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DSC 640 T301 Data Presentation and Visualization

Week 1 & 2

Excercise 1.2 Charts

```
In [1]:   import warnings
          warnings.filterwarnings("ignore")
```

```
In [2]:   import pandas as pd
          from pandas import ExcelWriter
          from pandas import ExcelFile
          import matplotlib.pyplot as plt
          import numpy as np

          ## Import data for visualization
          Obama_df = pd.read_excel('obama-approval-ratings.xls', "Sheet1")


          ## Let see how the data looks
          print(Obama_df)
```

```
                         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
```
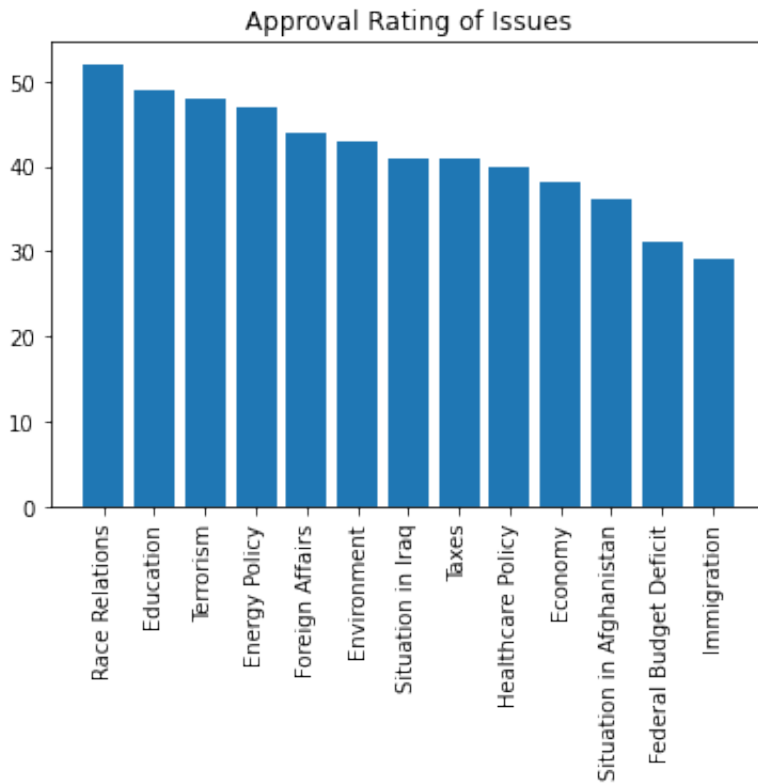
Bar Chart

In [3]:
```python
## Lets create bar chart for Approval rating

plt.bar(Obama_df.Issue, Obama_df.Approve)
plt.title('Approval Rating of Issues')
plt.xticks(rotation=90)

## Lets show bar chart
plt.show()
```
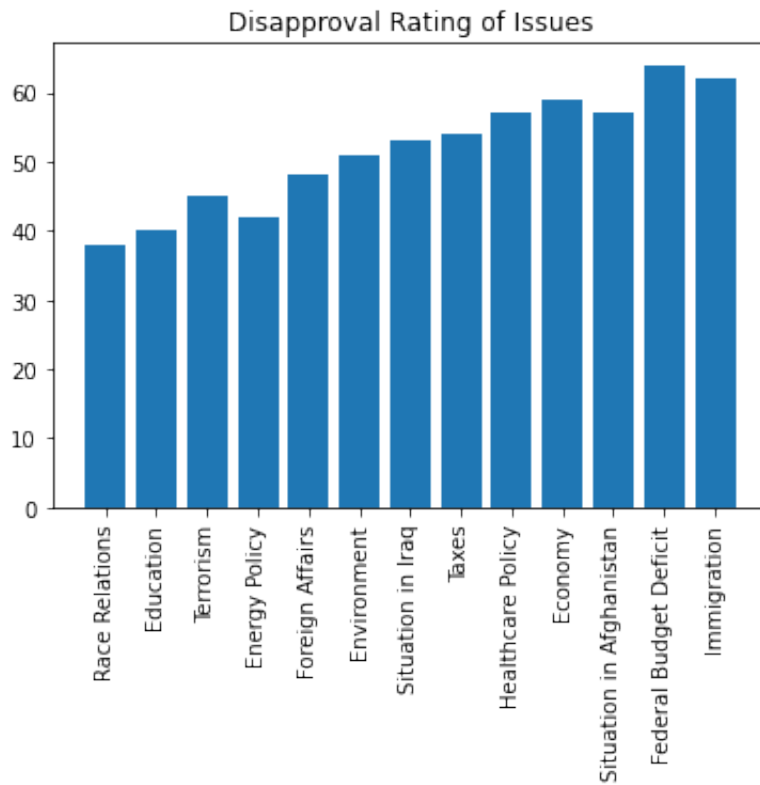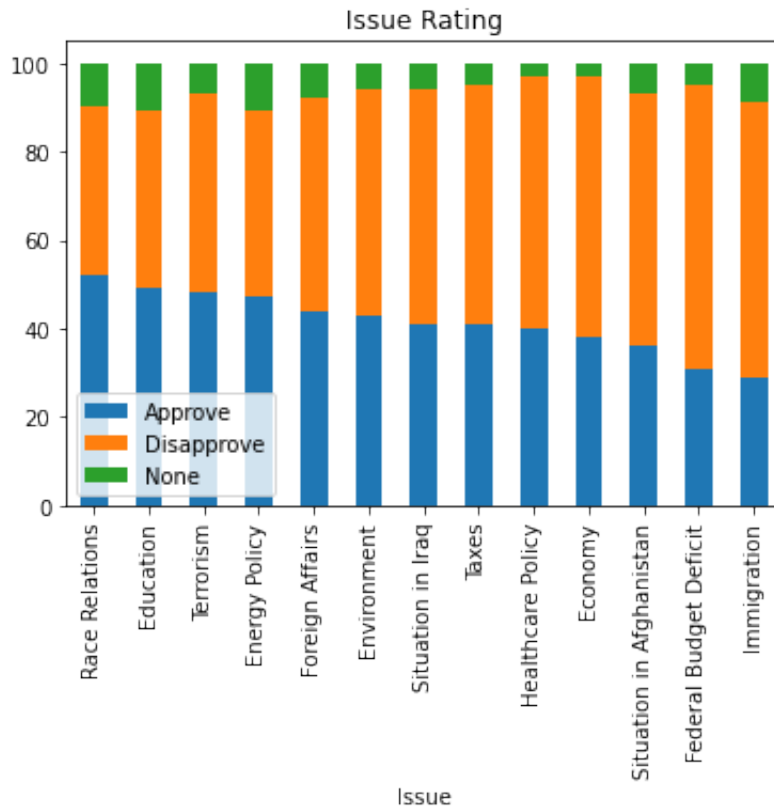

In [4]:
```python
## Lets create bar chart for disapproval rating
plt.bar(Obama_df.Issue, Obama_df.Disapprove)
plt.title('Disapproval Rating of Issues')
plt.xticks(rotation=90)

## Lets show bar chart
plt.show()
```

Stacked Bar Chart

In [5]:

```python
## Building Stacked bar chart

Obama_df.plot(x='Issue', kind='bar', stacked=True,
        title='Issue Rating')

## Lets show stacked bar chart
plt.show()
```

Pie Chart

In [6]:

```python
## Lets build Pie chart

## Grouping Rating into APProve, Disapprove and None
Rating = np.array([Obama_df['Approve'][10],Obama_df['Disapprove'][10], Obama_

## Declaring labels for above rating
mylabels = ["Approve", "Disapprove", "None"]

## Selecting colors for Rating
colors = ("green","red","blue")

## Pie chart
plt.pie(Rating, labels=mylabels, colors = colors, autopct='%1.1f%%')
plt.title("Issue Ratings")

## Lets display Pie chart
plt.show()
```
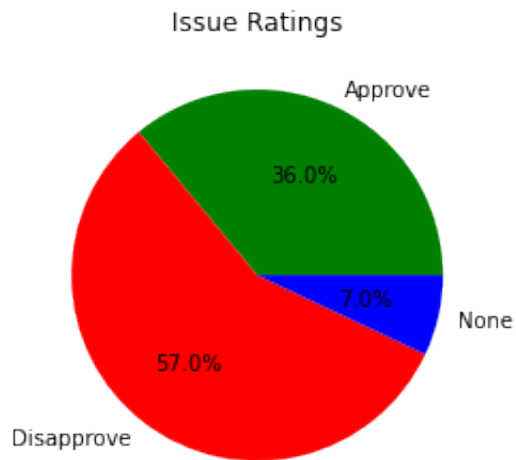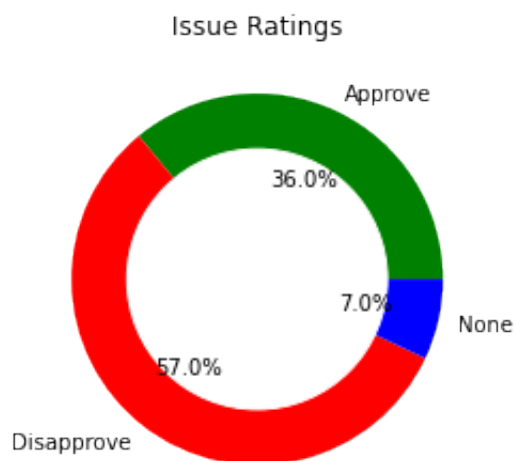
Donut

In [7]:

```python
## Lets build Donut chart

## Building Pie chart first
plt.pie(Rating, labels=mylabels, colors = colors, autopct='%1.1f%%')
plt.title("Issue Ratings")

## Now adding inner circle to Pie chart
my_circle=plt.Circle( (0,0), 0.7, color='white')
p=plt.gcf()
p.gca().add_artist(my_circle)

## Let display donut chart
plt.show()
```


In [ ]: