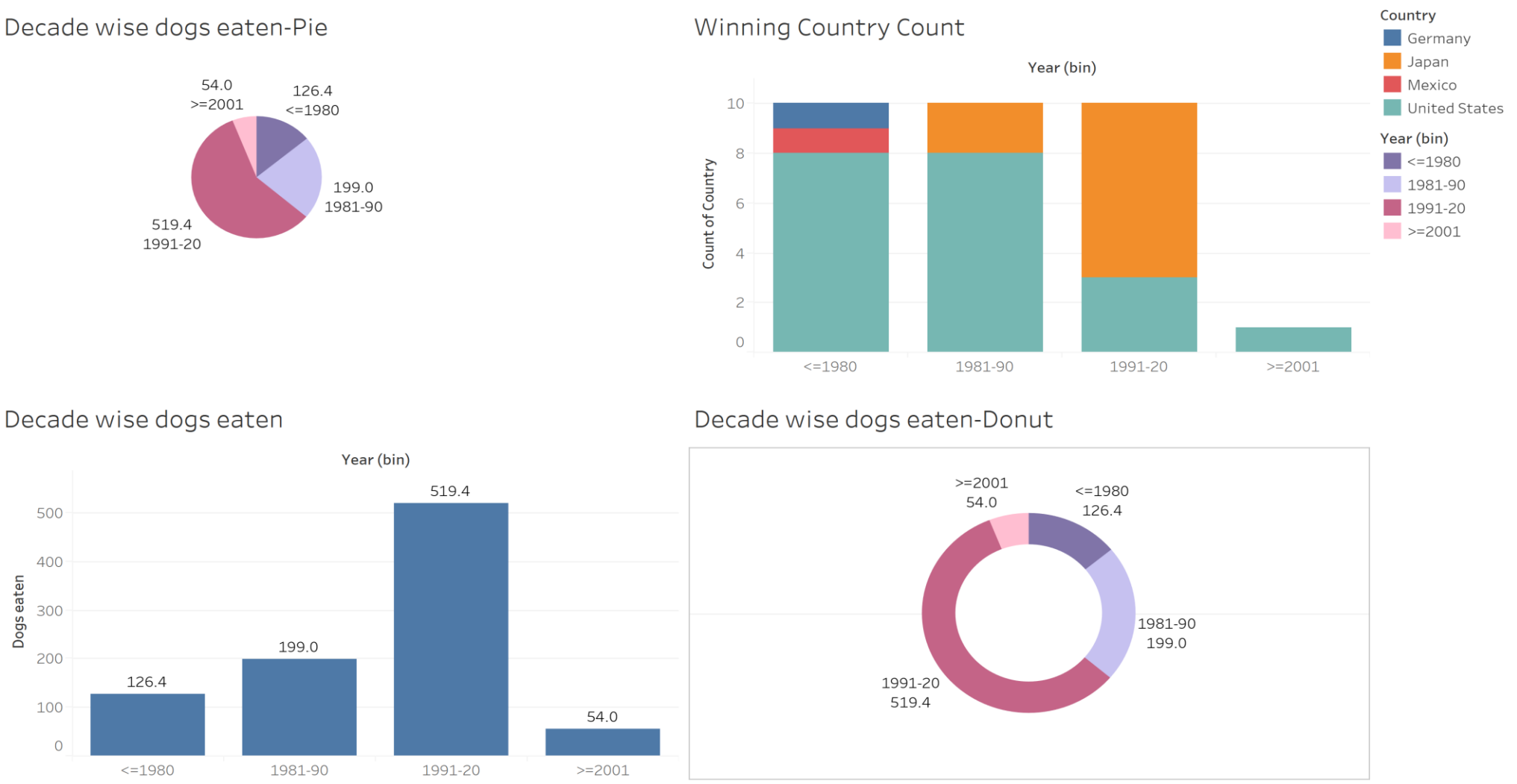
Gourav Verma

Assignment 1.2, Week 1-2

DSC-640, Winter 2020

Dashboard from Tableau.



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]:

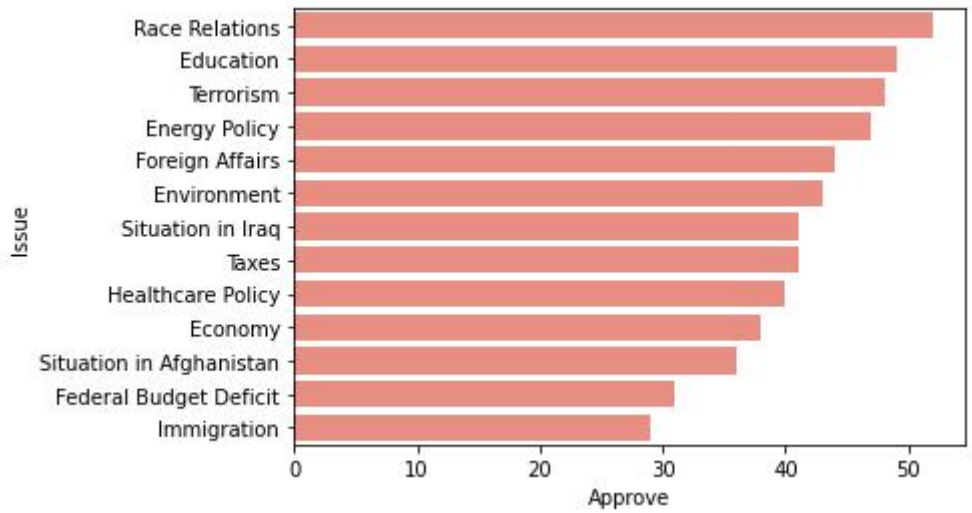
```
oar
```

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

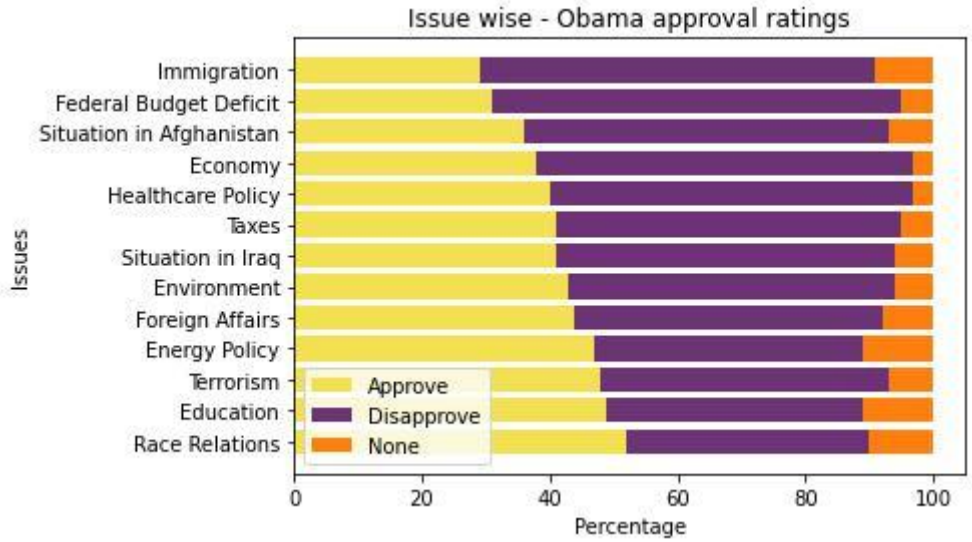
In [4]:

```
# Bar plot - Approval count by issue

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



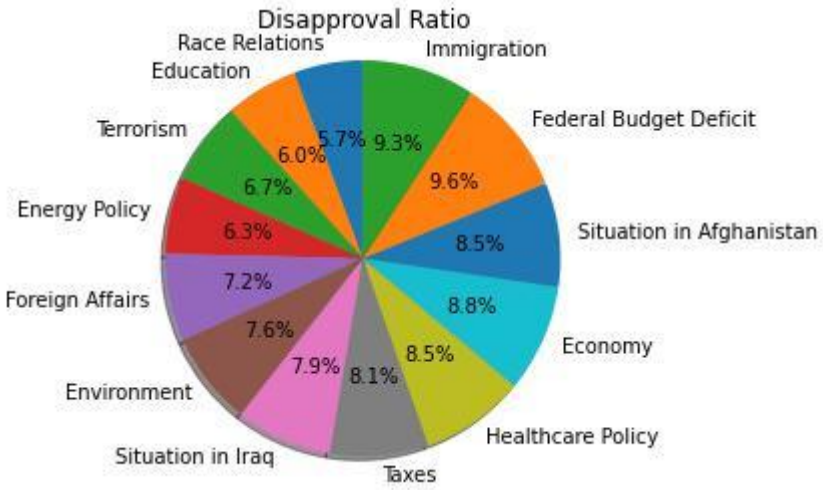
In [5]:

