Name : Gourav Verma
Method : Python
Assignment 1.2 - Charts
DSC-640 Week 1-2

In [1]:

```
# Import the libraries
import pandas as pd
import seaborn as sns
import matplotlib.pyplot as plt
```

```
C:\Users\goura\Anaconda3\lib\site-packages\statsmodels\tools\_testing.py:1
9: FutureWarning: pandas.util.testing is deprecated. Use the functions in
the public API at pandas.testing instead.
  import pandas.util.testing as tm
```

In [2]:

```
# Read the file
oar = pd.read_excel('obama-approval-ratings.xls')
```

In [3]:

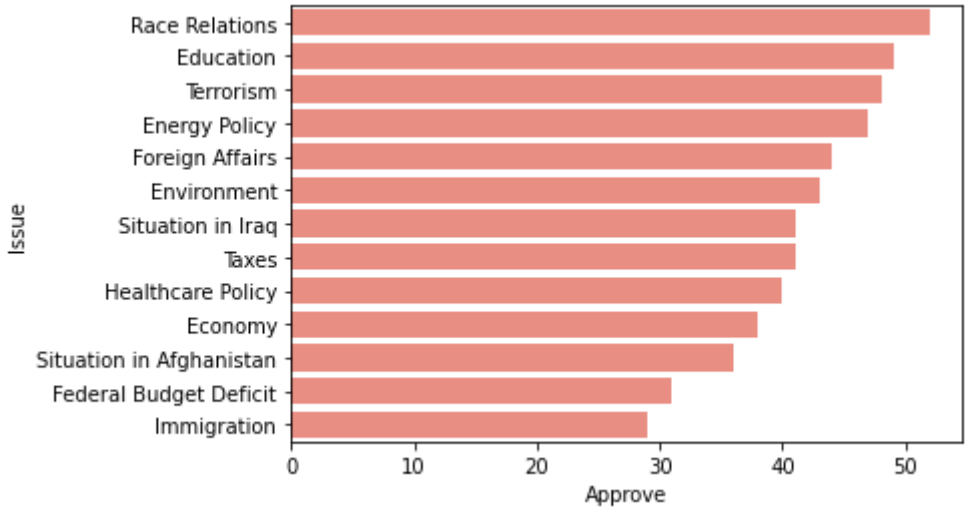
```
oar
```

Out[3]:

	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
5	Environment	43	51	6
6	Situation in Iraq	41	53	6
7	Taxes	41	54	5
8	Healthcare Policy	40	57	3
9	Economy	38	59	3
10	Situation in Afghanistan	36	57	7
11	Federal Budget Deficit	31	64	5
12	Immigration	29	62	9

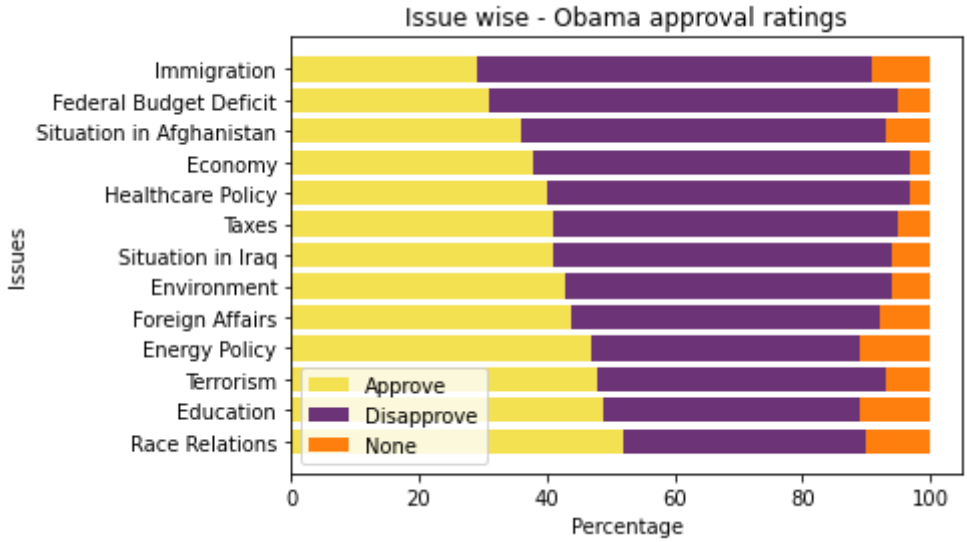
In [4]:

```
# Bar plot - Approval count by issue

bar1 = sns.barplot(x = 'Approve', y = 'Issue', color="salmon", data = oar)
```



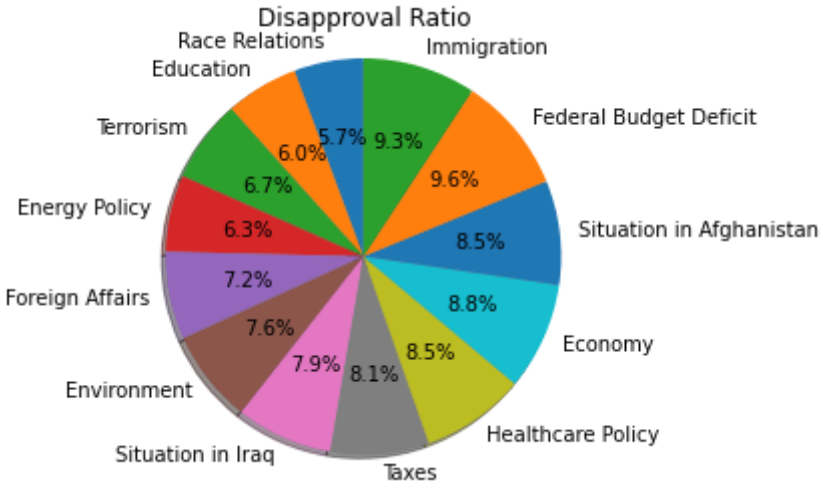
In [5]:

```
# Stacked bar plot
fig, ax = plt.subplots()
ax.barh(oar['Issue'], oar['Approve'], color="#f3e151", label='Approve')
ax.barh(oar['Issue'], oar['Disapprove'], left=oar['Approve'], color="#6c3376", label='D
isapprove')
ax.barh(oar['Issue'], oar['None'], left=oar['Approve']+oar['Disapprove'], color="#ff7f0
e", label='None')

ax.set_xlabel('Percentage')
ax.set_ylabel('Issues')
ax.legend()

ax.set_title('Issue wise - Obama approval ratings')

plt.show()
```



