

```
In [4]: import pandas as pd
import seaborn as sns
import matplotlib.pyplot as plt
import xlrd
```

```
In [5]: plt.style.use('ggplot')
```

Load the data

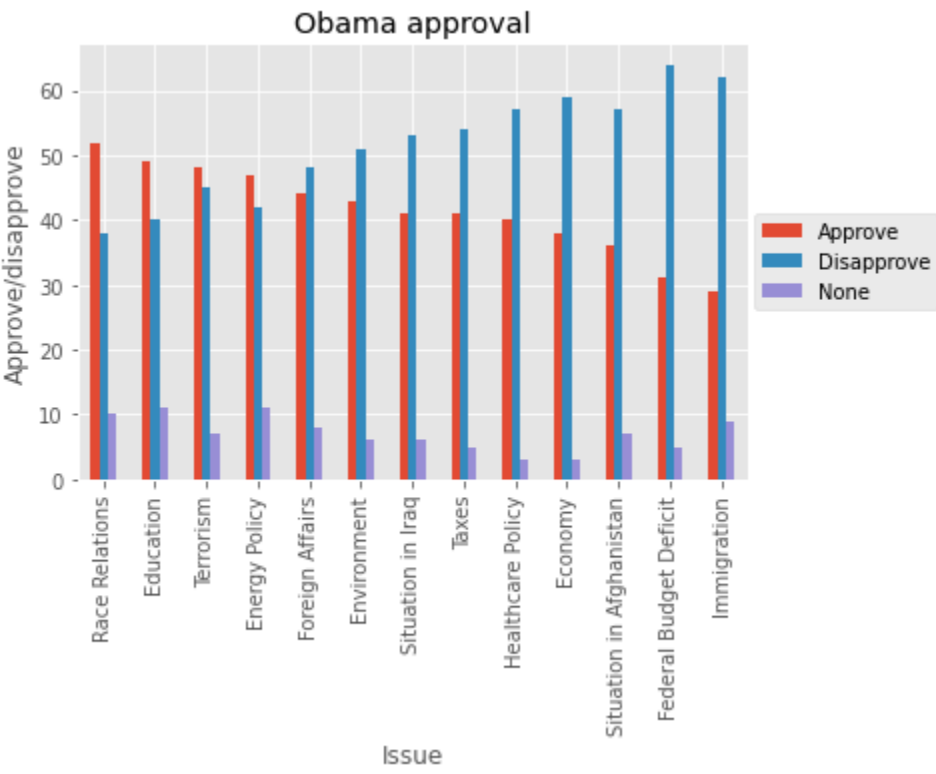
```
In [6]: obama_approval_ratings = pd.read_excel('Data\obama-approval-ratings.xls')
obama_approval_ratings.head()
```

Out[6]:

	Issue	Approve	Disapprove	None
0	Race Relations	52	38	10
1	Education	49	40	11
2	Terrorism	48	45	7
3	Energy Policy	47	42	11
4	Foreign Affairs	44	48	8

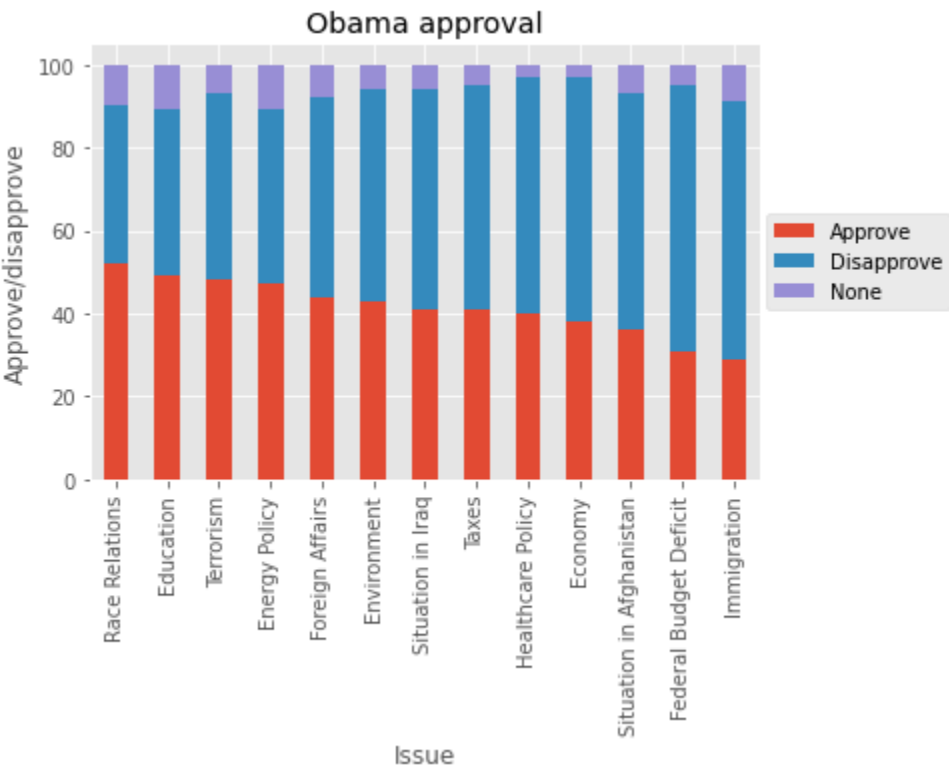
Bar Chart

```
In [7]: obama_approval_ratings.set_index('Issue').plot(kind='bar')
plt.xticks(rotation=90)
plt.xlabel('Issue')
plt.ylabel('Approve/disapprove')
plt.title('Obama approval')
plt.legend(loc='center right', bbox_to_anchor=(1.3, 0.5))
plt.show()
```



Stacked Bar Chart

```
In [8]: obama_approval_ratings.set_index('Issue').plot(kind='bar', stacked=True)
plt.xticks(rotation=90)
plt.xlabel('Issue')
plt.ylabel('Approve/disapprove')
plt.title('Obama approval')
plt.legend(loc='center right', bbox_to_anchor=(1.3, 0.5))
plt.show()
```

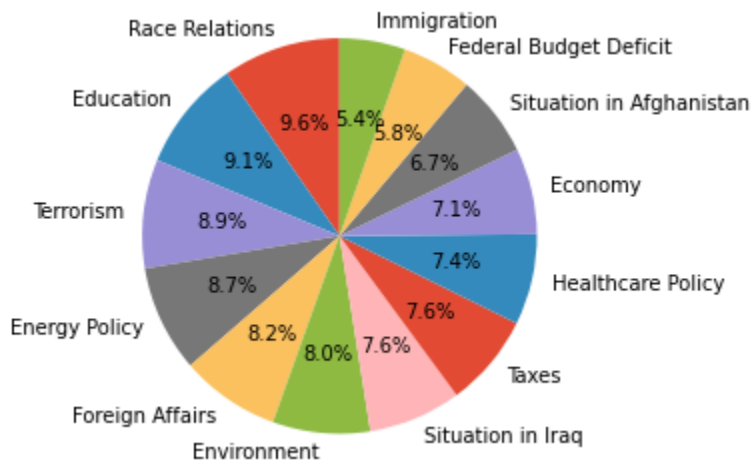


Pie Chart

```
In [9]: issues = obama_approval_ratings["Issue"]
approve = obama_approval_ratings["Approve"]

fig, ax = plt.subplots()
ax.pie(approve, labels=issues, autopct='%1.1f%%',
startangle=90)
ax.axis('equal')

plt.show()
```



Donut Chart

```
In [10]: issues = obama_approval_ratings["Issue"]
approve = obama_approval_ratings["Approve"]

fig, ax = plt.subplots()
ax.pie(approve, labels=issues, autopct='%1.1f%%',
startangle=90)
ax.axis('equal')

# draw circle
centre_circle = plt.Circle((0, 0), 0.70, fc='white')
fig = plt.gcf()

# Adding Circle in Pie chart
fig.gca().add_artist(centre_circle)

plt.show()
```

