DS104-04-19 - Lesson 4 Hands-On

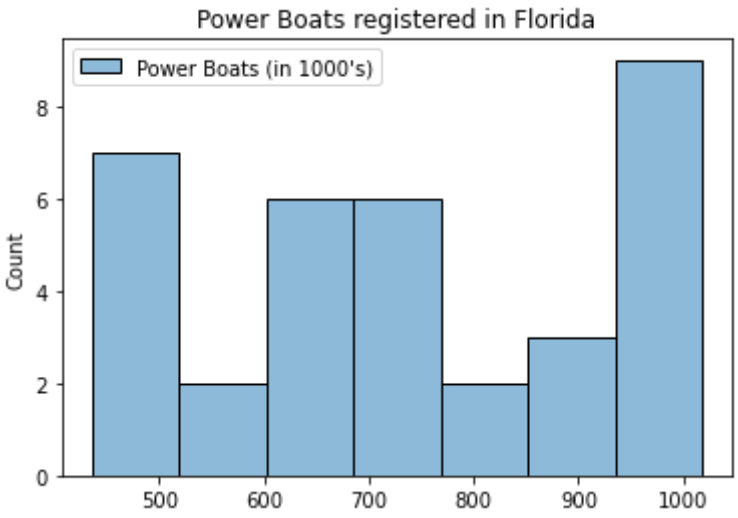
Part 1

In [1]:
```
# import needed packages
import pandas as pd
import seaborn as sns

# import `matplotlib`
import matplotlib.mlab as mlab

# import related subpackage
import matplotlib.pyplot as plt
```

In [2]:
```
# import dataset
powerboats = pd.read_csv(r'data/L3P1.csv')
```

In [3]:
```
# plot with 7 bins
powerboatsPlot = sns.histplot(powerboats,bins=7)
powerboatsPlot.set_title("Power Boats registered in Florida")
```

Out[3]:
```
Text(0.5, 1.0, 'Power Boats registered in Florida')
```

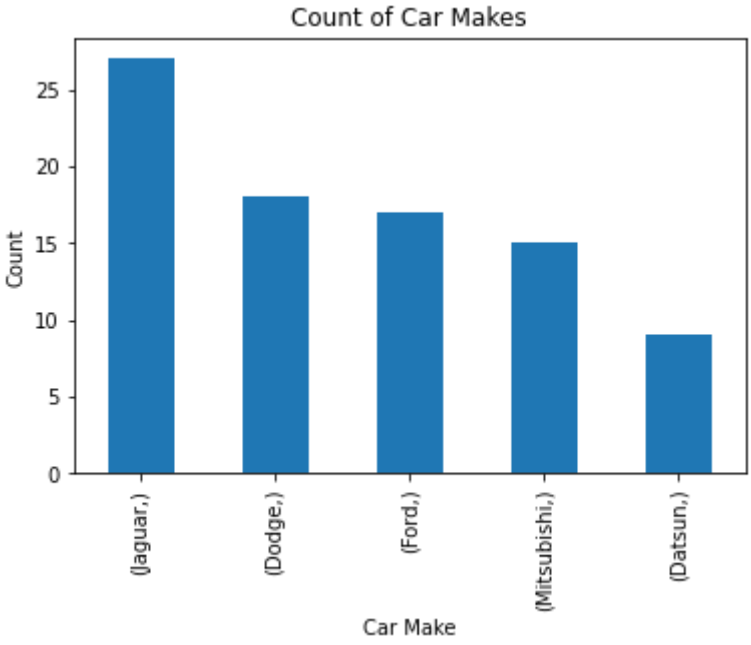


Part 2

In [4]:
```
# import dataset
carmakes = pd.read_csv(r'data/L3P2.csv')
```

In [5]:
```
# adding title and labels
carmakesPlot = carmakes.value_counts().plot(kind='bar')
carmakesPlot.set_title("Count of Car Makes")
carmakesPlot.set_xlabel("Car Make")
carmakesPlot.set_ylabel("Count")
```

Out[5]:
```
Text(0, 0.5, 'Count')
```

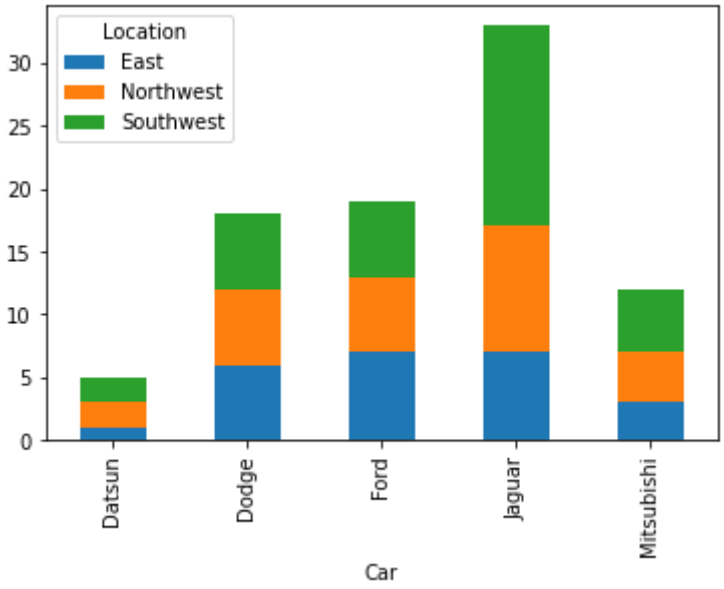


Part 3

In [6]:
```
# import dataset
carmakesbylocation = pd.read_csv(r'data/L3P3.csv')
```

In [7]:
```
# create stacked plot
carsStacked = pd.crosstab(carmakesbylocation['Car'], carmakesbylocation['Locati
carsStacked.plot.bar(stacked=True)
```

Out[7]:
```
<AxesSubplot:xlabel='Car'>
```

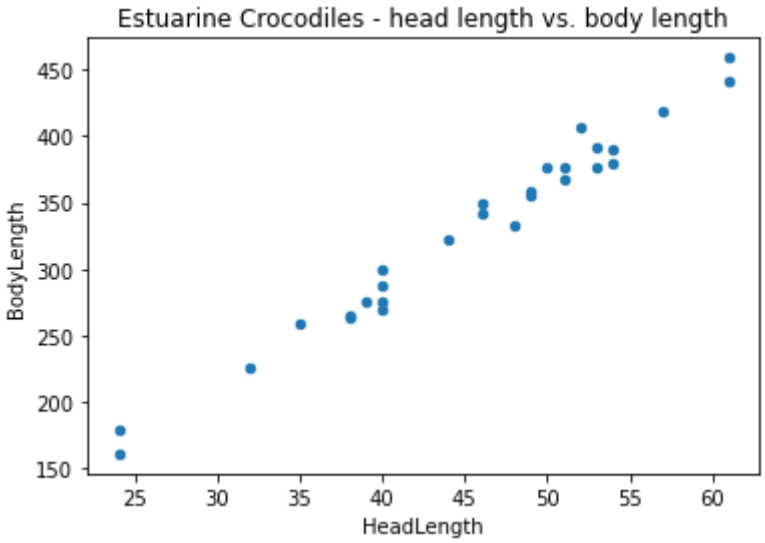


Part 4

In [8]:
```
# import dataset
crocodiles = pd.read_csv(r'data/L4P4_crocodiles.csv')
```

In [9]:
```
# create a scatter plot
crocodilesPlot = crocodiles.plot.scatter(x='HeadLength', y='BodyLength')
crocodilesPlot.set_title("Estuarine Crocodiles - head length vs. body length")
```

Out[9]:
```
Text(0.5, 1.0, 'Estuarine Crocodiles - head length vs. body length')
```



Part 5

In [10]:
```
# import dataset
heartattacks = pd.read_csv(r'data/L5P5.csv')
```

In [11]:
```
# combine columns to a date
heartattacks['Date'] = heartattacks["Month"] + " " + heartattacks["Day"] + " "
```

In [12]:
```
# view the dataframe
heartattacks.head()
```

Out[12]:

	Month	Day	Year	Heart Attacks	Date
0	May	1,	2003	12	May 1, 2003
1	May	2,	2003	12	May 2, 2003
2	May	3,	2003	6	May 3, 2003
3	May	4,	2003	16	May 4, 2003
4	May	5,	2003	13	May 5, 2003

In [13]:
```
# create line plot with title and labels
plt.plot(heartattacks['Date'], heartattacks['Heart Attacks'])
plt.xlabel('Date')
plt.ylabel('# of Heart Attacks')
plt.title("Heart Attacks, May through July 2003")
```

Out[13]:
```
Text(0.5, 1.0, 'Heart Attacks, May through July 2003')
```