

In [13]:

```
import pandas as pd
import numpy as np
import seaborn as sns
import matplotlib.pyplot as plt
```

In [14]:

```
data= pd.read_csv(r"C:\Users\Ritik Kumar Tiwari\Desktop\datasets_19_420_Iris.csv")
```

In [15]:

```
data.head()
```

Out[15]:

	Id	SepalLengthCm	SepalWidthCm	PetalLengthCm	PetalWidthCm	Species
0	1	5.1	3.5	1.4	0.2	Iris-setosa
1	2	4.9	3.0	1.4	0.2	Iris-setosa
2	3	4.7	3.2	1.3	0.2	Iris-setosa
3	4	4.6	3.1	1.5	0.2	Iris-setosa
4	5	5.0	3.6	1.4	0.2	Iris-setosa

In [16]:

```
data.columns
```

Out[16]:

```
Index(['Id', 'SepalLengthCm', 'SepalWidthCm', 'PetalLengthCm', 'PetalWidthCm',  
      'Species'],  
      dtype='object')
```

In [17]:

```
data.tail()
```

Out[17]:

	Id	SepalLengthCm	SepalWidthCm	PetalLengthCm	PetalWidthCm	Species
145	146	6.7	3.0	5.2	2.3	Iris-virginica
146	147	6.3	2.5	5.0	1.9	Iris-virginica
147	148	6.5	3.0	5.2	2.0	Iris-virginica
148	149	6.2	3.4	5.4	2.3	Iris-virginica
149	150	5.9	3.0	5.1	1.8	Iris-virginica

In [18]:

```
data.describe()
```

Out[18]:

	Id	SepalLengthCm	SepalWidthCm	PetalLengthCm	PetalWidthCm
count	150.000000	150.000000	150.000000	150.000000	150.000000
mean	75.500000	5.843333	3.054000	3.758667	1.198667
std	43.445368	0.828066	0.433594	1.764420	0.763161
min	1.000000	4.300000	2.000000	1.000000	0.100000
25%	38.250000	5.100000	2.800000	1.600000	0.300000
50%	75.500000	5.800000	3.000000	4.350000	1.300000
75%	112.750000	6.400000	3.300000	5.100000	1.800000
max	150.000000	7.900000	4.400000	6.900000	2.500000

In [19]:

```
data.shape
```

Out[19]:

(150, 6)

In [20]:

```
data.mean()
```

Out[20]:

```
Id          75.500000
SepalLengthCm  5.843333
SepalWidthCm  3.054000
PetalLengthCm  3.758667
PetalWidthCm  1.198667
dtype: float64
```

In [21]:

```
data.max()
```

Out[21]:

```
Id          150
SepalLengthCm  7.9
SepalWidthCm  4.4
PetalLengthCm  6.9
PetalWidthCm  2.5
Species      Iris-virginica
dtype: object
```

In [22]:

```
data.median()
```

Out[22]:

```
Id                75.50
SepalLengthCm     5.80
SepalWidthCm      3.00
PetalLengthCm     4.35
PetalWidthCm      1.30
dtype: float64
```

In [23]:

```
data.columns
```

Out[23]:

