In [1]:
```
import numpy as np
import pandas as pd
```

In [2]:
```
df=pd.read_csv('employeedata.csv')
```

In [3]:
```
df
```

Out[3]:

	Age	Gender	Marital Status	Occupation	Monthly Income	Educational Qualifications	Family size	Latitude	Longitude	Pin code	Output	Feedback	Unnamed: 12
0	20	Female	Single	Student	Below Rs.10000	Graduate	3	12.9766	77.5993	560001	Yes	Positive	NaN
1	24	Female	Single	Student	Below Rs.10000	Post Graduate	3	12.9770	77.5773	560009	Yes	Positive	NaN
2	22	Male	Single	Student	Below Rs.10000	Post Graduate	6	12.9962	77.5921	560027	Yes	Negative	NaN
3	22	Female	Single	Student	Below Rs.10000	Graduate	4	12.9799	77.5963	560001	Yes	Positive	NaN
4	22	Male	Single	Student	Below Rs.10000	Graduate	3	12.9789	77.5966	560001	Yes	Positive	NaN
...	...	...	...	...	...	...	...	...	...	...	...	...	...
995	23	Female	Single	Student	No Income	Post Graduate	4	12.9716	77.5946	560001	Yes	Positive	NaN
996	23	Female	Single	Student	No Income	Post Graduate	4	12.9766	77.5993	560001	Yes	Positive	NaN
997	23	Female	Single	Student	No Income	Post Graduate	5	12.9698	77.5952	560034	Yes	Positive	NaN
998	24	Female	Single	Student	Below Rs.10000	Post Graduate	3	12.9716	77.5946	560001	Yes	Positive	NaN
999	24	Female	Single	Student	Below Rs.10000	Post Graduate	4	12.9698	77.5952	560034	Yes	Positive	NaN

1000 rows × 13 columns

In [4]:
```
df.dtypes
```

Out[4]:
```
Age                              int64
Gender                          object
Marital Status                  object
Occupation                      object
Monthly Income                  object
Educational Qualifications      object
Family size                      int64
Latitude                       float64
Longitude                      float64
Pin code                         int64
Output                          object
Feedback                        object
Unnamed: 12                    float64
dtype: object
```

In [5]:
```
df.drop(columns='Unnamed: 12',inplace=True)
```

In [6]:
```
df.head()
```

Out[6]:

	Age	Gender	Marital Status	Occupation	Monthly Income	Educational Qualifications	Family size	Latitude	Longitude	Pin code	Output	Feedback
0	20	Female	Single	Student	Below Rs.10000	Graduate	3	12.9766	77.5993	560001	Yes	Positive
1	24	Female	Single	Student	Below Rs.10000	Post Graduate	3	12.9770	77.5773	560009	Yes	Positive
2	22	Male	Single	Student	Below Rs.10000	Post Graduate	6	12.9962	77.5921	560027	Yes	Negative
3	22	Female	Single	Student	Below Rs.10000	Graduate	4	12.9799	77.5963	560001	Yes	Positive
4	22	Male	Single	Student	Below Rs.10000	Graduate	3	12.9789	77.5966	560001	Yes	Positive

In [7]:
```
df.shape
```

Out[7]:
```
(1000, 12)
```

In [8]:
```
df.describe()
```

Out[8]:

	Age	Family size	Latitude	Longitude	Pin code
count	1000.000000	1000.000000	1000.000000	1000.000000	1000.000000
mean	23.012000	3.409000	12.972492	77.580643	560030.893000
std	2.155882	1.132023	0.043556	0.033772	31.399317
min	18.000000	1.000000	12.865930	77.462964	560001.000000
25%	22.000000	3.000000	12.935095	77.570833	560001.000000
50%	23.000000	3.000000	12.977993	77.580434	560034.000000
75%	24.000000	4.000000	12.997465	77.590440	560058.000000
max	30.000000	9.000000	13.035286	77.750256	560103.000000

In [9]:
```
df.columns
```

Out[9]:
```
Index(['Age', 'Gender', 'Marital Status', 'Occupation', 'Monthly Income',
       'Educational Qualifications', 'Family size', 'Latitude', 'Longitude',
       'Pin code', 'Output', 'Feedback'],
      dtype='object')
```

In [10]:
```
df.isnull().sum()
```

Out[10]:
```
Age                             0
Gender                          0
Marital Status                  0
Occupation                      0
Monthly Income                  0
Educational Qualifications      0
Family size                     0
Latitude                        0
Longitude                       0
Pin code                        0
Output                          0
Feedback                        0
dtype: int64
```

In [11]:
```
df.isnull().sum()/len(df)*100
```

Out[11]:
```
Age                            0.0
Gender                         0.0
Marital Status                 0.0
Occupation                     0.0
Monthly Income                 0.0
Educational Qualifications     0.0
Family size                    0.0
Latitude                       0.0
Longitude                      0.0
Pin code                       0.0
Output                         0.0
Feedback                       0.0
dtype: float64
```

