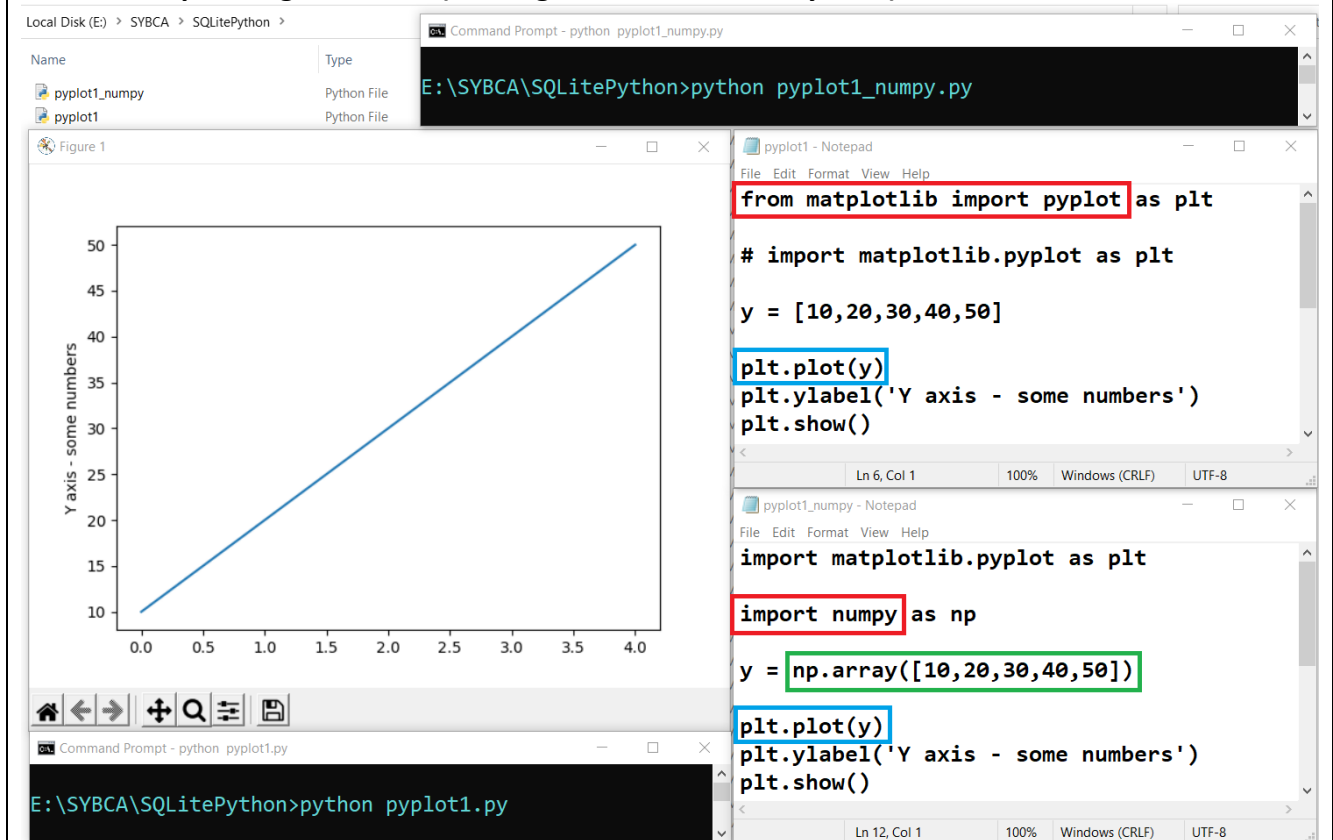
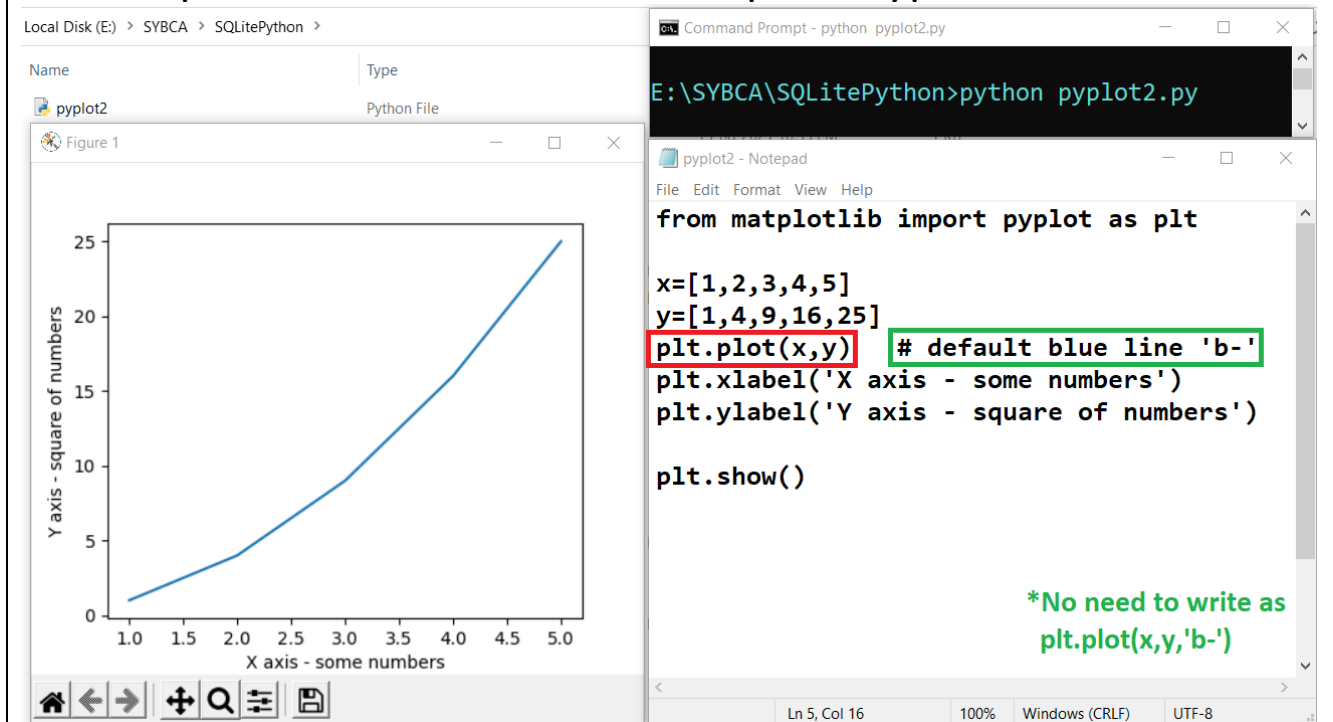


Practical Concepts : PART – 4

Q-1 How to plot single list data (Or single dimensional array data) ?



Q-2 How to plot two dimensional data ? Or How to plot x and y points ?



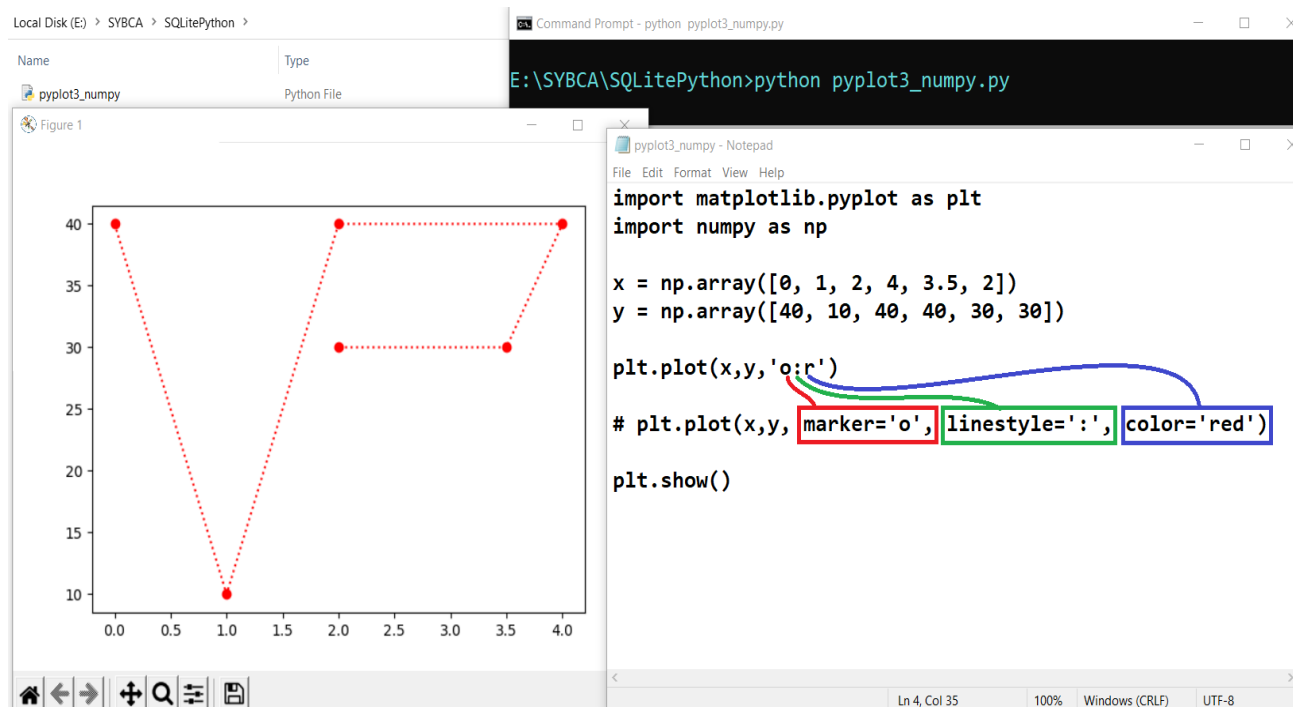
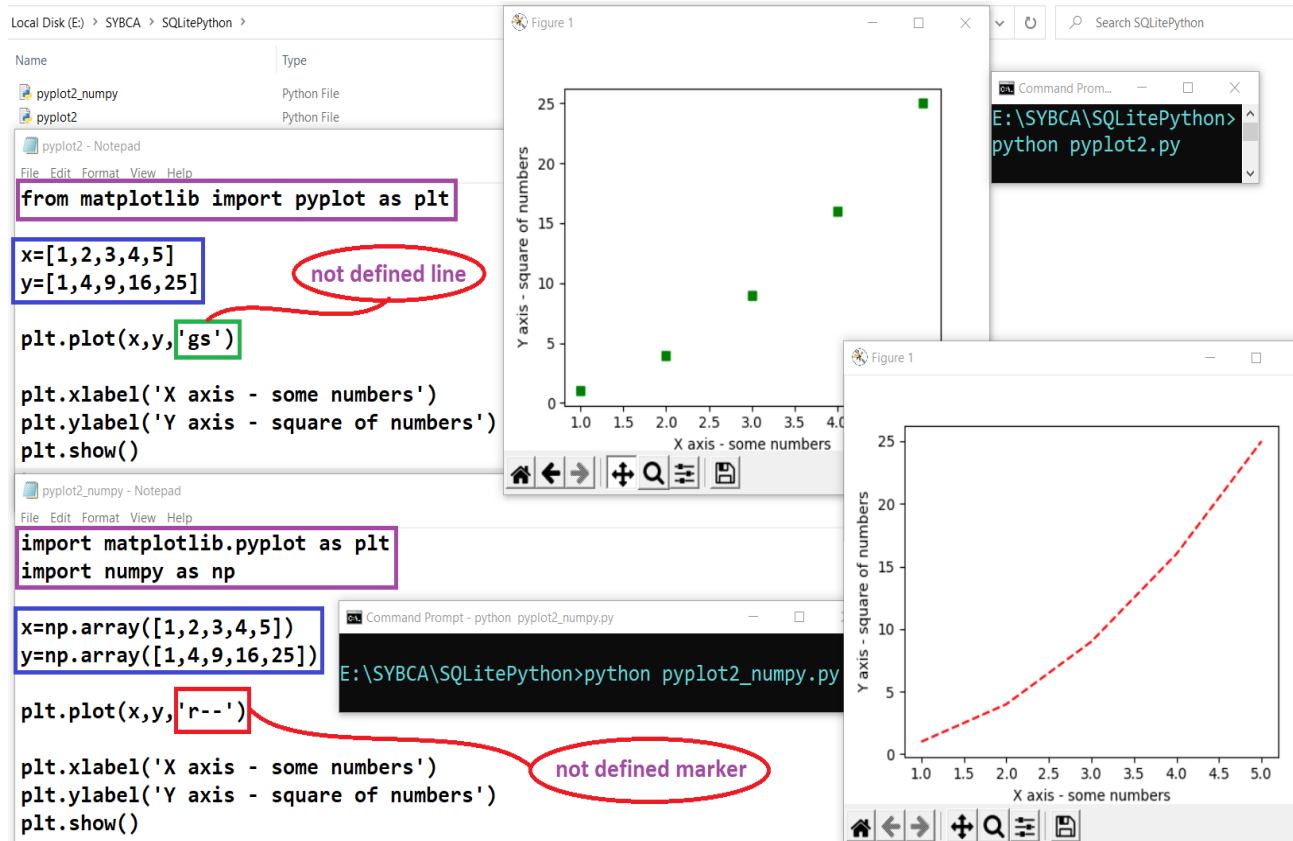
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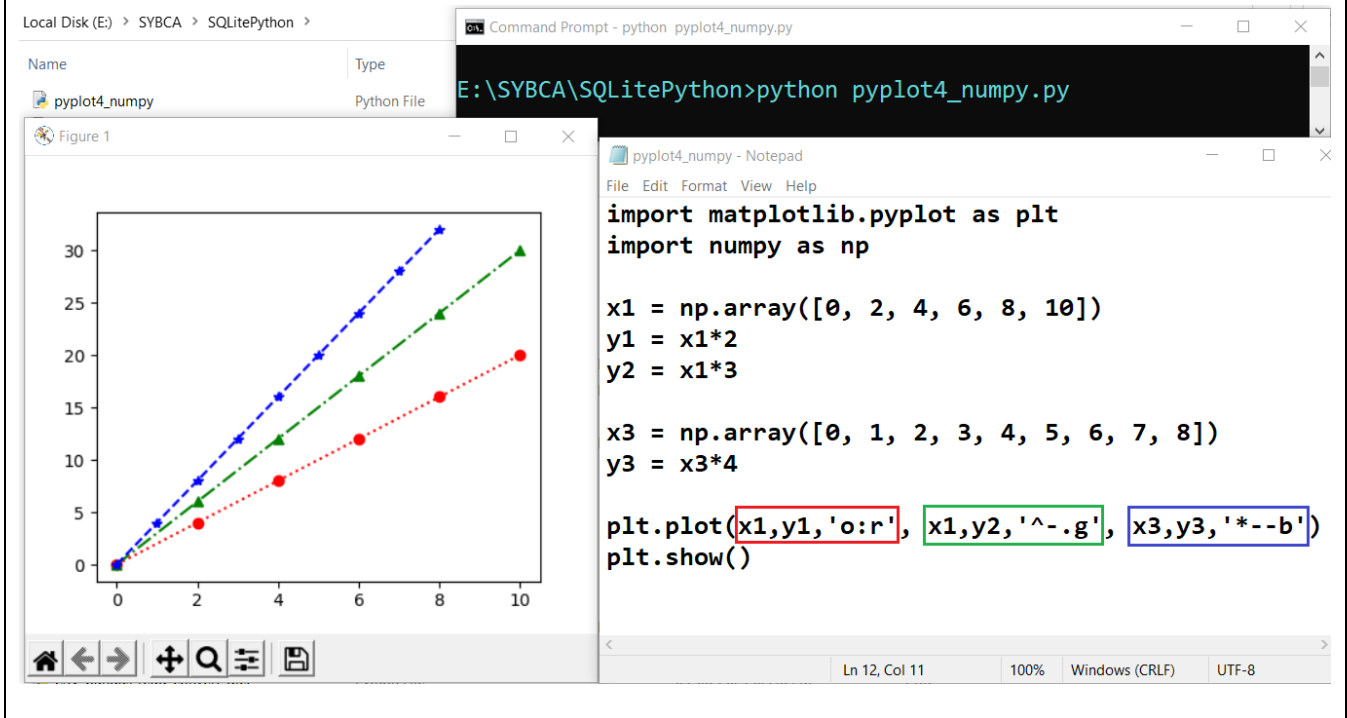
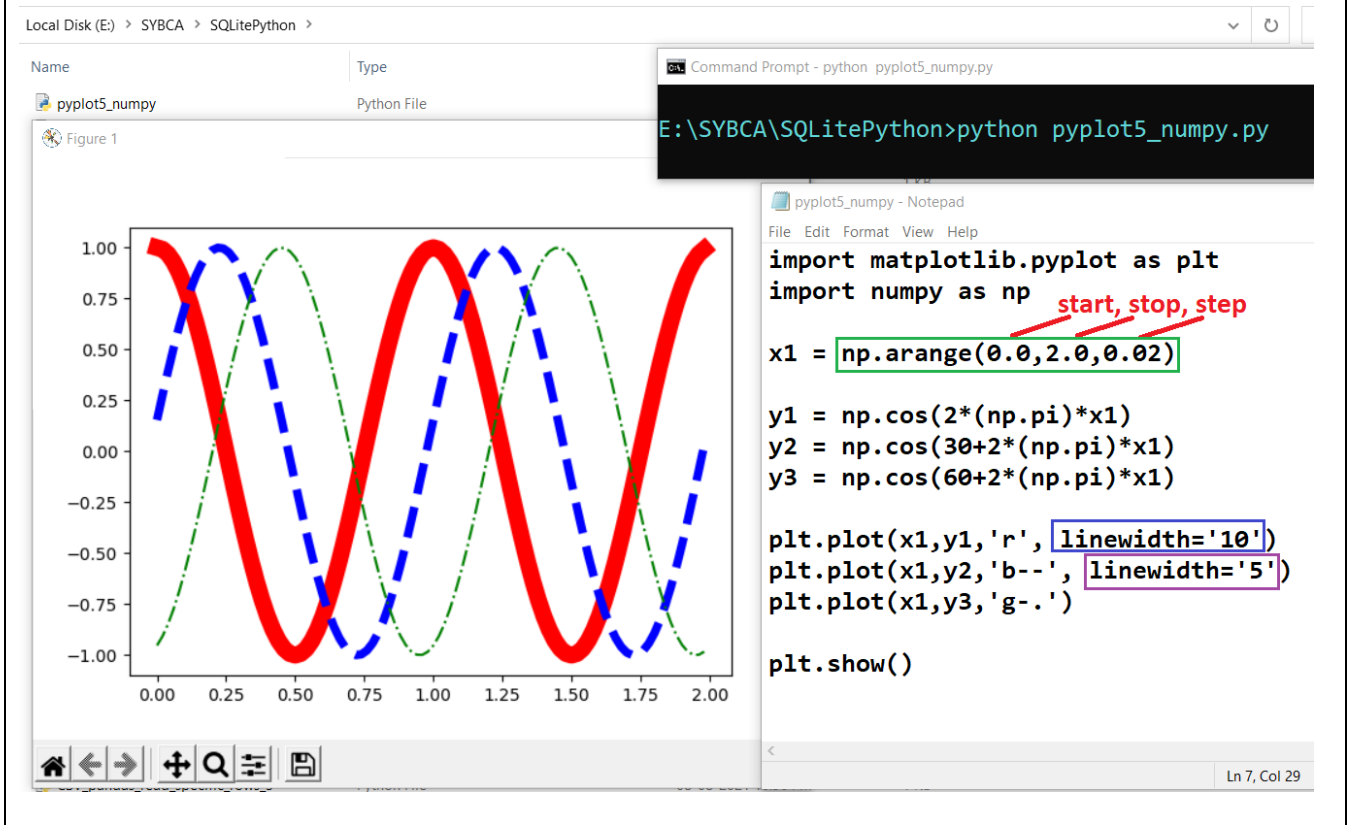
Q-3 How use marker|line|color concept in plot ?

