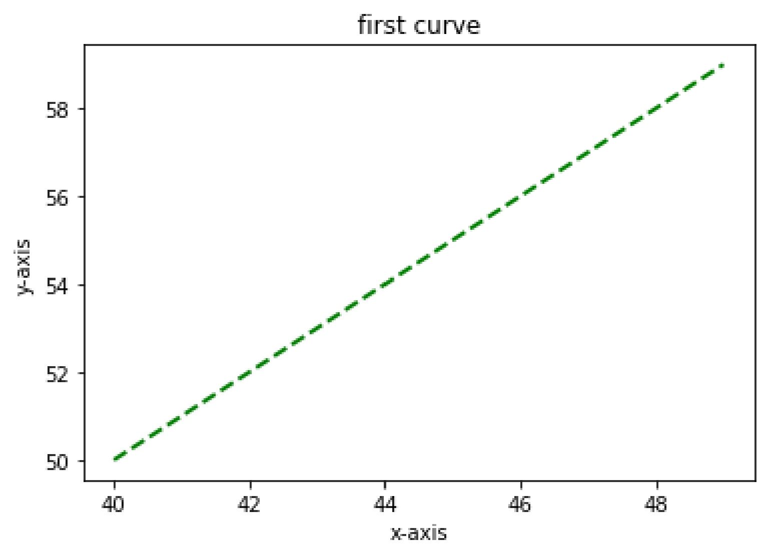
In [4]:
```
#Assignment 1 | 5th July 2021
```

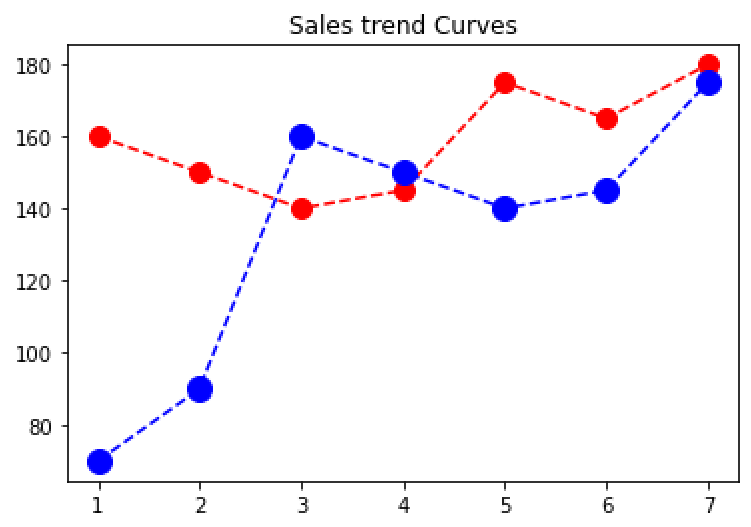
In [1]:
```
import numpy as np
import pandas as pd
import seaborn as sns

import matplotlib as mpl
import matplotlib.pyplot as plt
%matplotlib inline
```

In [2]:
```
#Question 1
#plot a line plot between a and b:
a=np.arange(40,50)
b=np.arange(50,60)
plt.title('first curve')
plt.xlabel('x-axis')
plt.ylabel('y-axis')
plt.plot(a,b,linestyle='dashed',linewidth=2,color='green')
plt.show()
```



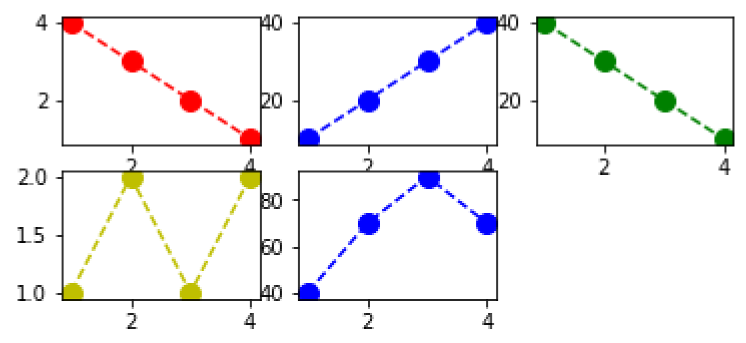
In [3]:
```
#Question 2
#Plot a line plot showing the sales trend in company 1 and 2:

days = [1,2,3,4,5,6,7] #days of d week
sales_1 = [160,150,140,145,175,165,180] #sales of company1
sales_2 = [70,90,160,150,140,145,175]  #sales of company2

plt.title('Sales trend Curves')

plt.plot(days,sales_1,'ro--',markersize=10)

plt.plot(days,sales_2,'bo--',markersize=12)
```

Out[3]: [<matplotlib.lines.Line2D at 0x1b1f180aee0>]



In [4]:
```
#Question 3
# Create a 3 by 3 subplots:
#multiple plots
x = [1,2,3,4]
y1 = [4,3,2,1]
y2 = [10,20,30,40]
y3 = [40,30,20,10]
y4 = [1,2,1,2]
y5 = [40,70,90,70]
plt.subplot(3,3,1)
plt.plot(x,y1,'ro--',markersize=10)
plt.subplot(3,3,2)
plt.plot(x,y2,'bo--',markersize=10)
plt.subplot(3,3,3)
plt.plot(x,y3,'go--',markersize=10)
plt.subplot(3,3,4)
plt.plot(x,y4,'yo--',markersize=10)
plt.subplot(3,3,5)
plt.plot(x,y5,'bo--',markersize=10)
```