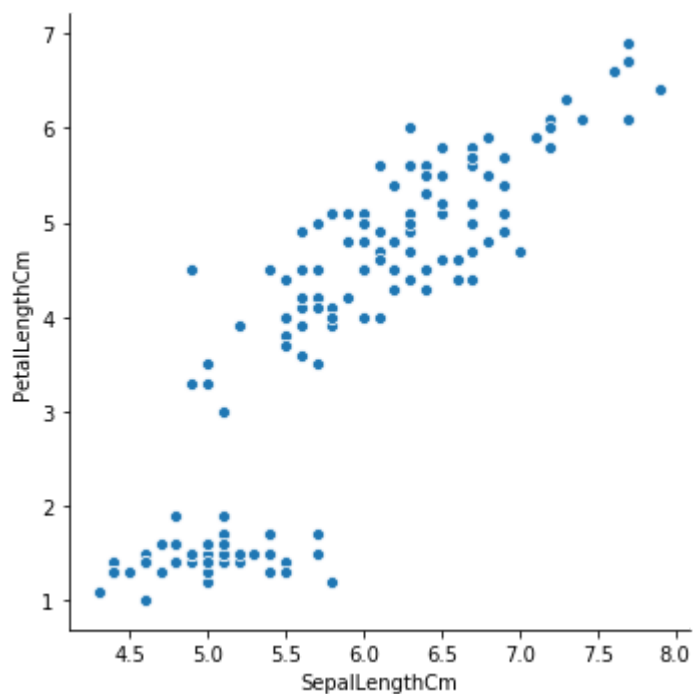
```
Index(['Id', 'SepalLengthCm', 'SepalWidthCm', 'PetalLengthCm', 'PetalWidthCm',
      'Species'],
      dtype='object')
```

In [24]:

```
sns.relplot(x="SepalLengthCm", y="PetalLengthCm", data=data)
```

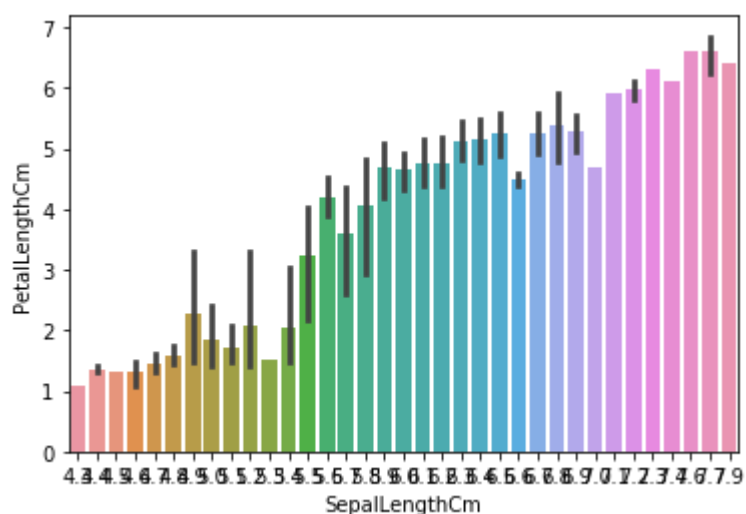
Out[24]:

<seaborn.axisgrid.FacetGrid at 0x1b733688348>



In [25]:

```
sns.barplot(x="SepalLengthCm", y="PetalLengthCm", data=data)
plt.show()
```



How To Create Subplot In Line plot..

In [32]:

```
import numpy as np
from matplotlib import pyplot as plt
```

In [33]:

```
x=np.arange(1,21)
```

In [34]:

```
y1=2*x
y2=3*x
```

In [35]:

```
y1
```

Out[35]:

```
array([ 2,  4,  6,  8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34,
        36, 38, 40])
```

In [36]:

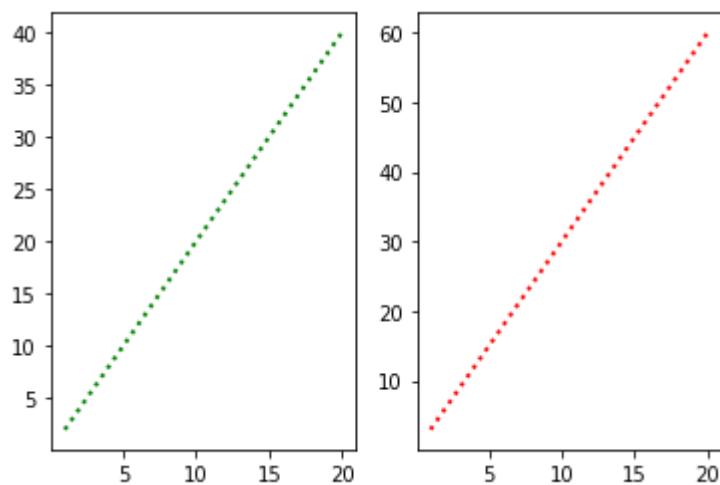
```
y2
```

Out[36]:

```
array([ 3,  6,  9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, 42, 45, 48, 51,
        54, 57, 60])
```