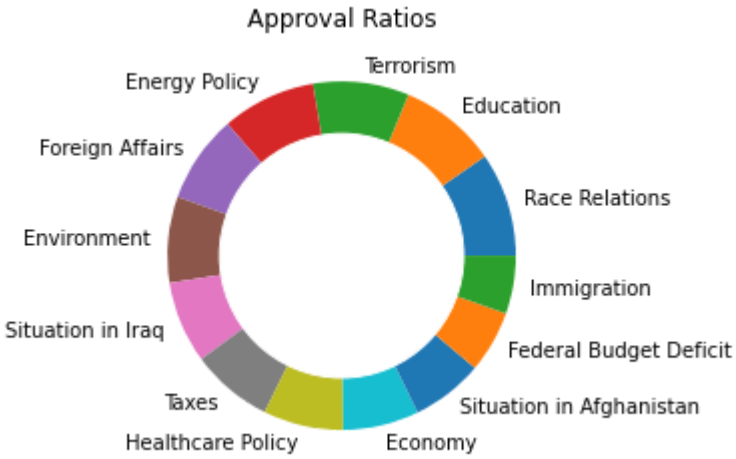
In [6]:

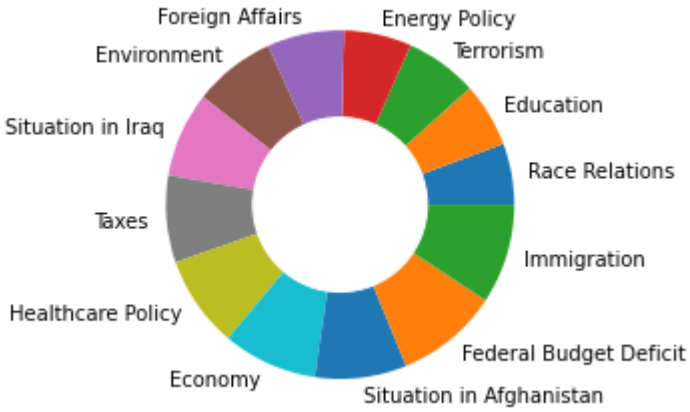
```
# Pie chart
fig1, ax1 = plt.subplots()
ax1.pie(oar['Disapprove'], labels=oar['Issue'], autopct='%1.1f%%',
        shadow=True, startangle=90)
ax1.axis('equal')  # Equal aspect ratio ensures that pie is drawn as a circle.
ax1.set_title('Disapproval Ratio')
plt.show()
```



In [7]:

```
# Donut Chart
fig1, ax1 = plt.subplots()
my_circle=plt.Circle( (0,0), 0.7, color='white')
plt.pie(oar['Approve'], labels=oar['Issue'])
p=plt.gcf()
p.gca().add_artist(my_circle)
ax1.set_title('Approval Ratios')
plt.show()


my_circle=plt.Circle( (0,0), 0.5, color='white')
plt.pie(oar['Disapprove'], labels=oar['Issue'])
p=plt.gcf()
p.gca().add_artist(my_circle)
ax1.set_title('Denial Ratios')
plt.show()

my_circle=plt.Circle( (0,0), 0.3, color='white')
plt.pie(oar['None'], labels=oar['Issue'])
p=plt.gcf()
p.gca().add_artist(my_circle)
ax1.set_title('No-result Ratios')
plt.show()
```


Approval Ratios
Terrorism
Education
Race Relations
Immigration
Federal Budget Deficit
Situation in Afghanistan
Economy
Healthcare Policy
Taxes
Situation in Iraq
Environment
Foreign Affairs
Energy Policy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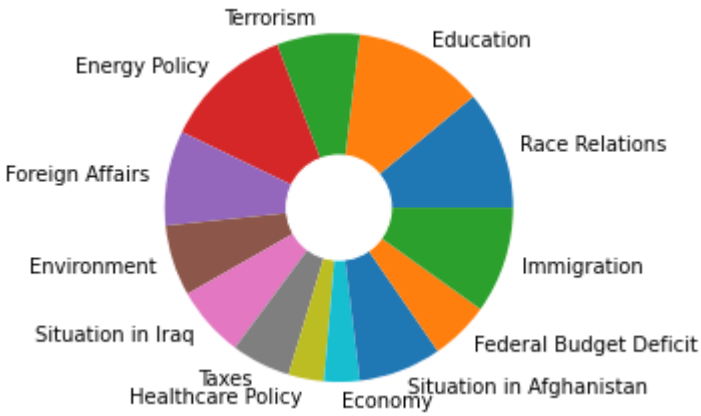
Terrorism
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In [ ]:

In [ ]: