Excercise in Python

In [1]:
```
import pandas as pd
from pandas import ExcelWriter
from pandas import ExcelFile
import matplotlib.pyplot as plt
```

In [5]:
```
#Read Excel file obama-approval-ratings.xls
approval = pd.read_excel('obama-approval-ratings.xls')
```

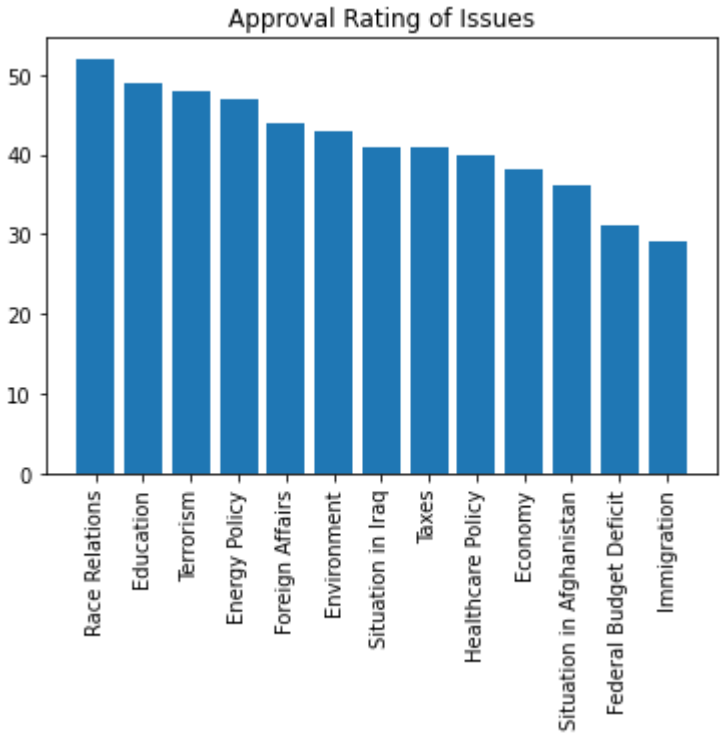
In [6]:
```
approval
```

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
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

Bar chart - Python

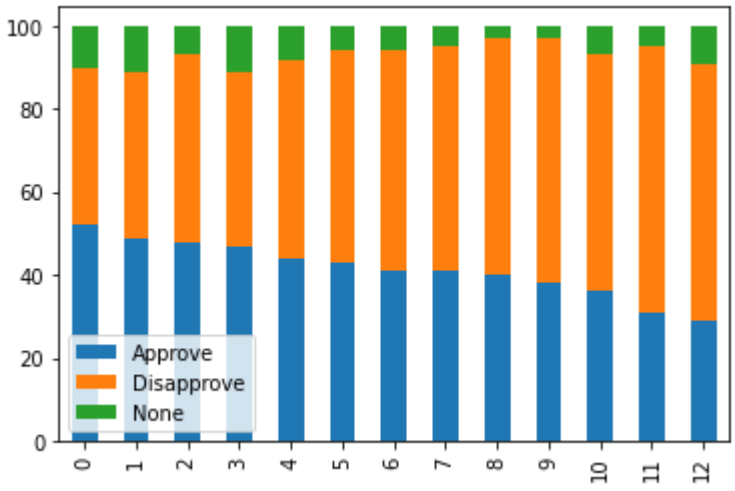
In [9]:
```
plt.bar(approval.Issue, approval.Approve)
plt.title('Approval Rating of Issues')
plt.xticks(rotation=90)
plt.show()
```



Stacked Bar Chart - Python

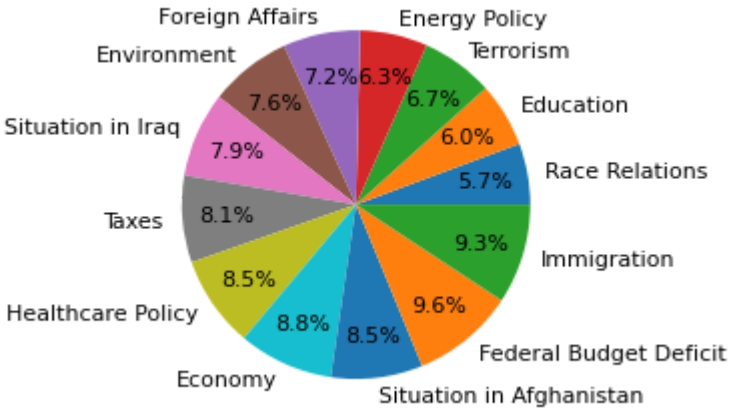
In [10]:
```
approval.plot.bar(stacked=True)
```

Out[10]: <AxesSubplot:>



Pie chart - Python

In [36]:
```
# plot the pie chart for disapproval percentage of each issue
_, _, autotexts = plt.pie(approval.Disapprove, labels = approval.Issue, autopct = '%1.1
for autotext in autotexts:
    autotext.set_color('Black')
```



Donut chart - Python

In [34]:

```
#plot the donut chart approval percentage for each issue
plt.pie(approval.Approve, labels = approval.Issue, autopct = '%1.1f%%', pctdistance = 0
centre_circle = plt.Circle((0,0), 0.40, fc = 'white')
fig = plt.gcf()
fig.gca().add_artist(centre_circle)

# Show compact plot
plt.tight_layout()
plt.show()
```