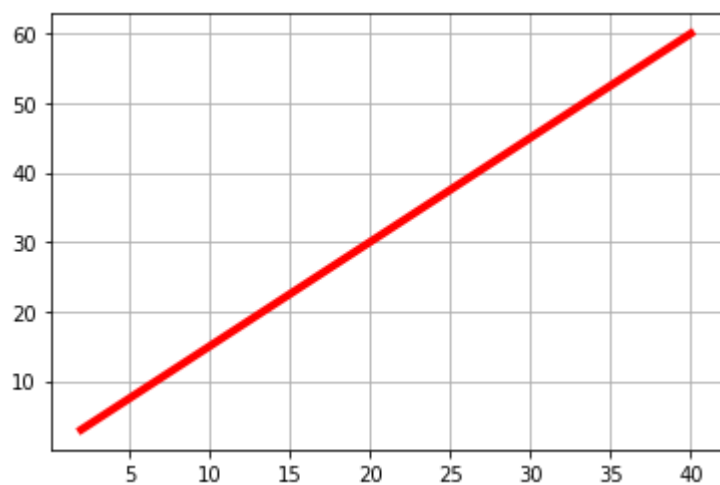
In [39]:

```
plt.subplot(1,2,1)
plt.plot(x, y1, color="g", linestyle=":", linewidth=2)
plt.subplot(1,2,2)
plt.plot(x, y2, color="r", linestyle=":", linewidth=2)
plt.show()
```



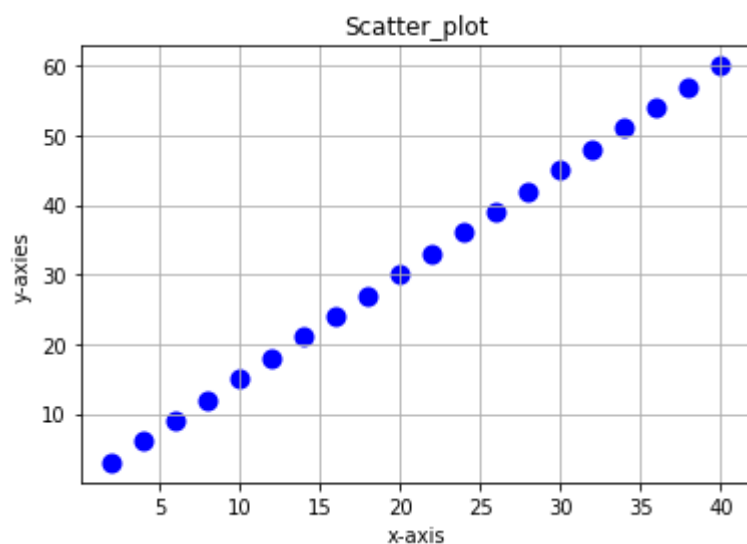
In [44]:

```
plt.plot(y1,y2, color="r", linewidth=4, linestyle="-")
plt.grid(True)
plt.show()
```