In [12]:
```
df.nunique()
```

Out[12]:
```
Age                             7
Gender                          2
Marital Status                  2
Occupation                      4
Monthly Income                  5
Educational Qualifications      6
Family size                     8
Latitude                      949
Longitude                     949
Pin code                      949
Output                          2
Feedback                        2
dtype: int64
```

In [13]:
```
for i,j in enumerate(df.nunique()):
    print(i,j)
```

Out[13]:
```
0 7
1 2
2 2
3 4
4 5
5 6
6 8
7 949
8 949
9 949
10 2
11 2
```

In [14]:
```
df.duplicated().sum()
```

Out[14]:
```
0
```

In [15]:
```
import seaborn as sns
```

In [16]:
```
# Count the occurrences of each Marital Status category
sns.countplot(x='Marital Status', data=df, palette='Set2')
```

Out[16]:
```
<AxesSubplot:xlabel="Marital Status", ylabel="count">
```


In [17]:
```
# Count the occurrences of each gender category
sns.countplot(x='Gender', data=df, palette='Set1')
```

Out[17]:
```
<AxesSubplot:xlabel="Gender", ylabel="count">
```


In [18]:
```
# Create a pie chart to visualize the distribution of Marital Status
plt.figure(figsize=(6, 6))
plt.pie(df['Marital Status'].value_counts(), labels=df['Marital Status'].value_counts().index, autopct='%1.1f%%', startangle=140)
plt.title('Distribution of Marital Status')
plt.show()
```


In [19]:
```
# Create a pie chart to visualize the distribution of Gender
plt.figure(figsize=(6, 6))
plt.pie(df['Gender'].value_counts(), labels=df['Gender'].value_counts().index, autopct='%1.1f%%', startangle=140)
plt.title('Gender Distribution')
plt.show()
```


In [20]:
```
df['Occupation'].value_counts()
```

Out[20]:
```
Student          550
Employee         341
Self Employed     59
Housewife         50
Name: Occupation, dtype: int64
```

In [21]:
```
plt.figure(figsize=(8, 6))
sns.countplot(x='Occupation', data=df, palette='viridis')
plt.title('Distribution of Occupations')
plt.xlabel('Occupation')
plt.ylabel('Count')
plt.show()
```


In [22]:
```
df['Monthly Income'].value_counts()
```

Out[22]:
```
Below Rs.10000          448
10001 to 25000          354
No Income               107
25001 to 50000          100
More than 50000          91
Name: Monthly Income, dtype: int64
```

In [23]:
```
plt.figure(figsize=(8, 6))
sns.countplot(x='Monthly Income', data=df, palette='viridis')
plt.title('Distribution of Monthly Incomes')
plt.xlabel('Monthly Income')
plt.ylabel('Count')
plt.show()
```


In [24]:
```
df['Educational Qualifications'].value_counts()
```

Out[24]:
```
Graduate                 376
Post Graduate            374
Ph.D                      94
Uneducated                78
School                    70
Graduate and above         8
Name: Educational Qualifications, dtype: int64
```

In [25]:
```
plt.figure(figsize=(8, 6))
sns.countplot(x='Educational Qualifications', data=df, palette='viridis')
plt.title('Distribution of Educational Qualifications')
plt.xlabel('Educational Qualifications')
plt.ylabel('Count')
plt.show()
```


In [26]:
```
# Count the occurrences of each family size category
family_size_counts = df['Family size'].value_counts()
```

In [27]:
```
# Create a pie chart
plt.figure(figsize=(8, 8))
plt.pie(family_size_counts, labels=family_size_counts.index, autopct='%1.1f%%', startangle=140)
plt.title('Family size distribution')
plt.axis('equal')  # Equal aspect ratio ensures that pie is drawn as a circle.
plt.show()
```


In [28]:
```
feedback_counts = df['Feedback'].value_counts()[::-1] # Reverse the order
plt.figure(figsize=(8, 6))
sns.barplot(x=feedback_counts.index, y=feedback_counts.values, palette='Spectral')
plt.title('Feedback Distribution')
plt.xlabel('Feedback')
plt.ylabel('Count')
plt.show()
```


In [29]:
```
df['Feedback'].value_counts()
```

Out[29]:
```
Positive    881
Negative    119
Name: Feedback, dtype: int64
```

In [30]:
```
df['Feedback'].value_counts()[::-1]
```

Out[30]:
```
Negative    119
Positive    881
Name: Feedback, dtype: int64
```

In [31]:
```
df['Feedback'].value_counts()[::-1].index
```

Out[31]:
```
Index(['Negative', 'Positive'], dtype='object')
```

In [32]:
```
df['Feedback'].value_counts()[::-1].values
```

Out[32]:
```
array([119, 881], dtype=int64)
```

In [33]:
```
df['Feedback'].value_counts()[::-1].index[0]
```

Out[33]:
```
'Negative'
```

In [34]:
```
df['Feedback'].value_counts()[::-1].values[0]
```

Out[34]:
```
119
```

In [35]:
```
df['Feedback'].value_counts()[::-1].index[1]
```

Out[35]:
```
'Positive'
```

In [36]:
```
df['Feedback'].value_counts()[::-1].values[1]
```

Out[36]:
```
881
```

In [37]:
```
df['Feedback'].value_counts()[::-1].index
```

Out[37]:
```
Index(['Negative', 'Positive'], dtype='object')
```

In [38]:
```
df['Feedback'].value_counts()[::-1].values
```

Out[38]:
```
array([119, 881], dtype=int64)
```

In [39]:
```
df['Feedback'].value_counts()[::-1].index[0]
```

Out[39]:
```
'Negative'
```

In [40]:
```
df['Feedback'].value_counts()[::-1].values[0]
```

Out[40]:
```
119
```

In [41]:
```
df['Feedback'].value_counts()[::-1].index[1]
```

Out[41]:
```
'Positive'
```

In [42]:
```
df['Feedback'].value_counts()[::-1].values[1]
```

Out[42]:
```
881
```

In [43]:
```
df['Feedback'].value_counts()[::-1].index
```

Out[43]:
```
Index(['Negative', 'Positive'], dtype='object')
```

In [44]:
```
df['Feedback'].value_counts()[::-1].values
```

Out[44]:
```
array([119, 881], dtype=int64)
```

In [45]:
```
df['Feedback'].value_counts()[::-1].index[0]
```

Out[45]:
```
'Negative'
```

In [46]:
```
df['Feedback'].value_counts()[::-1].values[0]
```

Out[46]:
```
119
```

In [47]:
```
df['Feedback'].value_counts()[::-1].index[1]
```

Out[47]:
```
'Positive'
```

In [48]:
```
df['Feedback'].value_counts()[::-1].values[1]
```

Out[48]:
```
881
```

In [49]:
```
df['Feedback'].value_counts()[::-1].index
```

Out[49]:
```
Index(['Negative', 'Positive'], dtype='object')
```

In [50]:
```
df['Feedback'].value_counts()[::-1].values
```

Out[50]:
```
array([119, 881], dtype=int64)
```

In [51]:
```
df['Feedback'].value_counts()[::-1].index[0]
```

Out[51]:
```
'Negative'
```

In [52]:
```
df['Feedback'].value_counts()[::-1].values[0]
```

Out[52]:
```
119
```

In [53]:
```
df['Feedback'].value_counts()[::-1].index[1]
```

Out[53]:
```
'Positive'
```

In [54]:
```
df['Feedback'].value_counts()[::-1].values[1]
```

Out[54]:
```
881
```

In [55]:
```
df['Feedback'].value_counts()[::-1].index
```

Out[55]:
```
Index(['Negative', 'Positive'], dtype='object')
```

In [56]:
```
df['Feedback'].value_counts()[::-1].values
```

Out[56]:
```
array([119, 881], dtype=int64)
```

In [57]:
```
df['Feedback'].value_counts()[::-1].index[0]
```

Out[57]:
```
'Negative'
```

In [58]:
```
df['Feedback'].value_counts()[::-1].values[0]
```

Out[58]:
```
119
```

In [59]:
```
df['Feedback'].value_counts()[::-1].index[1]
```

Out[59]:
```
'Positive'
```

In [60]:
```
df['Feedback'].value_counts()[::-1].values[1]
```

Out[60]:
```
881
```

In [61]:
```
df['Feedback'].value_counts()[::-1].index
```

Out[61]:
```
Index(['Negative', 'Positive'], dtype='object')
```

In [62]:
```
df['Feedback'].value_counts()[::-1].values
```

Out[62]:
```
array([119, 881], dtype=int64)
```

In [63]:
```
df['Feedback'].value_counts()[::-1].index[0]
```

Out[63]:
```
'Negative'
```

In [64]:
```
df['Feedback'].value_counts()[::-1].values[0]
```

Out[64]:
```
119
```

In [65]:
```
df['Feedback'].value_counts()[::-1].index[1]
```

Out[65]:
```
'Positive'
```

In [66]:
```
df['Feedback'].value_counts()[::-1].values[1]
```

Out[66]:
```
881
```

In [67]:
```
df['Feedback'].value_counts()[::-1].index
```

Out[67]:
```
Index(['Negative', 'Positive'], dtype='object')
```

In [68]:
```
df['Feedback'].value_counts()[::-1].values
```

Out[68]:
```
array([119, 881], dtype=int64)
```

In [69]:
```
df['Feedback'].value_counts()[::-1].index[0]
```

Out[69]:
```
'Negative'
```

In [70]:
```
df['Feedback'].value_counts()[::-1].values[0]
```

Out[70]:
```
119
```

In [71]:
```
df['Feedback'].value_counts()[::-1].index[1]
```

Out[71]:
```
'Positive'
```

In [72]:
```
df['Feedback'].value_counts()[::-1].values[1]
```

Out[72]:
```
881
```

In [73]:
```
df['Feedback'].value_counts()[::-1].index
```

Out[73]:
```
Index(['Negative', 'Positive'], dtype='object')
```

In [74]:
```
df['Feedback'].value_counts()[::-1].values
```

Out[74]:
```
array([119, 881], dtype=int64)
```

In [75]:
```
df['Feedback'].value_counts()[::-1].index[0]
```

Out[75]:
```
'Negative'
```

In [76]:
```
df['Feedback'].value_counts()[::-1].values[0]
```

Out[76]:
```
119
```

In [77]:
```
df['Feedback'].value_counts()[::-1].index[1]
```

Out[77]:
```
'Positive'
```

In [78]:
```
df['Feedback'].value_counts()[::-1].values[1]
```

Out[78]:
```
881
```

In [79]:
```
df['Feedback'].value_counts()[::-1].index
```

Out[79]:
```
Index(['Negative', 'Positive'], dtype='object')
```

In [80]:
```
df['Feedback'].value_counts()[::-1].values
```

Out[80]:
```
array([119, 881], dtype=int64)
```

In [81]:
```
df['Feedback'].value_counts()[::-1].index[0]
```

Out[81]:
```
'Negative'
```

In [82]:
```
df['Feedback'].value_counts()[::-1].values[0]
```

Out[82]:
```
119
```

In [83]:
```
df['Feedback'].value_counts()[::-1].index[1]
```

Out[83]:
```
'Positive'
```

In [84]:
```
df['Feedback'].value_counts()[::-1].values[1]
```

Out[84]:
```
881
```

In [85]:
```
df['Feedback'].value_counts()[::-1].index
```

Out[85]:
```
Index(['Negative', 'Positive'], dtype='object')
```

In [86]:
```
df['Feedback'].value_counts()[::-1].values
```

Out[86]:
```
array([119, 881], dtype=int64)
```

In [87]:
```
df['Feedback'].value_counts()[::-1].index[0]
```

Out[87]:
```
'Negative'
```

In [88]:
```
df['Feedback'].value_counts()[::-1].values[0]
```

Out[88]:
```
119
```

In [89]:
```
df['Feedback'].value_counts()[::-1].index[1]
```

Out[89]:
```
'Positive'
```

In [90]:
```
df['Feedback'].value_counts()[::-1].values[1]
```

Out[90]:
```
881
```

In [91]:
```
df['Feedback'].value_counts()[::-1].index
```

Out[91]:
```
Index(['Negative', 'Positive'], dtype='object')
```

In [92]:
```
df['Feedback'].value_counts()[::-1].values
```

Out[92]:
```
array([119, 881], dtype=int64)
```

In [93]:
```
df['Feedback'].value_counts()[::-1].index[0]
```

Out[93]:
```
'Negative'
```

In [94]:
```
df['Feedback'].value_counts()[::-1].values[0]
```

Out[94]:
```
119
```

In [95]:
```
df['Feedback'].value_counts()[::-1].index[1]
```

Out[95]:
```
'Positive'
```

In [96]:
```
df['Feedback'].value_counts()[::-1].values[1]
```

Out[96]:
```
881
```

In [97]:
```
df['Feedback'].value_counts()[::-1].index
```

Out[97]:
```
Index(['Negative', 'Positive'], dtype='object')
```

In [98]:
```
df['Feedback'].value_counts()[::-1].values
```

Out[98]:
```
array([119, 881], dtype=int64)
```

In [99]:
```
df['Feedback'].value_counts()[::-1].index[0]
```

Out[99]:
```
'Negative'
```

In [100]:
```
df['Feedback'].value_counts()[::-1].values[0]
```

Out[100]:
```
119
```

In [101]:
```
df['Feedback'].value_counts()[::-1].index[1]
```

Out[101]:
```
'Positive'
```

In [102]:
```
df['Feedback'].value_counts()[::-1].values[1]
```

Out[102]:
```
881
```

In [103]:
```
df['Feedback'].value_counts()[::-1].index
```

Out[103]:
```
Index(['Negative', 'Positive'], dtype='object')
```

In [104]:
```
df['Feedback'].value_counts()[::-1].values
```

Out[104]:
```
array([119, 881], dtype=int64)
```

In [105]:
```
df['Feedback'].value_counts()[::-1].index[0]
```

Out[105]:
```
'Negative'
```

In [106]:
```
df['Feedback'].value_counts()[::-1].values[0]
```

Out[106]:
```
119
```

In [107]:
```
df['Feedback'].value_counts()[::-1].index[1]
```

Out[107]:
```
'Positive'
```

In [108]:
```
df['Feedback'].value_counts()[::-1].values[1]
```

Out[108]:
```
881
```

In [109]:
```
df['Feedback'].value_counts()[::-1].index
```

Out[109]:
```
Index(['Negative', 'Positive'], dtype='object')
```

In [110]:
```
df['Feedback'].value_counts()[::-1].values
```

Out[110]:
```
array([119, 881], dtype=int64)
```

In [111]:
```
df['Feedback'].value_counts()[::-1].index[0]
```

Out[111]:
```
'Negative'
```

In [112]:
```
df['Feedback'].value_counts()[::-1].values[0]
```

Out[112]:
```
119
```

In [113]:
```
df['Feedback'].value_counts()[::-1].index[1]
```

Out[113]:
```
'Positive'
```

In [114]:
```
df['Feedback'].value_counts()[::-1].values[1]
```

Out[114]:
```
881
```

In [115]:
```
df['Feedback'].value_counts()[::-1].index
```

Out[115]:
```
Index(['Negative', 'Positive'], dtype='object')
```

In [116]:
```
df['Feedback'].value_counts()[::-1].values
```

Out[116]:
```
array([119, 881], dtype=int64)
```

In [117]:
```
df['Feedback'].value_counts()[::-1].index[0]
```

Out[117]:
```
'Negative'
```

In [118]:
```
df['Feedback'].value_counts()[::-1].values[0]
```

Out[118]:
```
119
```

In [119]:
```
df['Feedback'].value_counts()[::-1].index[1]
```

Out[119]:
```
'Positive'
```

In [120]:
```
df['Feedback'].value_counts()[::-1].values[1]
```

Out[120]:
```
881
```

In [121]:
```
df['Feedback'].value_counts()[::-1].index
```

Out[121]:
```
Index(['Negative', 'Positive'], dtype='object')
```

In [122]:
```
df['Feedback'].value_counts()[::-1].values
```

Out[122]:
```
array([119, 881], dtype=int64)
```

In [123]:
```
df['Feedback'].value_counts()[::-1].index[0]
```

Out[123]:
```
'Negative'
```

In [124]:
```
df['Feedback'].value_counts()[::-1].values[0]
```

Out[124]:
```
119
```

In [125]:
```
df['Feedback'].value_counts()[::-1].index[1]
```

Out[125]:
```
'Positive'
```

In [126]:
```
df['Feedback'].value_counts()[::-1].values[1]
```

Out[126]:
```
881
```

In [127]:
```
df['Feedback'].value_counts()[::-1].index
```

Out[127]:
```
Index(['Negative', 'Positive'], dtype='object')
```

In [128]:
```
df['Feedback'].value_counts()[::-1].values
```

Out[128]:
```
array([119, 881], dtype=int64)
```

In [129]:
```
df['Feedback'].value_counts()[::-1].index[0]
```

Out[129]:
```
'Negative'
```

In [130]:
```
df['Feedback'].value_counts()[::-1].values[0]
```

Out[130]:
```
119
```

In [131]:
```
df['Feedback'].value_counts()[::-1].index[1]
```

Out[131]:
```
'Positive'
```

In [132]:
```
df['Feedback'].value_counts()[::-1].values[1]
```

Out[132]:
```
881
```

In [133]:
```
df['Feedback'].value_counts()[::-1].index
```

Out[133]:
```
Index(['Negative', 'Positive'], dtype='object')
```

In [134]:
```
df['Feedback'].value_counts()[::-1].values
```

Out[134]:
```
array([119, 881], dtype=int64)
```

In [135]:
```
df['Feedback'].value_counts()[::-1].index[0]
```

Out[135]:
```
'Negative'
```

In [136]:
```
df['Feedback'].value_counts()[::-1].values[0]
```

Out[136]:
```
119
```

In [137]:
```
df['Feedback'].value_counts()[::-1].index[1]
```

Out[137]:
```
'Positive'
```

In [138]:
```
df['Feedback'].value_counts()[::-1].values[1]
```

Out[138]:
```
881
```

In [139]:
```
df['Feedback'].value_counts()[::-1].index
```

Out[139]:
```
Index(['Negative', 'Positive'], dtype='object')
```

In [140]:
```
df['Feedback'].value_counts()[::-1].values
```

Out[140]:
```
array([119, 881], dtype=int64)
```

In [141]:
```
