022.1 in c:\users\devat\anaconda3\lib\site-p
ackages (from pandas) (2023.3)
Requirement already satisfied: six>=1.5 in c:\users\devat\anaconda3\lib\site-package
s (from python-dateutil>=2.8.2->pandas) (1.16.0)
Note: you may need to restart the kernel to use updated packages.

In [4]:
```
pip install matplotlib
```

Requirement already satisfied: matplotlib in c:\users\devat\anaconda3\lib\site-packa
ges (3.8.0)
Requirement already satisfied: contourpy>=1.0.1 in c:\users\devat\anaconda3\lib\site
-packages (from matplotlib) (1.2.0)
Requirement already satisfied: cycler>=0.10 in c:\users\devat\anaconda3\lib\site-pac
kages (from matplotlib) (0.11.0)
Requirement already satisfied: fonttools>=4.22.0 in c:\users\devat\anaconda3\lib\sit
e-packages (from matplotlib) (4.25.0)
Requirement already satisfied: kiwisolver>=1.0.1 in c:\users\devat\anaconda3\lib\sit
e-packages (from matplotlib) (1.4.4)
Requirement already satisfied: numpy<2,>=1.21 in c:\users\devat\anaconda3\lib\site-p
ackages (from matplotlib) (1.26.4)
Requirement already satisfied: packaging>=20.0 in c:\users\devat\anaconda3\lib\site-
packages (from matplotlib) (23.1)
Requirement already satisfied: pillow>=6.2.0 in c:\users\devat\anaconda3\lib\site-pa
ckages (from matplotlib) (10.2.0)
Requirement already satisfied: pyparsing>=2.3.1 in c:\users\devat\anaconda3\lib\site
-packages (from matplotlib) (3.0.9)
Requirement already satisfied: python-dateutil>=2.7 in c:\users\devat\anaconda3\lib
\site-packages (from matplotlib) (2.8.2)
Requirement already satisfied: six>=1.5 in c:\users\devat\anaconda3\lib\site-package
s (from python-dateutil>=2.7->matplotlib) (1.16.0)
Note: you may need to restart the kernel to use updated packages.

In [ ]:

In [8]:
```
import pandas as pd
import matplotlib.pyplot as plt

df = pd.read_csv(r'C:\Users\devat\OneDrive\Desktop\Shravan Prodigy\twitter_training
df.head()
```

Out[8]:

	2401	Borderlands	Positive	im getting on borderlands and i will murder you all ,
0	2401	Borderlands	Positive	I am coming to the borders and I will kill you…
1	2401	Borderlands	Positive	im getting on borderlands and i will kill you …
2	2401	Borderlands	Positive	im coming on borderlands and i will murder you…
3	2401	Borderlands	Positive	im getting on borderlands 2 and i will murder …
4	2401	Borderlands	Positive	im getting into borderlands and i can murder y…

In [9]:
```python
#Display info
display(df.info())
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 74681 entries, 0 to 74680
Data columns (total 4 columns):
 #   Column                                               Non-Null Count  Dtype
---  ------                                               --------------  -----
 0   2401                                                 74681 non-null  int64
 1   Borderlands                                          74681 non-null  object
 2   Positive                                             74681 non-null  object
 3   im getting on borderlands and i will murder you all ,  73995 non-null  object
dtypes: int64(1), object(3)
memory usage: 2.3+ MB
None
```

In [10]:
```python
# Drop rows with missing values
df.dropna(inplace=True)
```

In [11]:
```python
df.info()
```

```
<class 'pandas.core.frame.DataFrame'>
Index: 73995 entries, 0 to 74680
Data columns (total 4 columns):
 #   Column                                               Non-Null Count  Dtype
---  ------                                               --------------  -----
 0   2401                                                 73995 non-null  int64
 1   Borderlands                                          73995 non-null  object
 2   Positive                                             73995 non-null  object
 3   im getting on borderlands and i will murder you all ,  73995 non-null  object
dtypes: int64(1), object(3)
memory usage: 2.8+ MB
```

In [13]:
```python
col_names = ['ID', 'Entity', 'Sentiment', 'Text']
df = pd.read_csv(r'C:\Users\devat\OneDrive\Desktop\Shravan Prodigy\twitter_training
```

In [14]:
```python
df.head()
```

Out[14]:

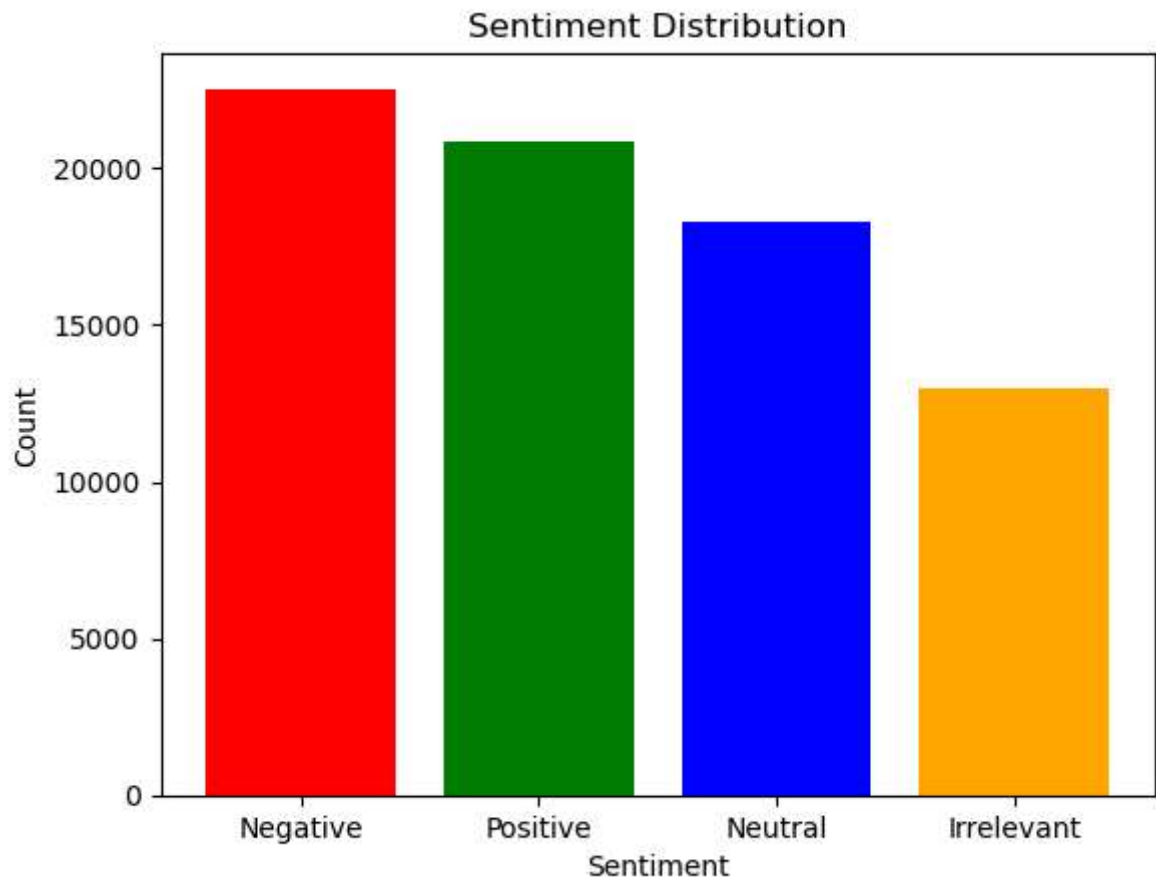|	ID	Entity	Sentiment	Text
0	2401	Borderlands	Positive	im getting on borderlands and i will murder yo…
1	2401	Borderlands	Positive	I am coming to the borders and I will kill you…
2	2401	Borderlands	Positive	im getting on borderlands and i will kill you …
3	2401	Borderlands	Positive	im coming on borderlands and i will murder you…
4	2401	Borderlands	Positive	im getting on borderlands 2 and i will murder …

In [15]:
```python
# Count sentiment categories
sentiment_counts = df['Sentiment'].value_counts()
```

In [16]:
```python
sentiment_counts.head()
```

Out[16]:
```
Sentiment
Negative      22542
Positive      20832
Neutral       18318
Irrelevant    12990
Name: count, dtype: int64
```

In [17]:
```python
# Plot bar chart for sentiment distribution
# Define colors for each sentiment category
colors = ['red', 'green', 'blue','orange']
#make a bor plot of sentiment distribution
plt.bar(sentiment_counts.index, sentiment_counts.values, color=colors)
plt.xlabel('Sentiment')
plt.ylabel('Count')
plt.title('Sentiment Distribution')
```

Out[17]: Text(0.5, 1.0, 'Sentiment Distribution')

Sentiment Distribution


```
In [18]:  # Define colors for each sentiment category
          colors = ['lightcoral', 'lightgreen', 'lightskyblue','lightyellow']

          # Plot pie chart with custom colors
          plt.figure(figsize=(8, 6))
          plt.pie(sentiment_counts.values, labels=sentiment_counts.index, colors=colors, auto
          plt.title('Sentiment Distribution for Twitter')

          plt.show()
```

Sentiment Distribution for Twitter