

In [2]:

```
# William Barker
# DSC640
# Weeks 1 & 2

import pandas as pd
import numpy as np
import matplotlib.pyplot as plt

df = pd.read_excel('obama-approval-ratings.xls')
df
```

Out[2]:

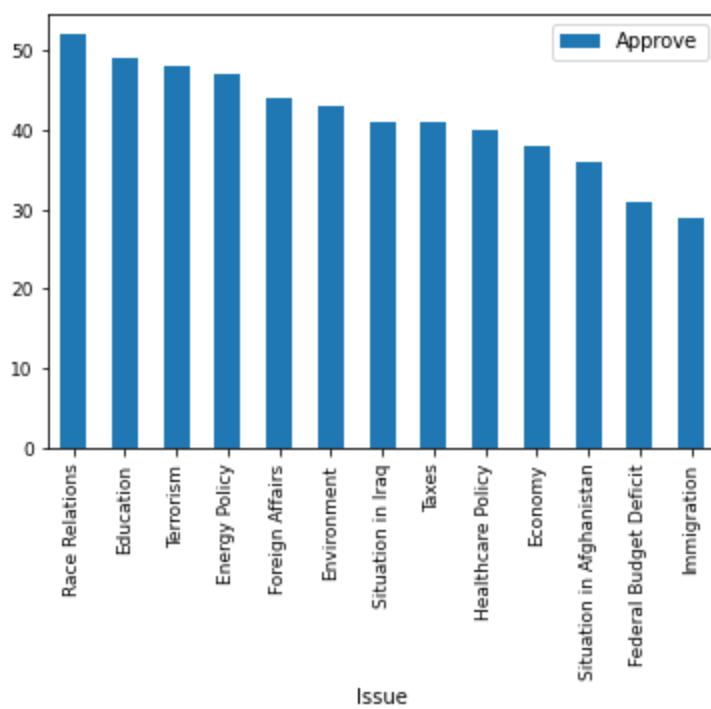
	Issue	Approve	Disapprove	None
0	Race Relations	52	38	10
1	Education	49	40	11
2	Terrorism	48	45	7
3	Energy Policy	47	42	11
4	Foreign Affairs	44	48	8
5	Environment	43	51	6
6	Situation in Iraq	41	53	6
7	Taxes	41	54	5
8	Healthcare Policy	40	57	3
9	Economy	38	59	3
10	Situation in Afghanistan	36	57	7
11	Federal Budget Deficit	31	64	5
12	Immigration	29	62	9

In [3]:

```
bargraph = df.plot.bar(x = 'Issue', y = 'Approve', fontsize='9')
bargraph
```

Out[3]:

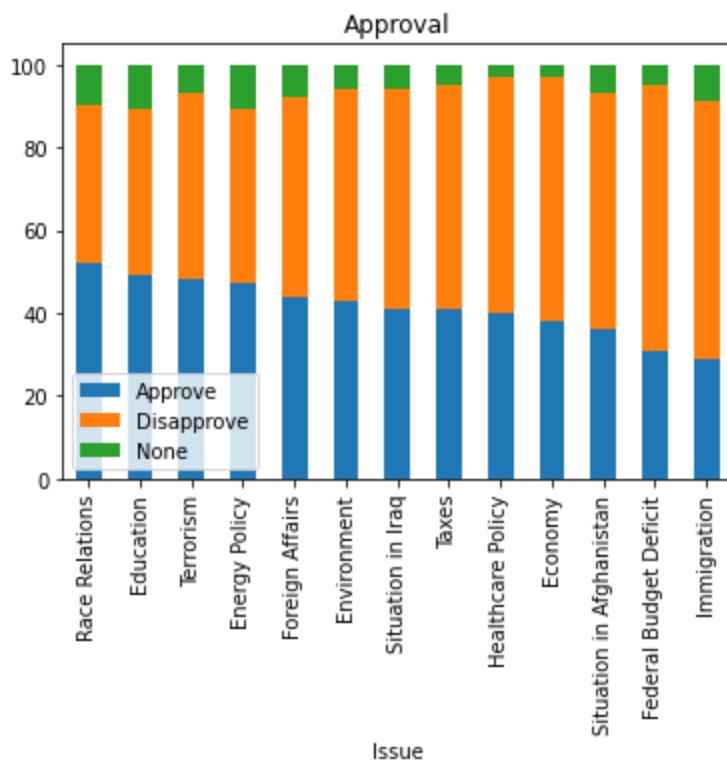
```
<AxesSubplot:xlabel='Issue'>
```



In [4]:

```
stacked_bargraph = df.plot.bar(x='Issue', stacked=True, title='Approval')
stacked_bargraph
```

Out[4]:

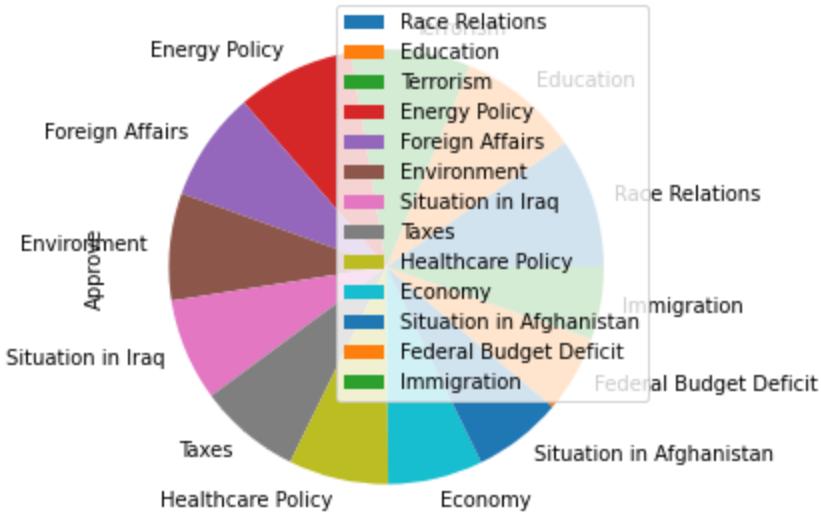


In [14]:

```
pie = df.plot.pie(y='Approve', labels = df['Issue'], figsize=(5, 5))
pie
```

Out[14]:

```
<AxesSubplot:ylabel='Approve'>
```



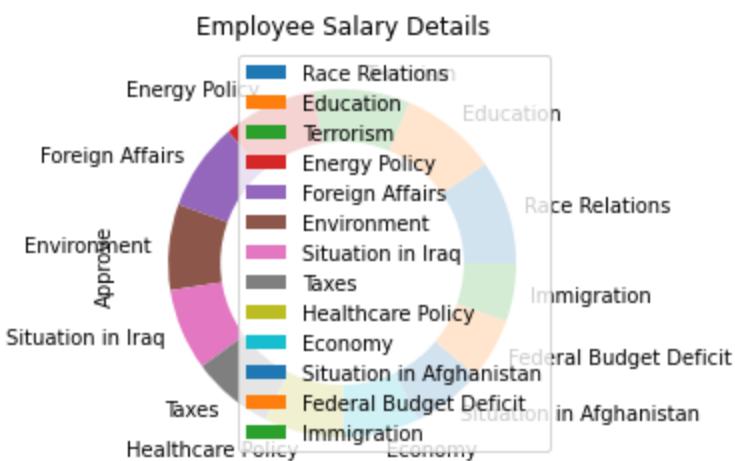
In [15]:

```
df.plot.pie(y='Approve', labels = df['Issue'])
centre_circle = plt.Circle((0, 0), 0.70, fc='white')
fig = plt.gcf()

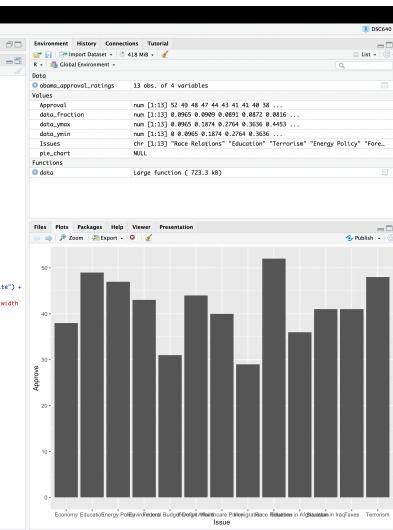
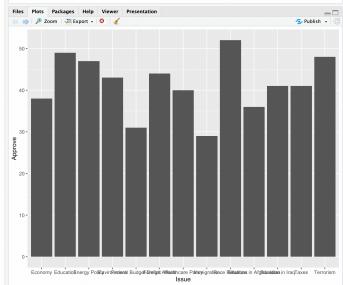
# Adding Circle in Pie chart
fig.gca().add_artist(centre_circle)

# Adding Title of chart
plt.title('Employee Salary Details')

plt.show()
```



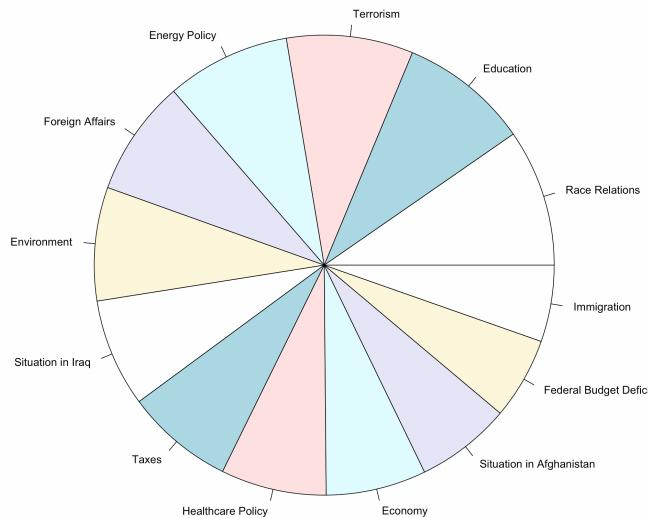
In []:



The screenshot shows the RStudio interface with the following details:

- Source** tab: Contains R code for generating a bar chart. The code uses ggplot2 to create a bar chart of 'obama_approval_ratings' data, grouped by 'issue'. The y-axis is labeled 'Approve' and ranges from 0 to 50. The x-axis is labeled 'Issue' and lists: Economy, Education, Energy, Pol... (truncated), Budget, Deficit, Healthcare, Pat... (truncated), Relations in Afghanistan, In Iraq, Taxes, and Terrorism.
- Environment** tab: Shows the global environment with objects like 'Approval', 'Issues', 'pct_change', 'piet_chort', and 'data'. The 'Approval' object is a data frame with 13 rows and 4 columns, containing 'Issue', 'Approve', 'disapprove', and 'dissatisfied'.
- Data** tab: Displays the 'obama_approval_ratings' data frame with 13 observations and 4 variables: Approval, disapprove, data_xmax, and data_ymin.
- Plots** tab: Shows a bar chart where the height of each bar represents the 'Approve' value for a specific issue. The bars are dark grey.

Approval



0.001100