df['Feedback'].value_counts()[::-1].index[0]
```

Out[141]:
```
'Negative'
```

In [142]:
```
df['Feedback'].value_counts()[::-1].values[0]
```

Out[142]:
```
119
```

In [143]:
```
df['Feedback'].value_counts()[::-1].index[1]
```

Out[143]:
```
'Positive'
```

In [144]:
```
df['Feedback'].value_counts()[::-1].values[1]
```

Out[144]:
```
881
```

In [145]:
```
df['Feedback'].value_counts()[::-1].index
```

Out[145]:
```
Index(['Negative', 'Positive'], dtype='object')
```

In [146]:
```
df['Feedback'].value_counts()[::-1].values
```

Out[146]:
```
array([119, 881], dtype=int64)
```

In [147]:
```
df['Feedback'].value_counts()[::-1].index[0]
```

Out[147]:
```
'Negative'
```

In [148]:
```
df['Feedback'].value_counts()[::-1].values[0]
```

Out[148]:
```
119
```

In [149]:
```
df['Feedback'].value_counts()[::-1].index[1]
```

Out[149]:
```
'Positive'
```

In [150]:
```
df['Feedback'].value_counts()[::-1].values[1]
```

Out[150]:
```
881
```

In [151]:
```
df['Feedback'].value_counts()[::-1].index
```

Out[151]:
```
Index(['Negative', 'Positive'], dtype='object')
```

In [152]:
```
df['Feedback'].value_counts()[::-1].values
```

Out[152]:
```
array([119, 881], dtype=int64)
```

In [153]:
```
df['Feedback'].value_counts()[::-1].index[0]
```

Out[153]:
```
'Negative'
```

In [154]:
```
df['Feedback'].value_counts()[::-1].values[0]
```

Out[154]:
```
119
```

In [155]:
```
df['Feedback'].value_counts()[::-1].index[1]
```

Out[155]:
```
'Positive'
```

In [156]:
```
df['Feedback'].value_counts()[::-1].values[1]
```

Out[156]:
```
881
```

In [157]:
```
df['Feedback'].value_counts()[::-1].index
```

Out[157]:
```
Index(['Negative', 'Positive'], dtype='object')
```

In [158]:
```
df['Feedback'].value_counts()[::-1].values
```

Out[158]:
```
array([119, 881], dtype=int64)
```

In [159]:
```
df['Feedback'].value_counts()[::-1].index[0]
```

Out[159]:
```
'Negative'
```

In [160]:
```
df['Feedback'].value_counts()[::-1].values[0]
```

Out[160]:
```
119
```

In [161]:
```
df['Feedback'].value_counts()[::-1].index[1]
```

Out[161]:
```
'Positive'
```

In [162]:
```
df['Feedback'].value_counts()[::-1].values[1]
```

Out[162]:
```
881
```

In [163]:
```
df['Feedback'].value_counts()[::-1].index
```

Out[163]:
```
Index(['Negative', 'Positive'], dtype='object')
```

In [164]:
```
df['Feedback'].value_counts()[::-1].values
```

Out[164]:
```
array([119, 881], dtype=int64)
```

In [165]:
```
df['Feedback'].value_counts()[::-1].index[0]
```

Out[165]:
```
'Negative'
```

In [166]:
```
df['Feedback'].value_counts()[::-1].values[0]
```

Out[166]:
```
119
```

In [167]:
```
df['Feedback'].value_counts()[::-1].index[1]
```

Out[167]:
```
'Positive'
```

In [168]:
```
df['Feedback'].value_counts()[::-1].values[1]
```

Out[168]:
```
881
```

In [169]:
```
df['Feedback'].value_counts()[::-1].index
```

Out[169]:
```
Index(['Negative', 'Positive'], dtype='object')
```

In [170]:
```
df['Feedback'].value_counts()[::-1].values
```

Out[170]:
```
array([119, 881], dtype=int64)
```

In [171]:
```
df['Feedback'].value_counts()[::-1].index[0]
```

Out[171]:
```
'Negative'
```

In [172]:
```
df['Feedback'].value_counts()[::-1].values[0]
```

Out[172]:
```
119
```

In [173]:
```
df['Feedback'].value_counts()[::-1].index[1]
```

Out[173]:
```
'Positive'
```

In [174]:
```
df['Feedback'].value_counts()[::-1].values[1]
```

Out[174]:
```
881
```

In [175]:
```
df['Feedback'].value_counts()[::-1].index
```

Out[175]:
```
Index(['Negative', 'Positive'], dtype='object')
```

In [176]:
```
df['Feedback'].value_counts()[::-1].values
```

Out[176]:
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array([119, 881], dtype=int64)
```

In [177]:
```
df['Feedback'].value_counts()[::-1].index[0]
```

Out[177]:
```
'Negative'
```

In [178]:
```
df['Feedback'].value_counts()[::-1].values[0]
```

Out[178]:
```
119
```

In [179]:
```
df['Feedback'].value_counts()[::-1].index[1]
```

Out[179]:
```
'Positive'
```

In [180]:
```
df['Feedback'].value_counts()[::-1].values[1]
```

Out[180]:
```
881
```

In [181]:
```
df['Feedback'].value_counts()[::-1].index
```

Out[181]:
```
Index(['Negative', 'Positive'], dtype='object')
```

In [182]:
```
df['Feedback'].value_counts()[::-1].values
```

Out[182]:
```
array([119, 881], dtype=int64)
```

In [183]:
```
df['Feedback'].value_counts()[::-1].index[0]
```

Out[183]:
```
'Negative'
```

In [184]:
```
df['Feedback'].value_counts()[::-1].values[0]
```

Out[184]:
```
119
```

In [185]:
```
df['Feedback'].value_counts()[::-1].index[1]
```

Out[185]:
```
'Positive'
```

In [186]:
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df['Feedback'].value_counts()[::-1].values[1]
```

Out[186]:
```
881
```

In [187]:
```
df['Feedback'].value_counts()[::-1].index
```

Out[187]:
```
Index(['Negative', 'Positive'], dtype='object')
```

In [188]:
```
df['Feedback'].value_counts()[::-1].values
```

Out[188]:
```
array([119, 881], dtype=int64)
```

In [189]:
```
df['Feedback'].value_counts()[::-1].index[0]
```

Out[189]:
```
'Negative'
```

In [190]:
```
df['Feedback'].value_counts()[::-1].values[0]
```

Out[190]:
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119
```

In [191]:
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df['Feedback'].value_counts()[::-1].index[1]
```

Out[191]:
```
'Positive'
```

In [192]:
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df['Feedback'].value_counts()[::-1].values[1]
```

Out[192]:
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881
```

In [193]:
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df['Feedback'].value_counts()[::-1].index
```

Out[193]:
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Index(['Negative', 'Positive'], dtype='object')
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df['Feedback'].value_counts()[::-1].values
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Out[194]:
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array([119, 881], dtype=int64)
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In [195]:
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df['Feedback'].value_counts()[::-1].index[0]
```

Out[195]:
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'Negative'
```

In [196]:
```
df['Feedback'].value_counts()[::-1].values[0]
```

Out[196]:
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119
```

In [197]:
```
df['Feedback'].value_counts()[::-1].index[1]
```

Out[197]:
```
'Positive'
```

In [198]:
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df['Feedback'].value_counts()[::-1].values[1]
```

Out[198]:
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881
```

In [199]:
```
df['Feedback'].value_counts()[::-1].index
```

Out[199]:
```
Index(['Negative', 'Positive'], dtype='object')
```

In [200]:
```
df['Feedback'].value_counts()[::-1].values
```

Out[200]:
```
array([119, 881], dtype=int64)
```

In [201]:
```
df['Feedback'].value_counts()[::-1].index[0]
```

Out[201]:
```
'Negative'
```

In [202]:
```
df['Feedback'].value_counts()[::-1].values[0]
```

Out[202]:
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119
```

In [203]:
```
df['Feedback'].value_counts()[::-1].index[1]
```

Out[203]:
```
'Positive'
```

In [204]:
```
df['Feedback'].value_counts()[::-1].values[1]
```

Out[204]:
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881
```

In [205]:
```
df['Feedback'].value_counts()[::-1].index
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Out[205]:
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Index(['Negative', 'Positive'], dtype='object')
```

In [206]:
```
df['Feedback'].value_counts()[::-1].values
```

Out[206]:
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array([119, 881], dtype=int64)
```

In [207]:
```
df['Feedback'].value_counts()[::-1].index[0]
```

Out[207]:
```
'Negative'
```

In [208]:
```
df['Feedback'].value_counts()[::-1].values[0]
```

Out[208]:
```
119
```

In [209]:
```
df['Feedback'].value_counts()[::-1].index[1]
```

Out[209]:
```
'Positive'
```

In [210]:
```
df['Feedback'].value_counts()[::-1].values[1]
```

Out[210]:
```
881
```

In [211]:
```
df['Feedback'].value_counts()[::-1].index
```

Out[211]:
```
Index(['Negative', 'Positive'], dtype='object')
```

In [212]:
```
df['Feedback'].value_counts()[::-1].values
```

Out[212]:
```
array([119, 881], dtype=int64)
```

In [213]:
```
df['Feedback'].value_counts()[::-1].index[0]
```

Out[213]:
```
'Negative'
```

In [214]:
```
df['Feedback'].value_counts()[::-1].values[0]
```

Out[214]:
```
119
```

In [215]:
```
df['Feedback'].value_counts()[::-1].index[1]
```

Out[215]:
```
'Positive'
```

In [216]:
```
df['Feedback'].value_counts()[::-1].values[1]
```

Out[216]:
```
881
```

In [217]:
```
df['Feedback'].value_counts()[::-1].index
```

Out[217]:
```
Index(['Negative', 'Positive'], dtype='object')
```

In [218]:
```
df['Feedback'].value_counts()[::-1].values
```

Out[218]:
```
array([119, 881], dtype=int64)
```

In [219]:
```
df['Feedback'].value_counts()[::-1].index[0]
```

Out[219]:
```
'Negative'
```

In [220]:
```
df['Feedback'].value_counts()[::-1].values[0]
```

Out[220]:
```
119
```

In [221]:
```
df['Feedback'].value_counts()[::-1].index[1]
```

Out[221]:
```
'Positive'
```

In [222]:
```
df['Feedback'].value_counts()[::-1].values[1]
```

Out[222]:
```
881
```

In [223]:
```
df['Feedback'].value_counts()[::-1].index
```

Out[223]:
```
Index(['Negative', 'Positive'], dtype='object')
```

In [224]:
```
df['Feedback'].value_counts()[::-1].values
```

Out[224]:
```
array([119, 881], dtype=int64)
```

In [225]:
```
df['Feedback'].value_counts()[::-1].index[0]
```

Out[225]:
```
'Negative'
```

In [226]:
```
df['Feedback'].value_counts()[::-1].values[0]
```

Out[226]:
```
119
```

In [227]:
```
df['Feedback'].value_counts()[::-1].index[1]
```

Out[227]:
```
'Positive'
```

In [228]:
```
df['Feedback'].value_counts()[::-1].values[1]
```

Out[228]:
```
881
```

In [229]:
```
df['Feedback'].value_counts()[::-1].index
```

Out[229]:
```
Index(['Negative', 'Positive'], dtype='object')
```

In [230]:
```
df['Feedback'].value_counts()[::-1].values
```

Out[230]:
```
array([119, 881], dtype=int64)
```

In [231]:
```
df['Feedback'].value_counts()[::-1].index[0]
```

Out[231]:
```
'Negative'
```

In [232]:
```
df['Feedback'].value_counts()[::-1].values[0]
```

Out[232]:
```
119
```

In [233]:
```
df['Feedback'].value_counts()[::-1].index[1]
```

Out[233]:
```
'Positive'
```

In [234]:
```
df['Feedback'].value_counts()[::-1].values[1]
```

Out[234]:
```
881
```

In [235]:
```
df['Feedback'].value_counts()[::-1].index
```

Out[235]:
```
Index(['Negative', 'Positive'], dtype='object')
```

In [236]:
```
df['Feedback'].value_counts()[::-1].values
```

Out[236]:
```
array([119, 881], dtype=int64)
```

In [237]:
```
df['Feedback'].value_counts()[::-1].index[0]
```

Out[237]:
```
'Negative'
```

In [238]:
```
df['Feedback'].value_counts()[::-1].values[0]
```

Out[238]:
```
119
```

In [239]:
```
df['Feedback'].value_counts()[::-1].index[1]
```

Out[239]:
```
'Positive'
```

In [240]:
```
df['Feedback'].value_counts()[::-1].values[1]
```

Out[240]:
```
881
```

In [241]:
```
df['Feedback'].value_counts()[::-1].index
```

Out[241]:
```
Index(['Negative', 'Positive'], dtype='object')
```

In [242]:
```
df['Feedback'].value_counts()[::-1].values
```

Out[242]:
```
array([119, 881], dtype=int64)
```

In [243]:
```
df['Feedback'].value_counts()[::-1].index[0]
```

Out[243]:
```
'Negative'
```

In [244]:
```
df['Feedback'].value_counts()[::-1].values[0]
```

Out[244]:
```
119
```

In [245]:
```
df['Feedback'].value_counts()[::-1].index[1]
```

Out[245]:
```
'Positive'
```

In [246]:
```
df['Feedback'].value_counts()[::-1].values[1]
```

Out[246]:
```
881
```

In [247]:
```
df['Feedback'].value_counts()[::-1].index
```

Out[247]:
```
Index(['Negative', 'Positive'], dtype='object')
```

In [248]:
```
df['Feedback'].value_counts()[::-1].values
```

Out[248]:
```
array([119, 881], dtype=int64)
```

In [249]:
```
df['Feedback'].value_counts()[::-1].index[0]
```

Out[249]:
```
'Negative'
```

In [250]:
```
df['Feedback'].value_counts()[::-1].values[0]
```

Out[250]:
```
119
```

In [251]:
```
df['Feedback'].value_counts()[::-1].index[1]
```

Out[251]:
```
'Positive'
```

In [252]:
```
df['Feedback'].value_counts()[::-1].values[1]
```

Out[252]:
```
881
```

In [253]:
```
df['Feedback'].value_counts()[::-1].index
```

Out[253]:
```
Index(['Negative', 'Positive'], dt
```