Out[4]: [<matplotlib.lines.Line2D at 0x1b1f193f820>]

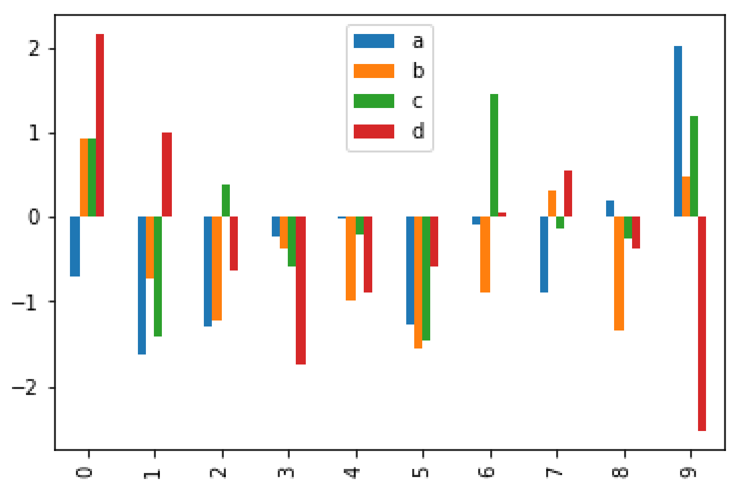


In [5]:
```
from numpy.random import randn,randint,uniform,sample
```

In [6]:
```
df = pd.DataFrame(randn(10,4),columns = ['a','b','c','d'])
```

In [9]:
```
 df.plot(kind = 'bar')
```

Out[9]: <matplotlib.axes._subplots.AxesSubplot at 0x1b1f1c7c220>



In [10]:
```
tips = sns.load_dataset('tips')
```

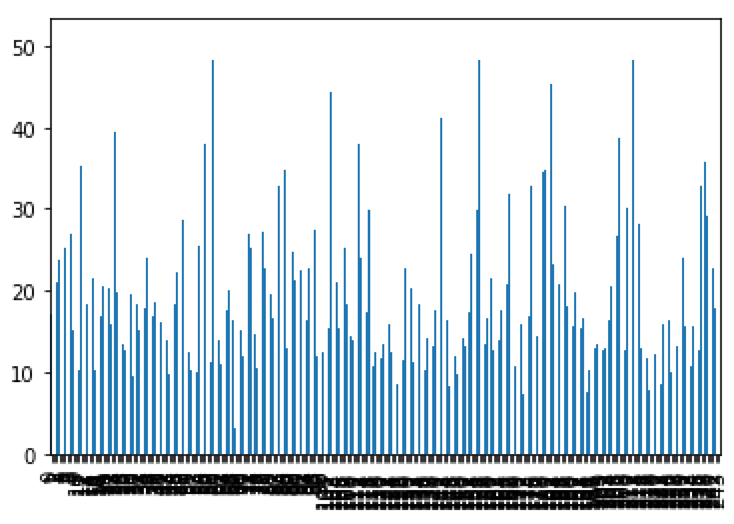
In [13]:
```
tips.head(5)
```

Out[13]:

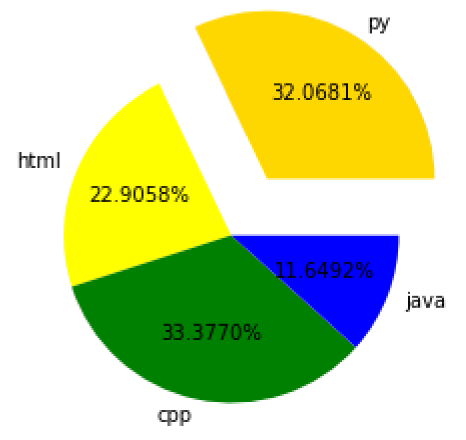
	total_bill	tip	sex	smoker	day	time	size
0	16.99	1.01	Female	No	Sun	Dinner	2
1	10.34	1.66	Male	No	Sun	Dinner	3
2	21.01	3.50	Male	No	Sun	Dinner	3
3	23.68	3.31	Male	No	Sun	Dinner	2
4	24.59	3.61	Female	No	Sun	Dinner	4

In [14]:
```
tips['total_bill'].plot(kind='bar')
```

Out[14]: <matplotlib.axes._subplots.AxesSubplot at 0x1b1f1d9f160>



In [15]:
```
labels= 'py','html','cpp','java'
sizes = [245,175,255,89]
colors= ['gold','yellow','green','blue']
explode = (0.4,0,0,0) #explode 1st slice

#plot
plt.pie(sizes,explode = explode,labels = labels,colors = colors,
autopct='%1.4f%%',shadow = False)
plt.axis('equal')
plt.show()
```



In [ ]: