Lab-3_Part_2

Matplotlib Exercises

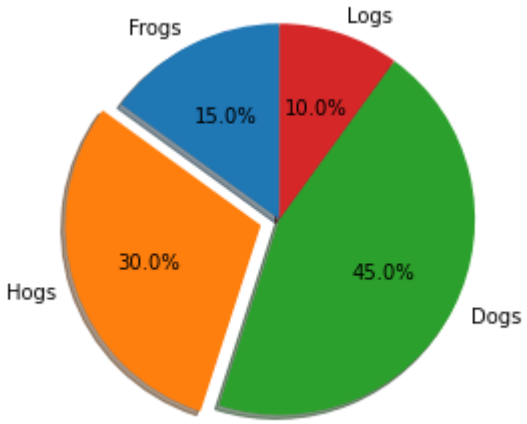
* Name: Bhavesh Waghela
* Student ID:N01639685

Import library

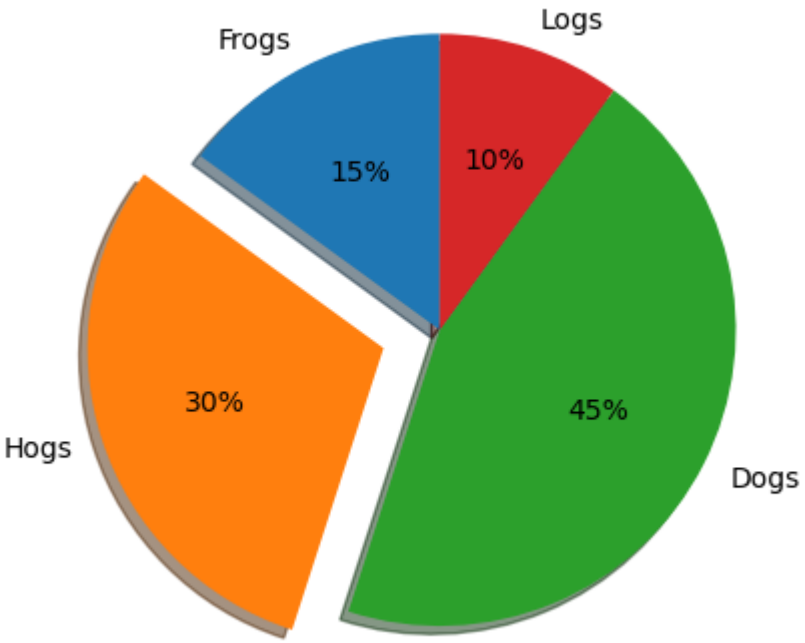
In [1]:
```
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
```

Question 6

In [6]:
```
##Write the code to plot the graph below
```



In [34]:
```
mylabels = ['Frogs','Hogs','Dogs','Logs']
x = [15, 30, 45, 10]
myexplode = [0, 0.2, 0, 0]
plt.pie(x, labels = mylabels, startangle = 90, explode = myexplode, shadow = T
plt.show()
```



Question 7

Download any random data in CSV or Excel format from the internet and try to analyze the data as per the important attributes present in the file.

Plot the data on a graph.

Try to find out what important information can be obtained from visual representation data.

In [33]:
```
df = pd.read_csv('stroke-data.csv')
df.head()
```

Out[33]:

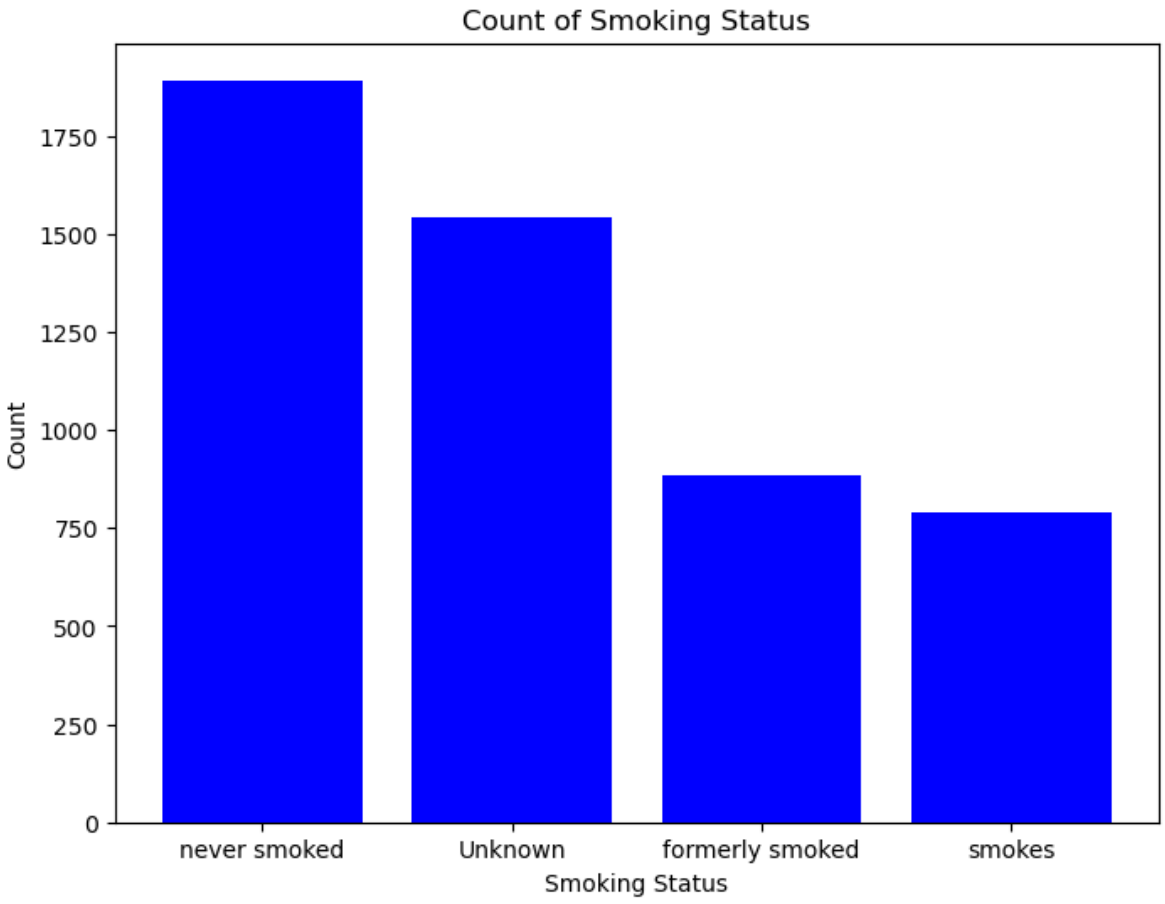
	id	gender	age	hypertension	heart_disease	ever_married	work_type	residence_type	avg_
0	67	Female	17.0	0	0	No	Private	Urban	
1	77	Female	13.0	0	0	No	children	Rural	
2	84	Male	55.0	0	0	Yes	Private	Urban	
3	91	Female	42.0	0	0	No	Private	Urban	
4	99	Female	31.0	0	0	No	Private	Urban	

In [99]:
```
smoking_counts = df['smoking_status'].value_counts()


plt.figure(figsize=(8, 6))
plt.bar(smoking_counts.index, smoking_counts.values, color='blue')

plt.xlabel('Smoking Status')
plt.ylabel('Count')
plt.title('Count of Smoking Status')

plt.show()
```

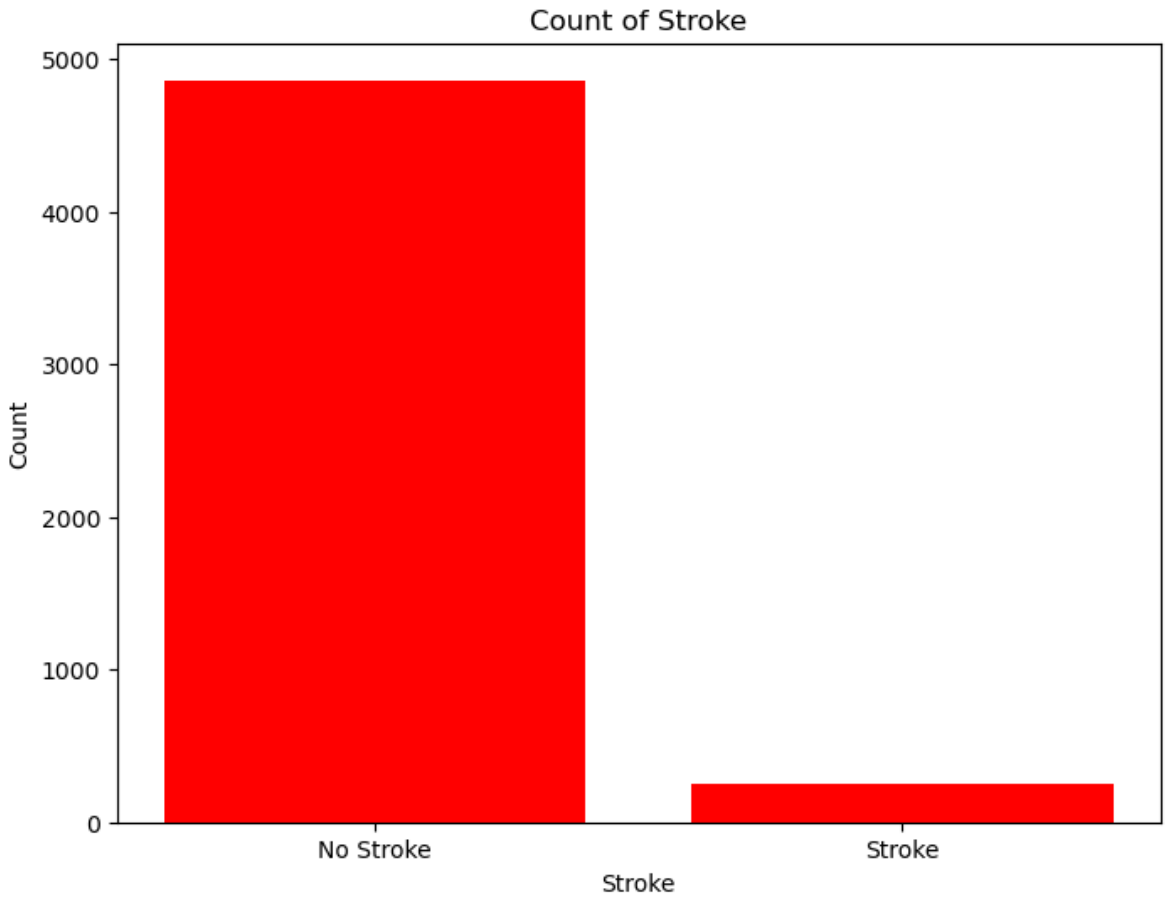


In [98]:
```
stroke_counts = df['stroke'].value_counts()

plt.figure(figsize=(8, 6))
plt.bar(stroke_counts.index, stroke_counts.values, color='red')

plt.xlabel('Stroke')
plt.ylabel('Count')
plt.title('Count of Stroke')

plt.xticks([0, 1], ['No Stroke', 'Stroke'])
plt.show()
```