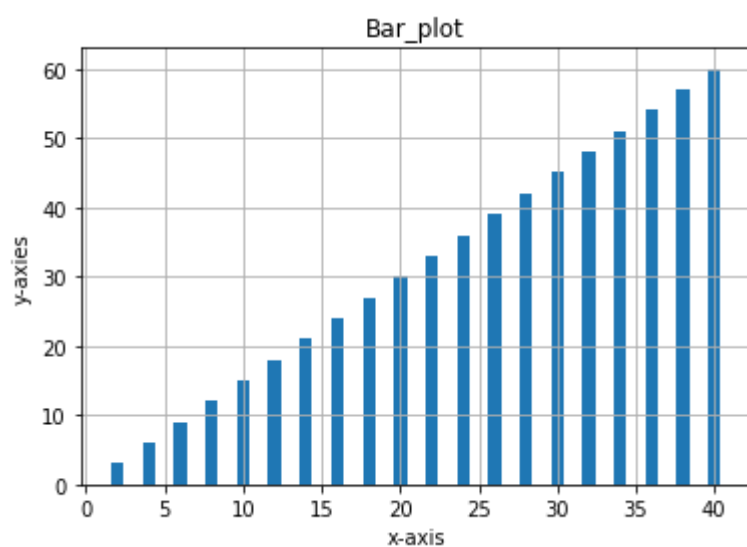
In [52]:

```
plt.scatter(y1,y2, color="b", linewidth=4, linestyle="-")  
plt.title("Scatter_plot")  
plt.xlabel("x-axis")  
plt.ylabel("y-axis")  
plt.grid(True)  
plt.show()
```



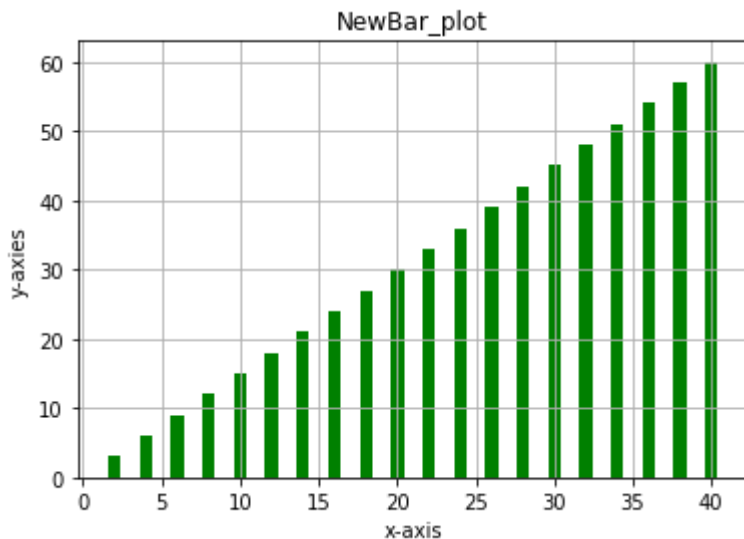
In [58]:

```
plt.bar(y1,y2)  
plt.title("Bar_plot")  
plt.xlabel("x-axis")  
plt.ylabel("y-axis")  
plt.grid(True)  
plt.show()  
plt.show()
```



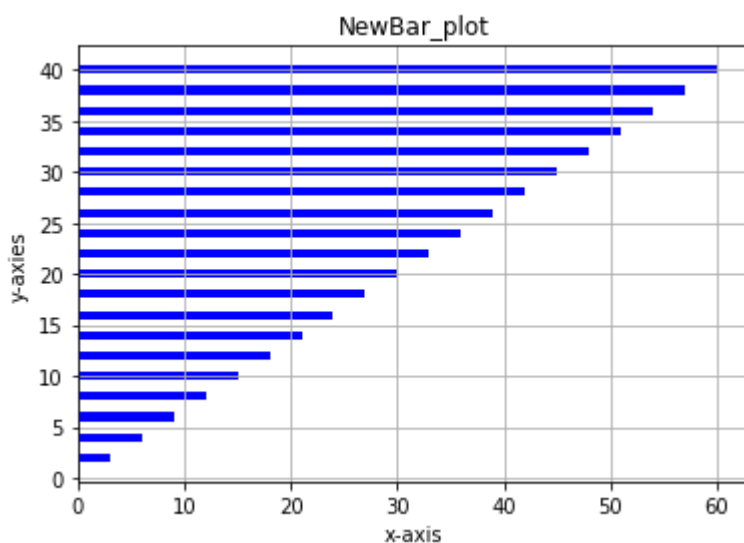
In [57]:

```
plt.bar(y1,y2, color="g")
plt.title("NewBar_plot")
plt.xlabel("x-axis")
plt.ylabel("y-axies")
plt.grid(True)
plt.show()
plt.show()
```