```
# 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()
```



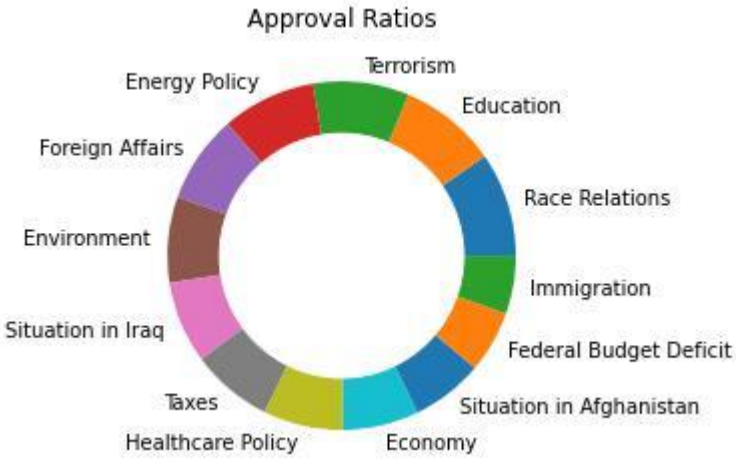
In [6]:

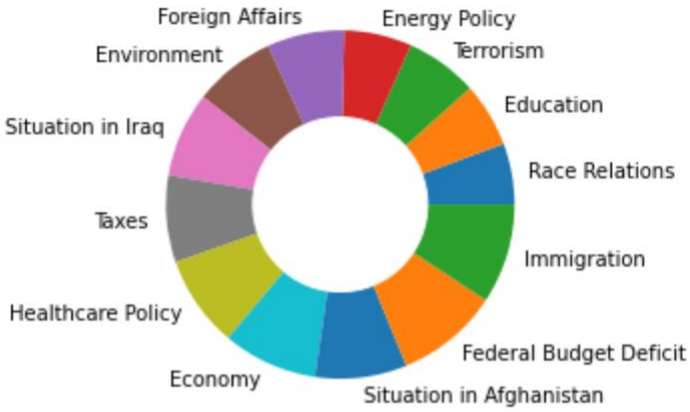
```
# Pie chart
fig1, ax1 = plt.subplots()
ax1.pie(oar['Disapprove'], labels=oar['Issue'],
        autopct='%1.1f%%', shadow=True, startangle=90)
ax1.axis('equal')  # Equal aspect ratio ensures that pie is drawn as a circle.
ax1.set_title('Disapproval Ratio')
plt.show()
```

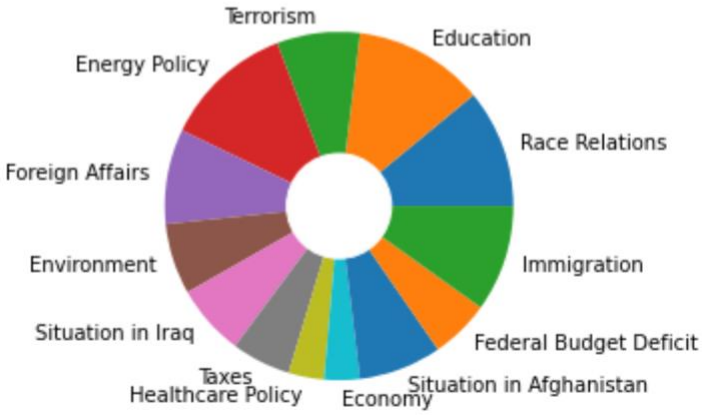


In [7]:

```
# 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


Energy Policy
Terrorism
Education
Race Relations
Immigration
Federal Budget Deficit
Situation in Afghanistan
Economy
Healthcare Policy
Taxes
Situation in Iraq
Environment
Foreign Affairs


Terrorism
Education
Race Relations
Immigration
Federal Budget Deficit
Situation in Afghanistan
Economy
Healthcare Policy
Taxes
Situation in Iraq
Environment
Foreign Affairs
Energy Policy

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

In [1]:

```
# import libraries and
data library(ggplot2)
library(readxl)
```

```
Warning message:
"package 'ggplot2' was built under R version 3.6.3"Warning message:
"package 'readxl' was built under R version 3.6.3"
```

In [2]:

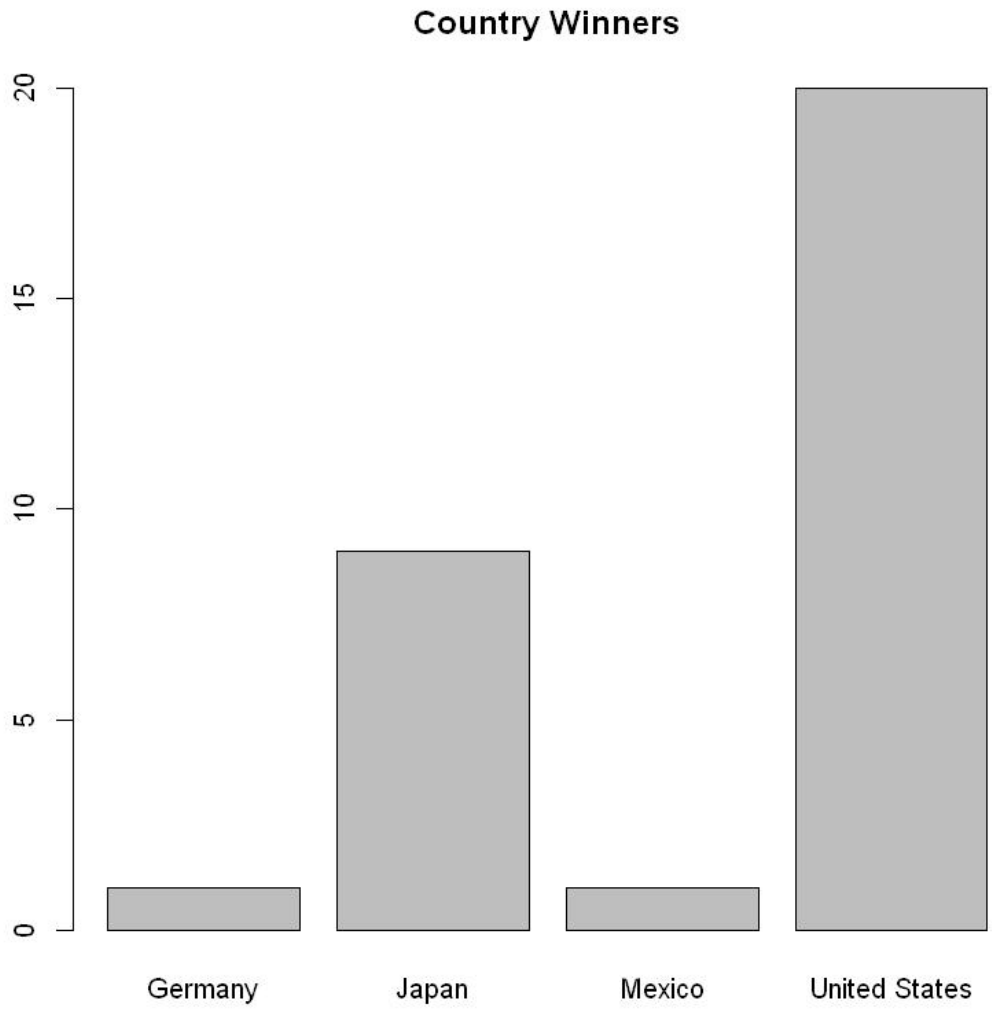
```
hotdog_data <- read_excel("hotdog-contest-winners.xlsm")
head(hotdog_data)
```

A tibble: 6 × 5

Year	Winner	Dogs eaten	Country	New record
<dbl>	<chr>	<dbl>	<chr>	<dbl>
1980	Paul Siederman & Joe Baldini	9.10	United States	0
1981	Thomas DeBerry	11.00	United States	0
1982	Steven Abrams	11.00	United States	0
1983	Luis Llamas	19.50	Mexico	0
1984	Birgit Felden	9.50	Germany	0
1985	Oscar Rodriguez	11.75	United States	0

In [3]:

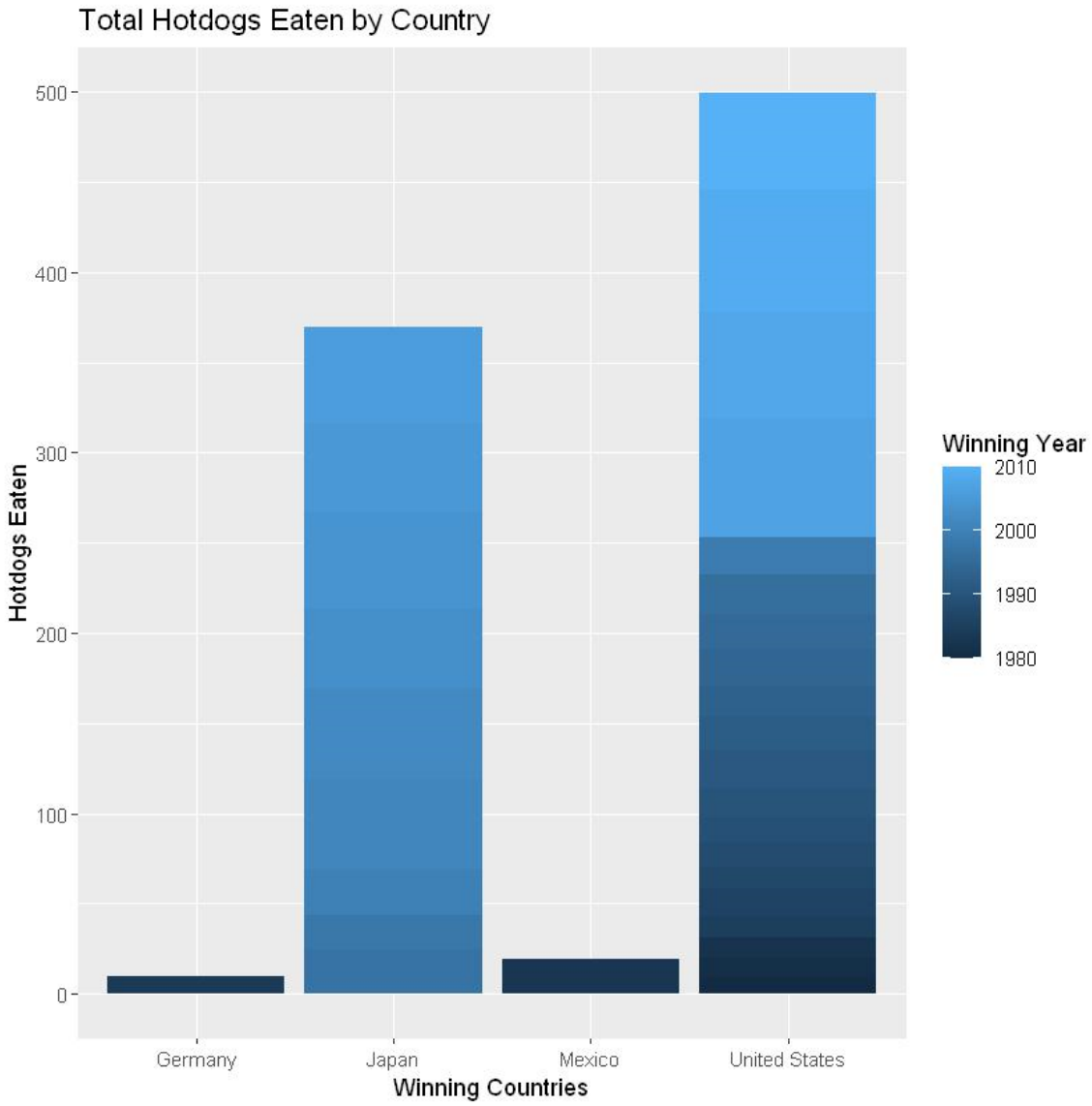
```
# Bar Chart
counts <- table(hotdog_data$Country)
barplot(counts, main='Country Winners')
```



In [4]:

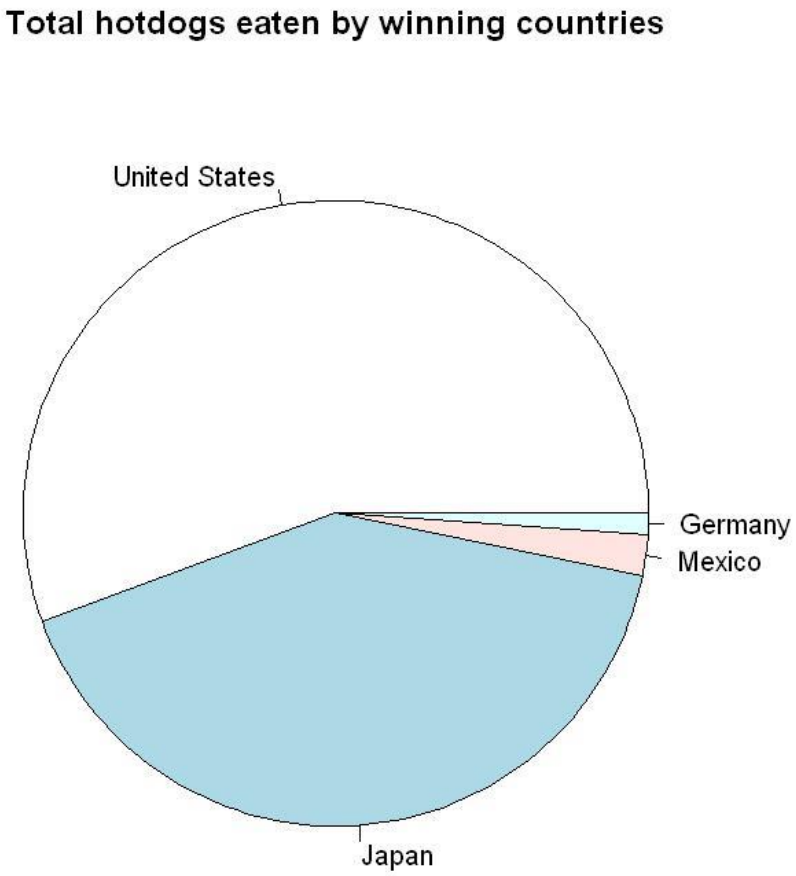
```
# Stacked Bar Chart
ggplot2::ggplot(hotdog_data,
                ggplot2::aes(fill=hotdog_data$Year, y = hotdog_data$`Dogs eaten`, x= ho
tdog_data$Country)) +
ggplot2::geom_bar(position = "stack", stat = "identity") +
ggplot2::ggtitle('Total Hotdogs Eaten by Country') +
ggplot2::xlab('Winning Countries') +
ggplot2::ylab('Hotdogs Eaten') +
ggplot2::labs(fill='Winning Year')
```

```
Warning message:
"Use of `hotdog_data$Country` is discouraged. Use `Country`
instead."Warni ng message:
"Use of `hotdog_data$`Dogs eaten`` is discouraged. Use `Dogs eaten`
instea d."Warning message:
"Use of `hotdog_data$Year` is discouraged. Use `Year` instead."
```



In [5]:

```
# Pie Chart
slices <- c(499.85, 369.88, 19.50, 9.50)
lbls <- c('United States', 'Japan', 'Mexico', 'Germany')
pie(slices, labels = lbls, main='Total hotdogs eaten by winning countries')
```



In [6]:

```
# Donut Pie Chart
data <- data.frame(category=c('United States', 'Japan', 'Mexico', 'Germany'),
count=c(4 99.85, 369.88, 19.50, 9.50))
data$fraction <- data$count / sum(data$count)
data$ymax <- cumsum(data$fraction)
data$ymin <- c(0, head(data$ymax, n=-1))
data$labelPosition <- (data$ymax + data$ymin) / 2
data$label <- paste0(data$category, "\n value: ", data$count)


ggplot2::ggplot(data, ggplot2::aes(ymax=ymax, ymin=ymin, xmax=4, xmin=3,
fill=category )) +
ggplot2::geom_rect() +
ggplot2::geom_text(x=2, ggplot2::aes(y=labelPosition, label=label, color=category),
siz e=6) +
ggplot2::scale_fill_brewer(palette=3) + ggplot2::scale_color_brewer(palette = 3) +
ggplot2::coord_polar(theta = "y") +
ggplot2::xlim(c(-1,4)) +
ggplot2::theme_void()
```