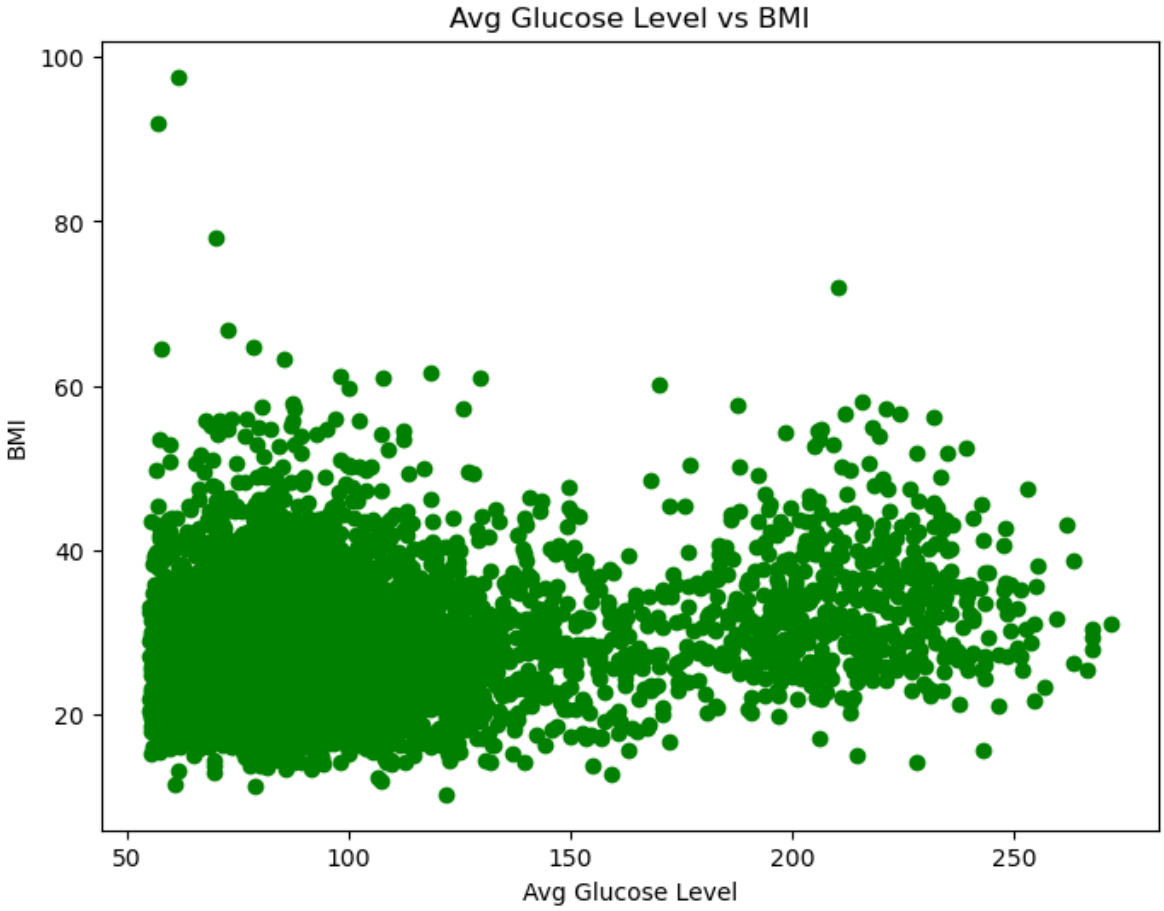


In [60]:
```
plt.figure(figsize=(8, 6))

plt.scatter(df['avg_glucose_level'], df['bmi'], color='green')

plt.xlabel('Avg Glucose Level')
plt.ylabel('BMI')
plt.title('Avg Glucose Level vs BMI')

plt.show()
```



Question 8

Add some text to a graph & create and plot a random linear graph Right at the center if the graph add some text which says this is the center. Also add grids to the graph.

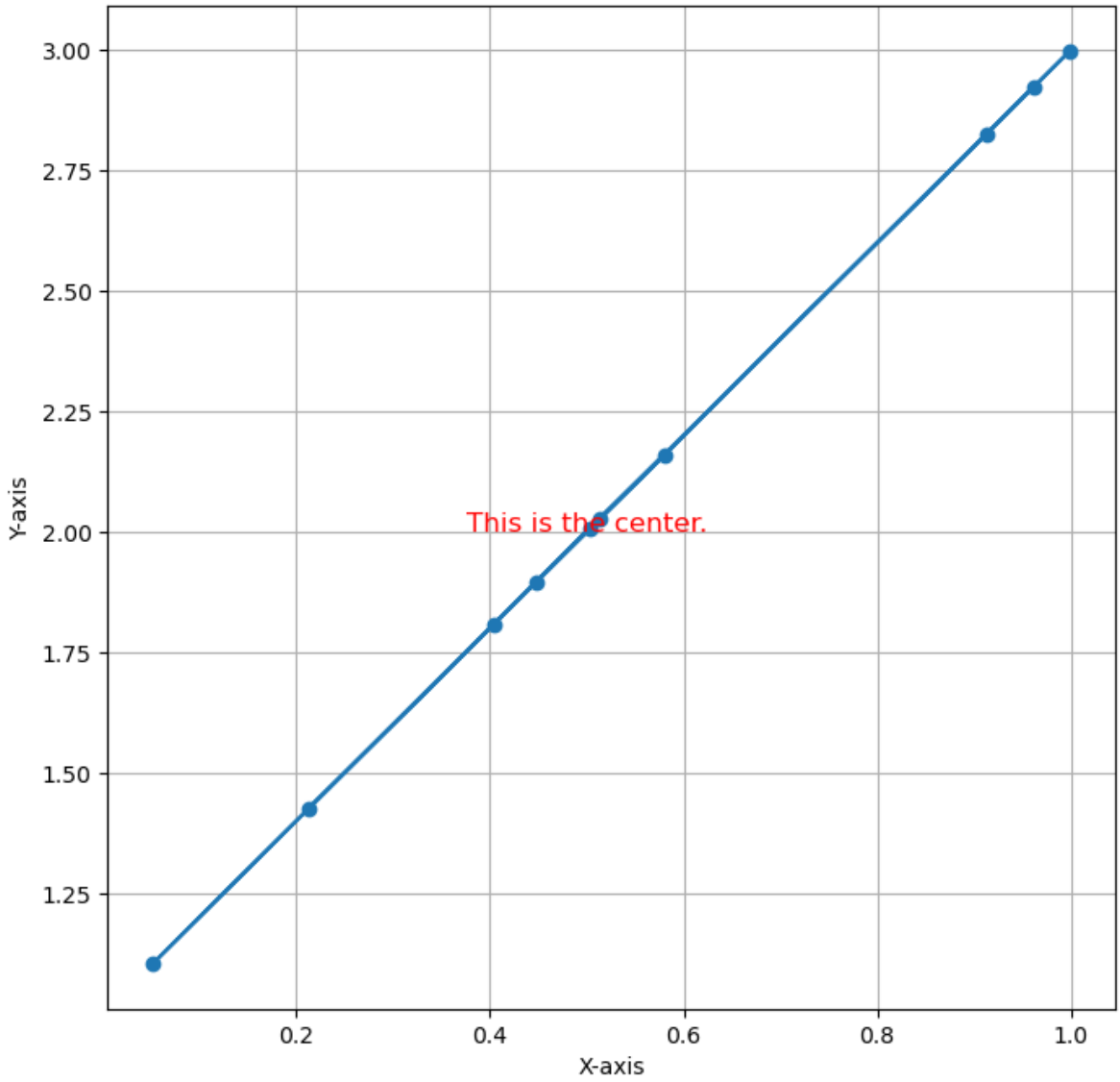
In [97]:
```
x = np.random.rand(10)
y = 2 * x + 1

plt.figure(figsize=(8, 8))
plt.plot(x, y, marker='o')

plt.text(0.5, 2, 'This is the center.', horizontalalignment='center', fontsize

plt.grid(True)
plt.xlabel('X-axis')
plt.ylabel('Y-axis')

plt.show()
```



Please save as Pdf and upload in Blackboard Lab4.