Marker → Circle('o') Star('*') Plus('P','+') pentagon ('p') Square('s') Diamond('D' , 'd') Hexagon('H' , 'h') Triangle('^' , 'v' , '<' , '>') ...

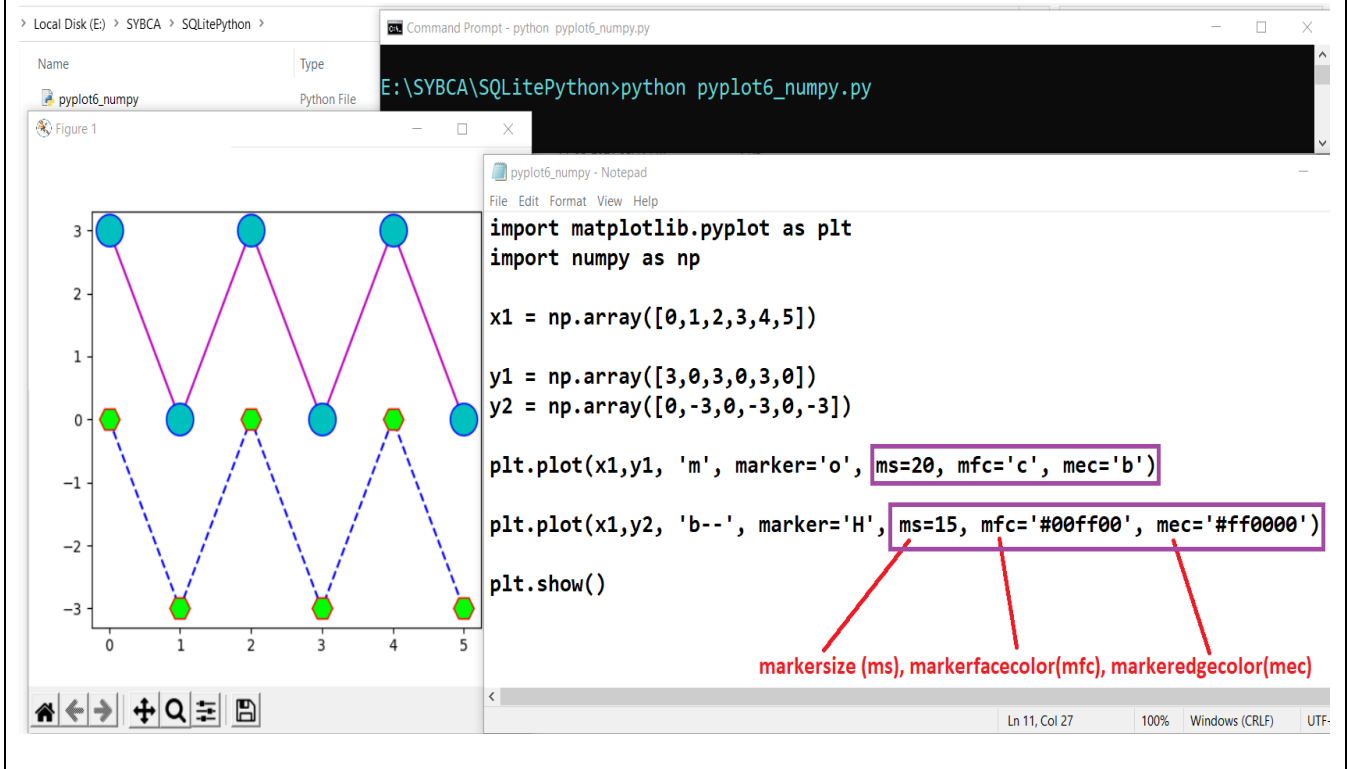
Line → solid line('-') Dotted line('.') Dashed line('--') DashedDotted line('-.-')

Color → Blue('b') Green('g') Red('r') Cyan('c') Magenta('m') Yellow('y') Black('b') White('w')

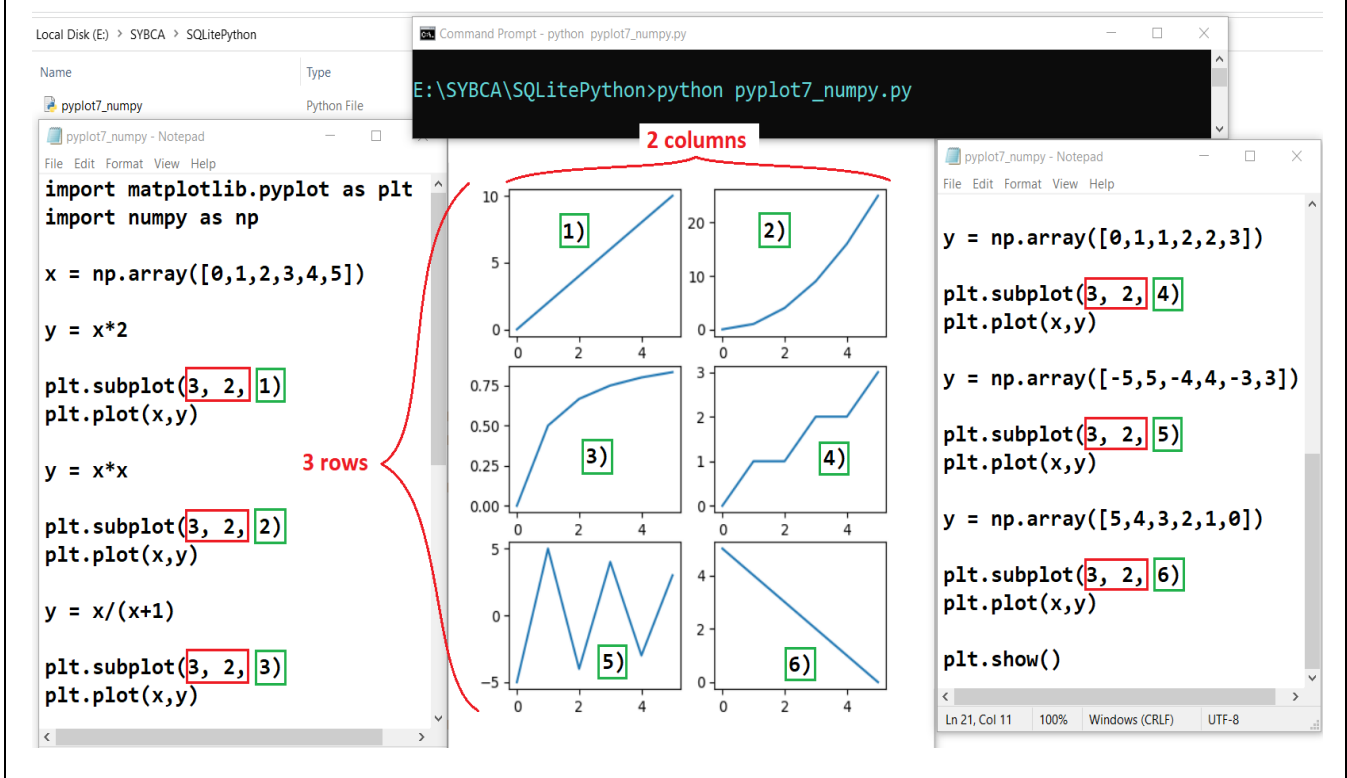


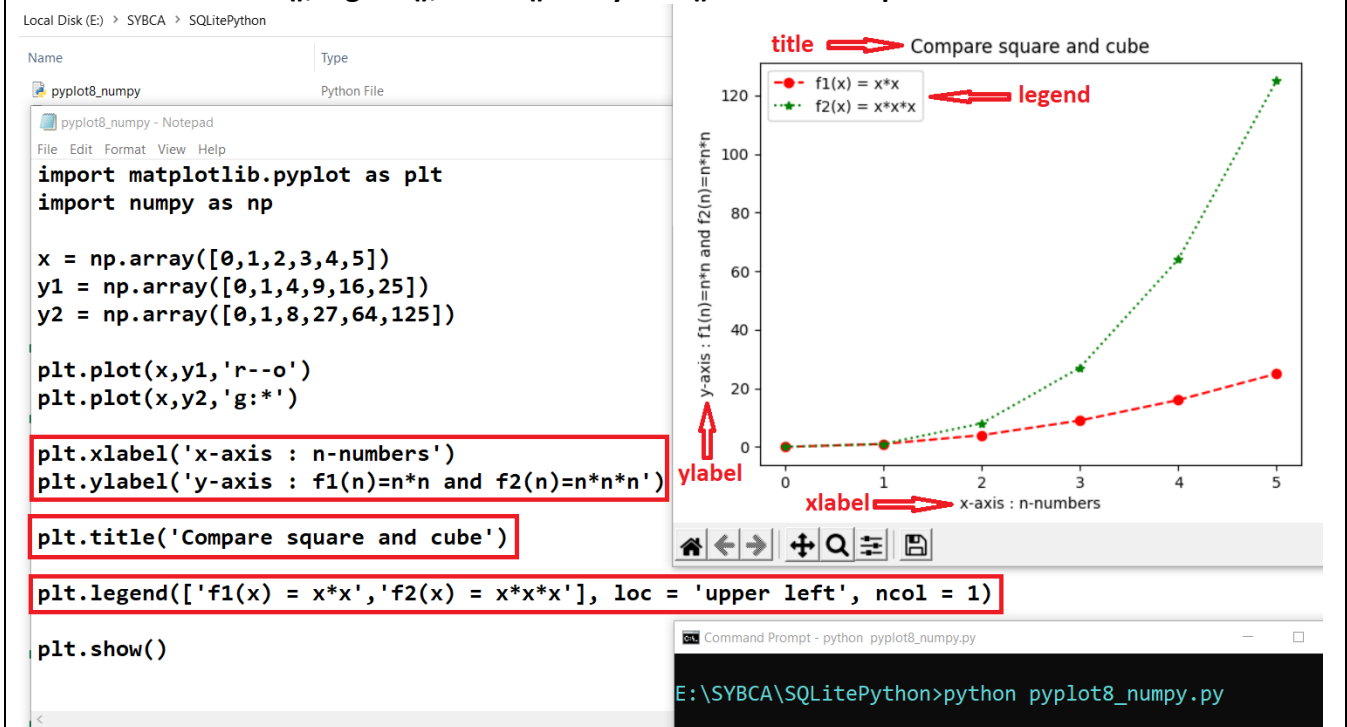
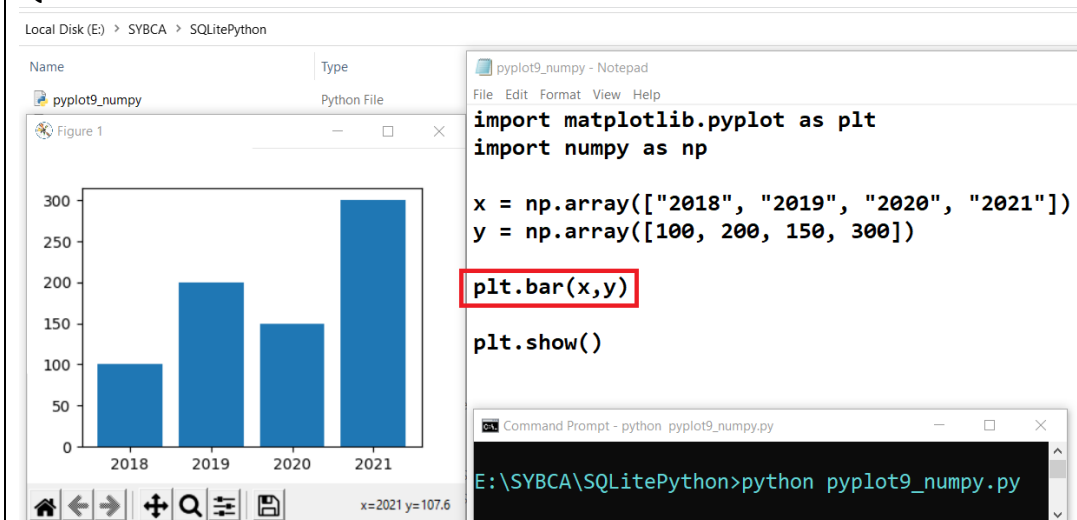
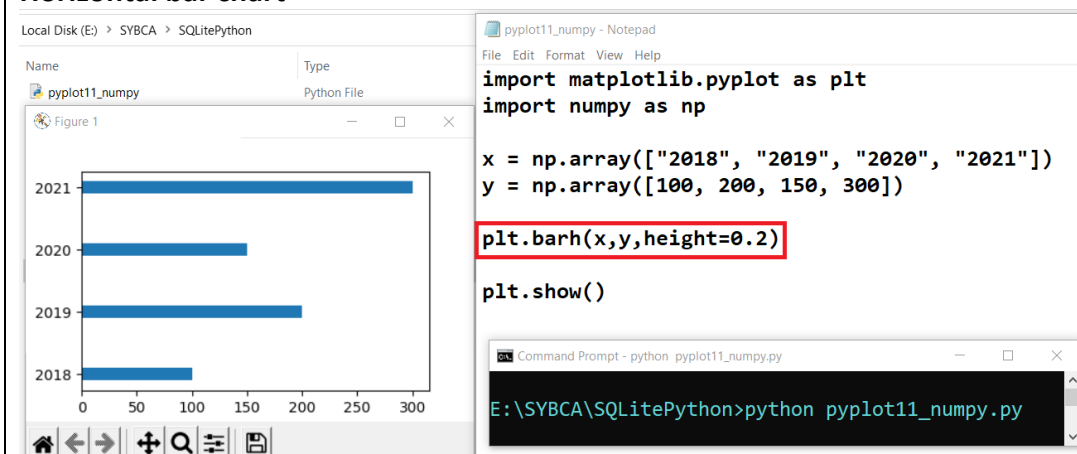
Q-4 How plot several lines with different format styles ?**Q-5 How use arange() function ? How to change width of line ?**

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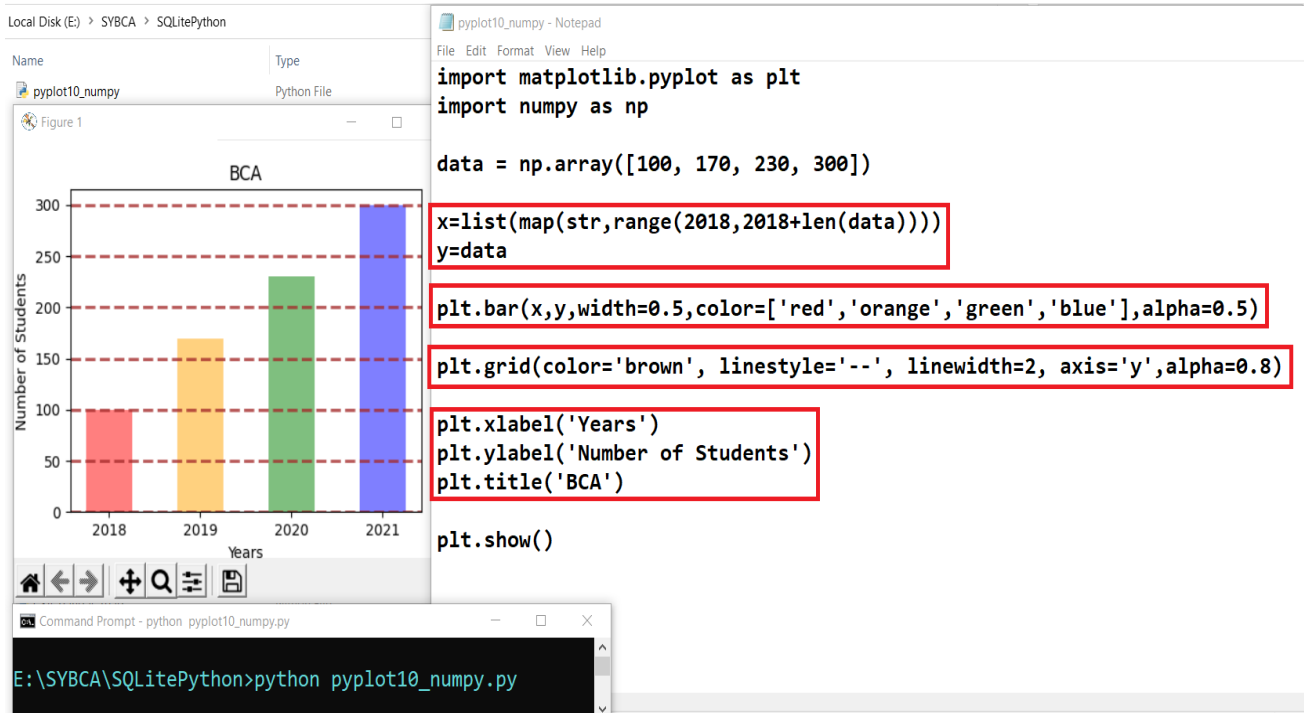
Q-6 How to use markersize (ms), markerfacecolor(mfc), markeredgecolor(mec) concept in plot ?

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Q-7 How to use subplot() function ?

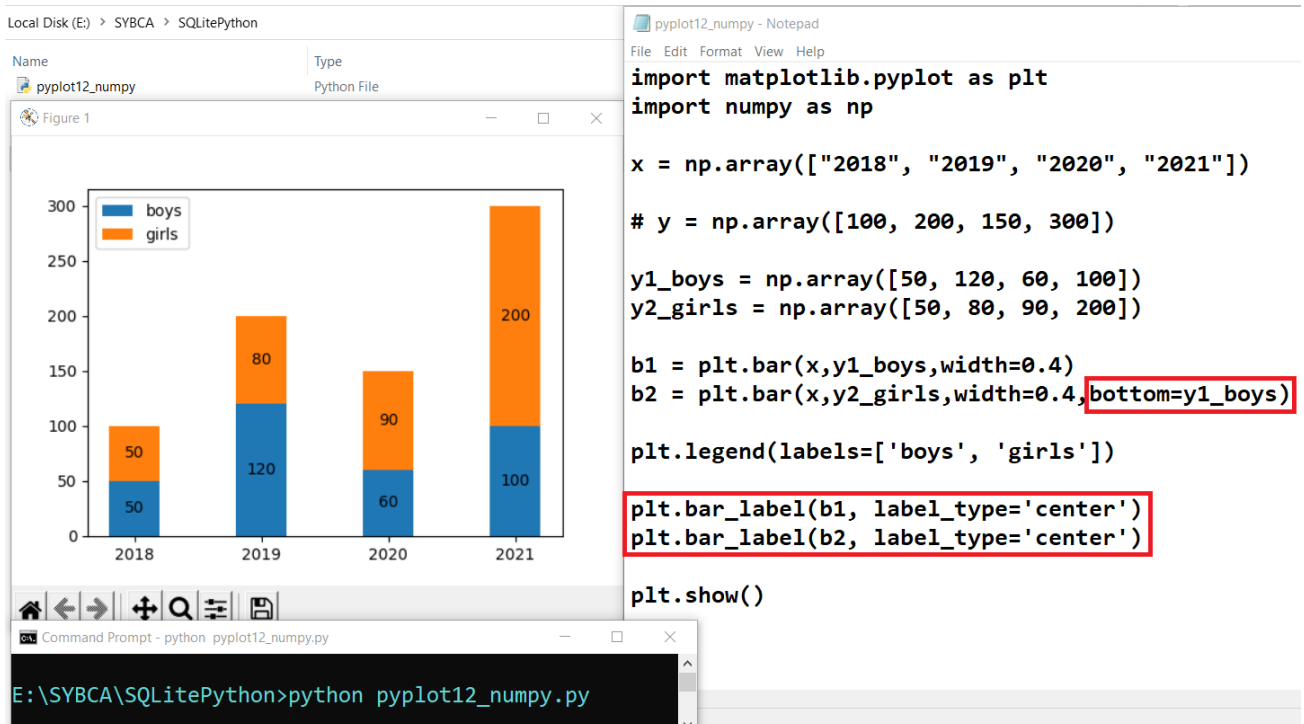
Q-8 How to use title(), legend(), xlabel() and ylabel() functions in plot ?**Q-9 How to make bar chart ?****Horizontal bar chart**

Grid lines in bar chart



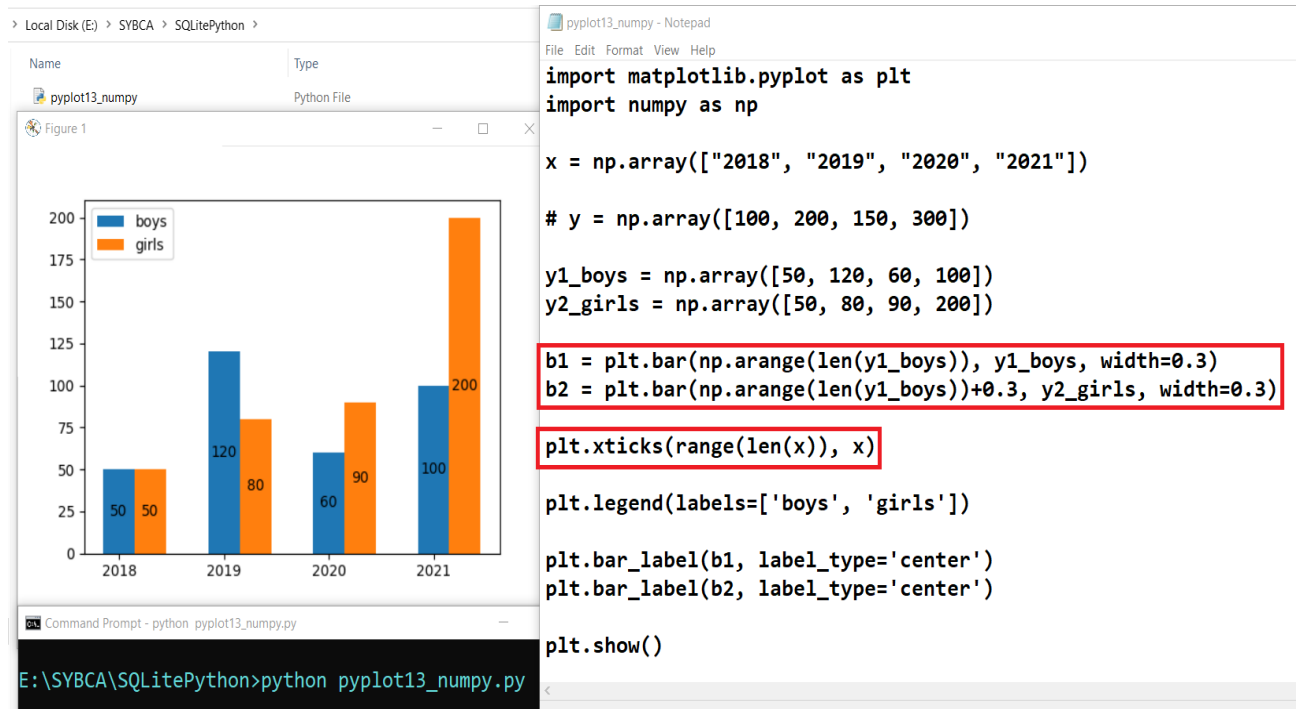
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Stack bar charts



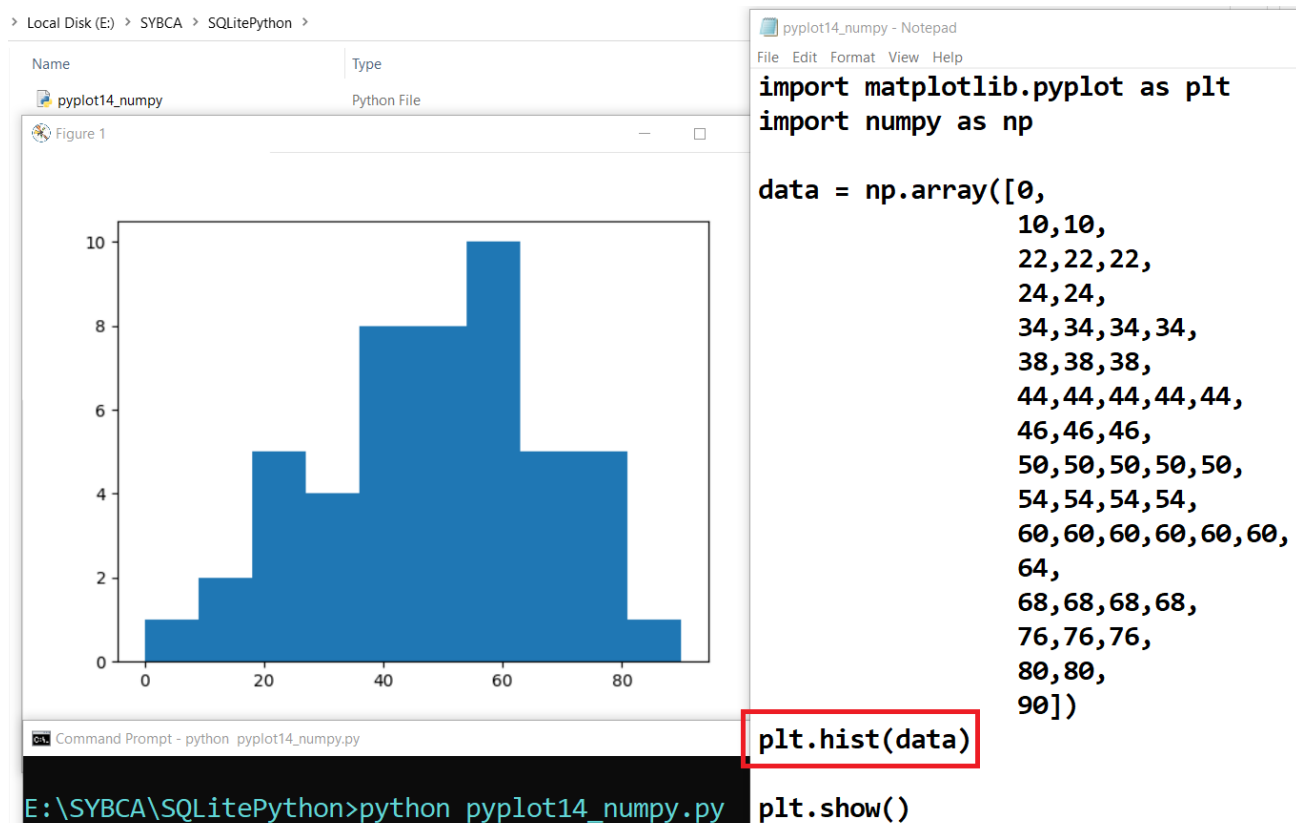
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Multiple bar charts



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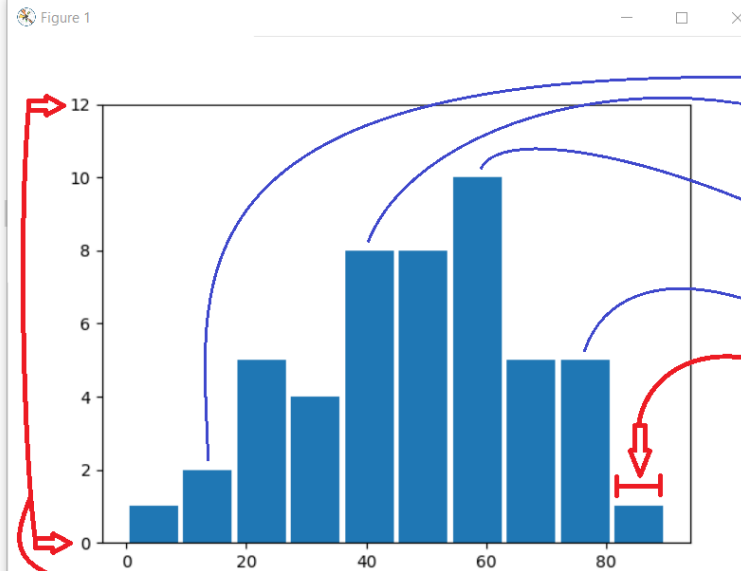
Q-10 How to make histogram chart ?



Use rwidth and ylim()

Local Disk (E:) > SYBCA > SQLitePython

Name Type
pyplot15_numpy Python File



Command Prompt - python pyplot15_numpy.py

E:\SYBCA\SQLitePython>python pyplot15_numpy.py

pyplot15_numpy - Notepad

File Edit Format View Help

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

```
data = np.array([0,
10,10,
22,22,22,
24,24,
34,34,34,34,
38,38,38,
44,44,44,44,44,
46,46,46,
50,50,50,50,50,
54,54,54,54,
60,60,60,60,60,60,
64,
68,68,68,68,
76,76,76,
80,80,
90])
```

```
plt.hist(data,rwidth=0.9)
```

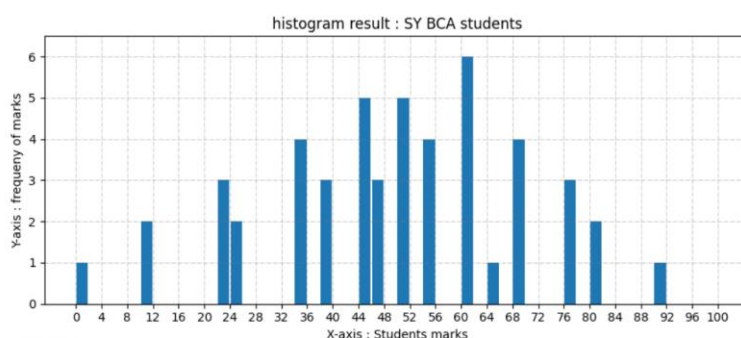
```
plt.ylim(0,12)
```

```
plt.show()
```

Use bins, grid(), xticks, xlabel, ylabel, range(), ylim

This PC > Local Disk (E:) > SYBCA > SQLitePython

Name Type
pyplot16_numpy Python File



Command Prompt - python pyplot16_numpy.py

E:\SYBCA\SQLitePython>python pyplot16_numpy.py

pyplot16_numpy - Notepad

File Edit Format View Help

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

```
data = np.array([
0,10,10,22,22,22,24,24,34,34,34,34,38,38,38,
44,44,44,44,44,46,46,46,50,50,50,50,50,54,54,54,54,
60,60,60,60,60,60,64,68,68,68,68,76,76,76,80,80,90])
```

```
plt.hist(data, rwidth=0.9, bins=range(0,101,2))
```

```
plt.ylim(0,6.5)
```

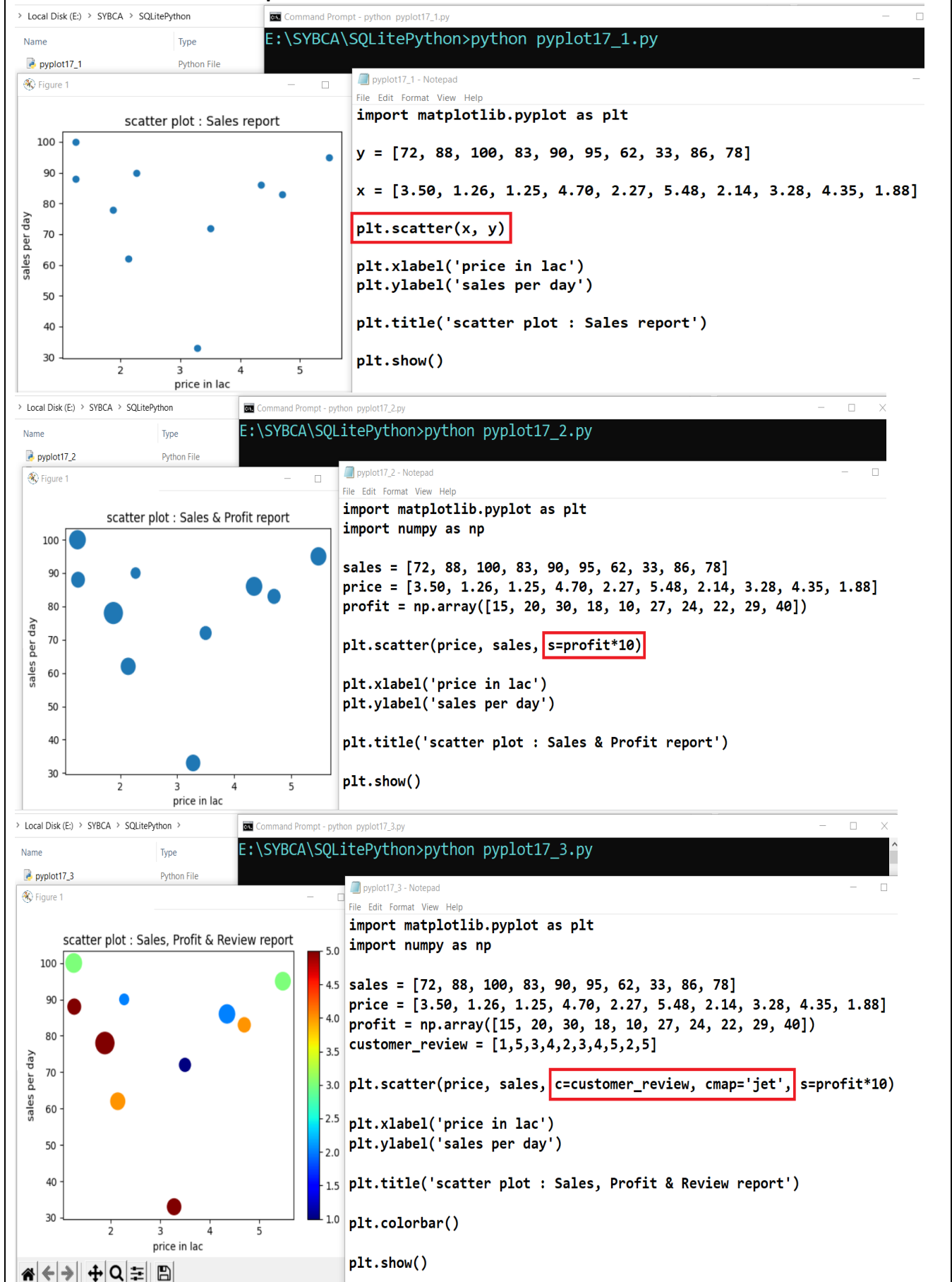
```
plt.grid(b = True,
color = 'grey',
linestyle = '-.-',
linewidth = 0.5,
alpha = 0.6)
```

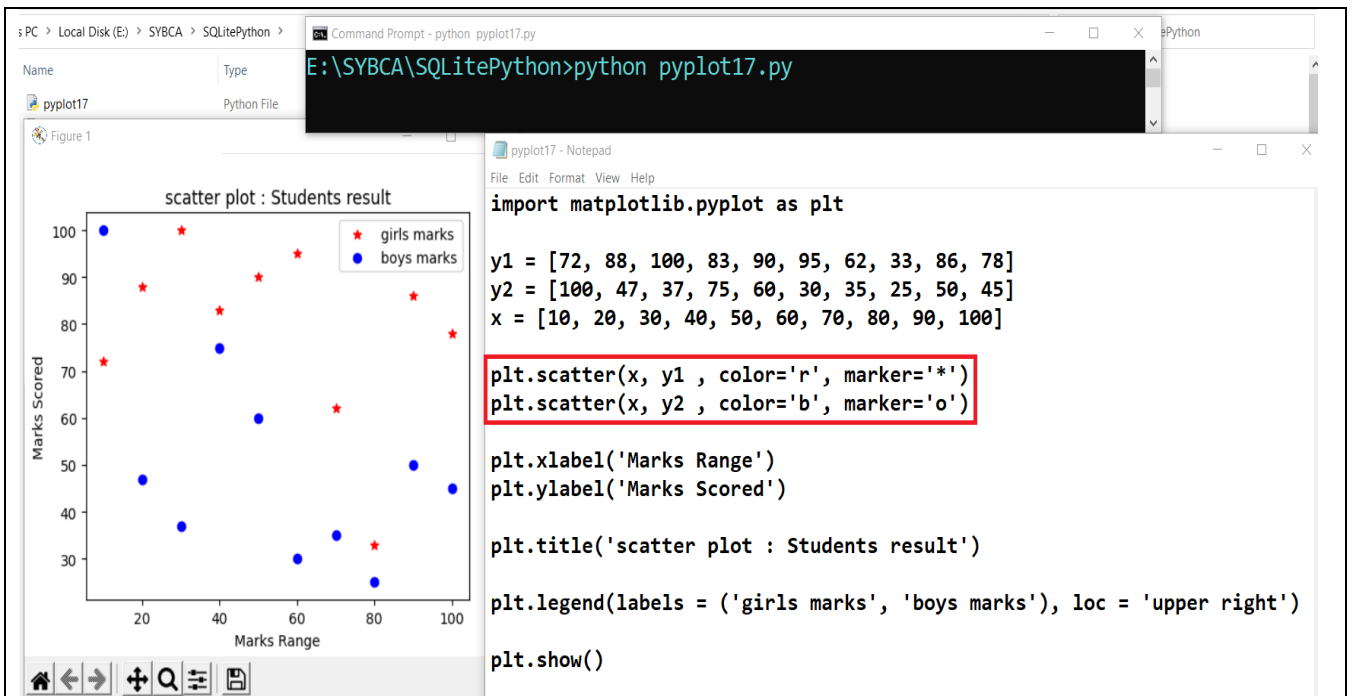
```
plt.title("histogram result : SY BCA students")
```

```
plt.xticks(range(0,101,4))
```

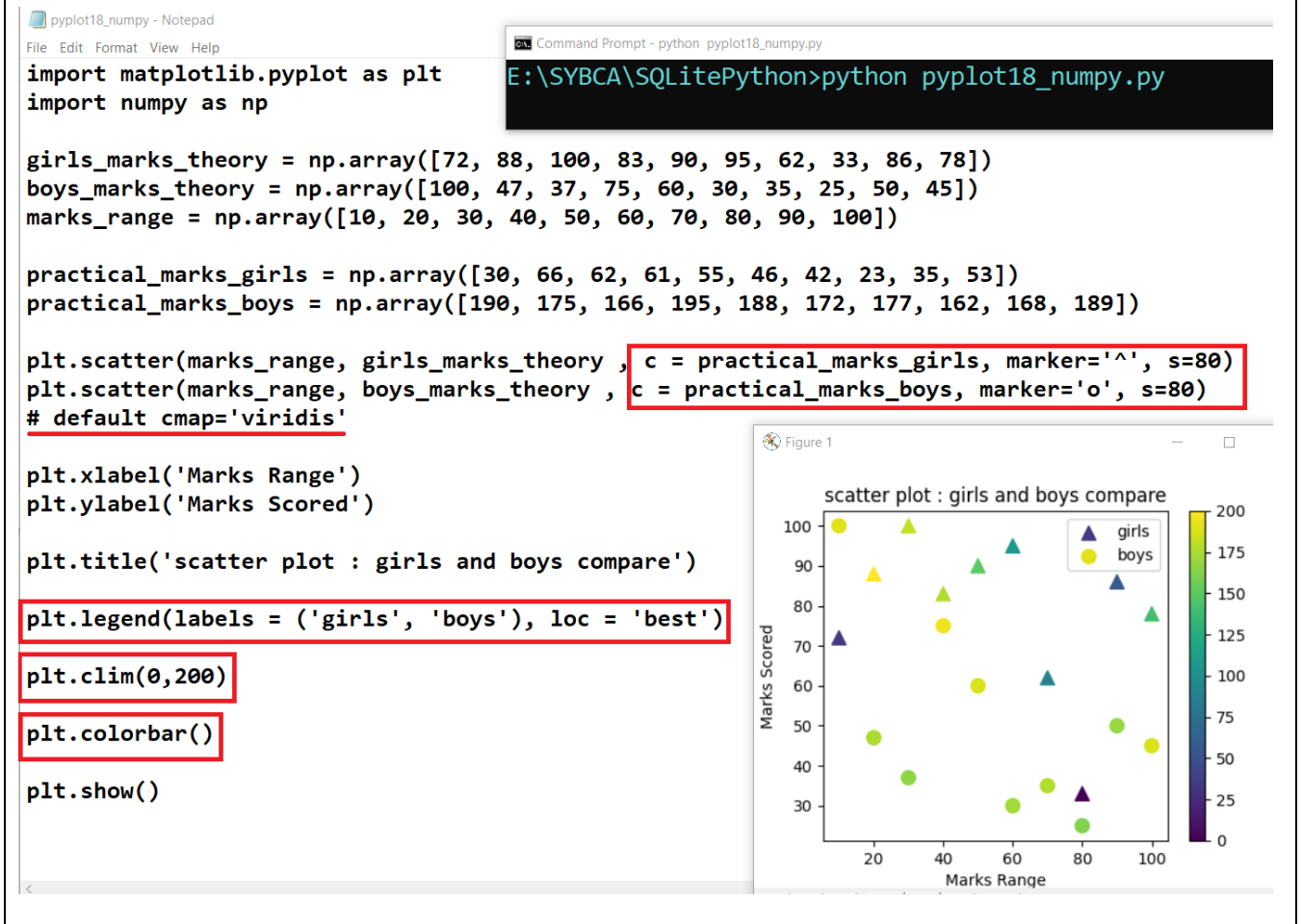
```
plt.xlabel('X-axis : Students marks')
plt.ylabel('Y-axis : frequency of marks')
plt.show()
```

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Q-11 How to make scatter plot ?



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