In [61]:

```
plt.barh(y1,y2, color="b")
plt.title("NewBar_plot")
plt.xlabel("x-axis")
plt.ylabel("y-axies")
plt.grid(True)
plt.show()
plt.show()
```

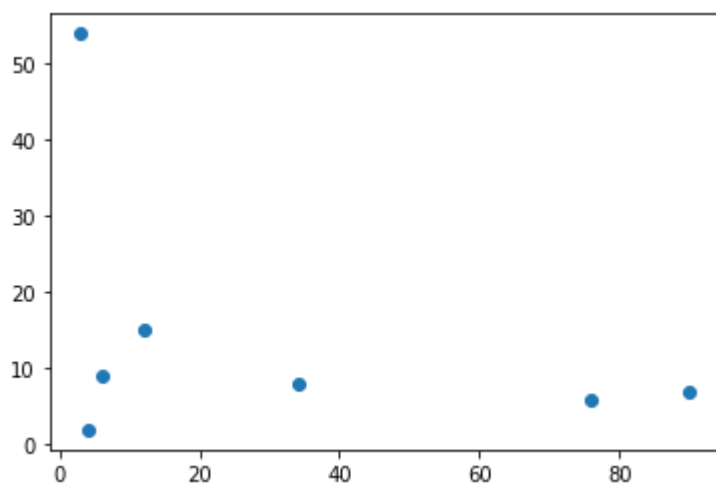


In [68]:

```
x=[12,34,6,4,90,76,3]
y=[15,8,9,2,7,6,54]
```

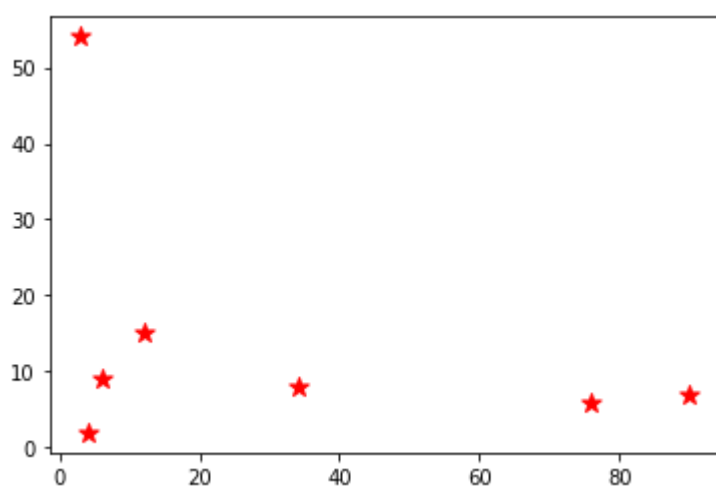
In [70]:

```
plt.scatter(x,y)  
plt.show()
```



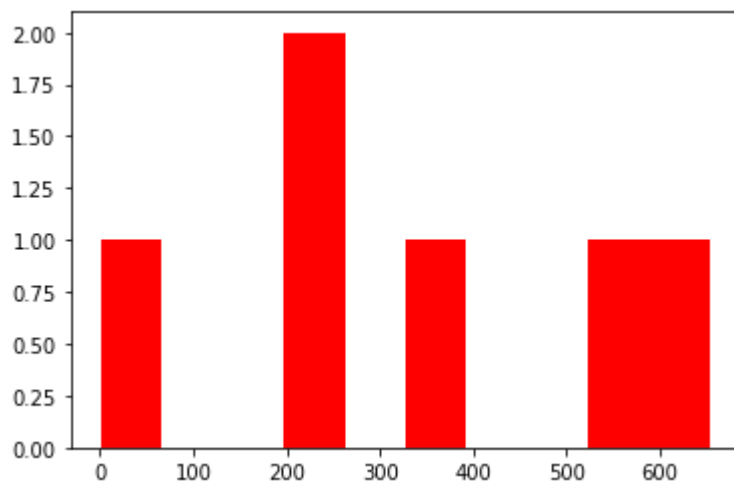
In [74]:

```
plt.scatter(x,y, marker="*", c="r", s=100)  
plt.show()
```



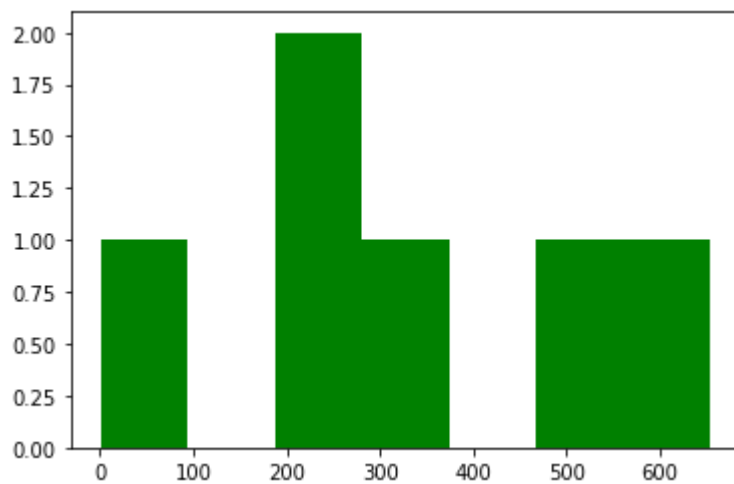
In [77]:

```
data=[1,234,554,654,332,243]  
plt.hist(data, color="r")  
plt.show()
```



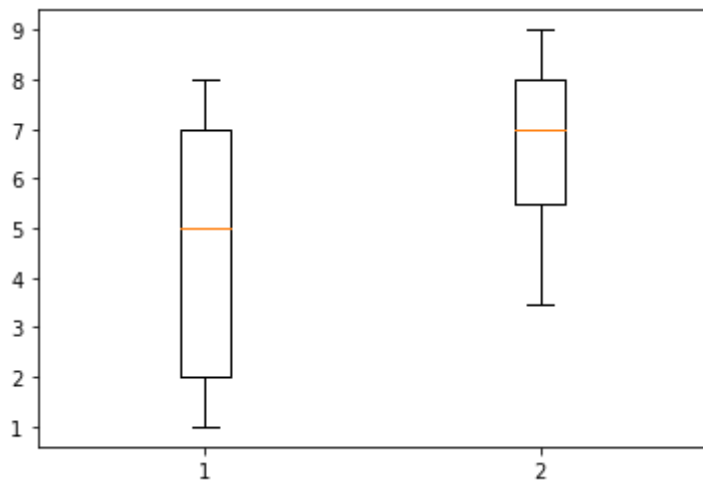
In [82]:

```
plt.hist(data, color="g", bins=7)  
plt.show()
```



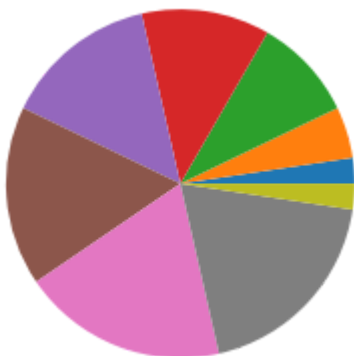
In [90]:

```
one=[1,2,4,5,6,7,8,8,1]
two=[3.45,5,6,7,8,9,8]
data=list([one,two])
plt.boxplot(data)
plt.show()
```



In [93]:

```
plt.pie(one)
plt.show()
```



In []: