# Assignment 1.2: Charts

## DSC640

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In [1]:
```
import pandas as pd
import numpy as np
import seaborn as sns
import matplotlib.pyplot as plt
%matplotlib inline

## Dataset 1
df1 = pd.read_excel('hotdog-contest-winners.xlsm', sheet_name='hot-dog-contest-winners')
df1.head()

## Bar Chart

plt.rcParams['figure.figsize'] = [12,8]

sns.set(font_scale = 1.3)
sns.set_style("white")


ax = sns.countplot(x=df1['Country'],data=df1,order = df1['Country'].value_counts().index,
              palette = "dark:salmon_r")

plt.yticks([0,5,10,15,20])
for p in ax.patches:
   ax.annotate('{}'.format(round(p.get_height())), (p.get_x()+0.25, p.get_height()+0.01))

ax.set(title = "Python - Bar Chart: Country's Winning Times", xlabel = "Country", ylabel = "Winning Times")
sns.despine()

## Dataset 2
df2 = pd.read_excel('hotdog-places.xlsm', sheet_name='hot-dog-places')
df2.head()
df2 = df2.transpose()
df2.head()

## Stacked Bar Chart
plt.rcParams['figure.figsize'] = [12,8]
```

```
ax = df2.plot(kind='bar', stacked=True, color={0: "skyblue", 2: "firebrick", 1: "coral"})

y_offset = -15
for bar in ax.patches:
    ax.text(
        # text in the middle
        bar.get_x() + bar.get_width() / 2,

        # Add the height of the bar to the start of the bar,
        bar.get_height() + bar.get_y() + y_offset,
        round(bar.get_height()),

        # Center the labels
        ha='center',
        color='w',
        weight='bold',
        size=13
  )

# Just add a title and rotate the x-axis labels to be horizontal.
plt.title("Python - Stacked Bar Chart: Hotdog's Places for Each Year")
plt.xlabel("Year")
plt.ylabel("Places")
plt.xticks(rotation=0, ha='center')

right_side = ax.spines["right"]
right_side.set_visible(False)
top = ax.spines["top"]
top.set_visible(False)
plt.show()

## Dataset 3
df3 = pd.read_excel('obama-approval-ratings.xls', sheet_name='Sheet1')
df3.head(14)


## Pie Chart
df3 = df3.transpose()
df3.columns = df3.iloc[0]
df3 = df3.drop(df3.index[0])
df3.head()

plt.rcParams['figure.figsize'] = [12,8]
plt.rcParams["figure.autolayout"] = True
plt.rcParams["axes.edgecolor"] = "black"
```

```
plt.rcParams["axes.linewidth"] = 1.0

#define Seaborn color palette to use
colors = sns.color_palette('pastel')[0:5]

#create pie chart
plt.pie(df3['Race Relations'], labels=df3.index, colors = colors, autopct='%.0f%%', startangle=90, textprops={'fontsize':
plt.title("Python - Pie Chart: Approval Ratings for Race Relations")
plt.show()


## Donut Chart
plt.rcParams['figure.figsize'] = [12,8]

colors = sns.color_palette('Accent')[0:5]
# explosion
explode = (0.05, 0.05, 0.05)

plt.pie(df3['Taxes'], labels=df3.index, colors = colors, autopct='%.0f%%', pctdistance=0.85,startangle=-90,
        textprops={'fontsize': 14}, explode=explode)

# draw circle
centre_circle = plt.Circle((0, 0), 0.70, fc='white')
fig = plt.gcf()

# Adding Circle in Pie chart
fig.gca().add_artist(centre_circle)
plt.title("Python - Donut Chart: Approval Ratings for Taxes")
plt.show()
```