2140232_practical_python

July 19, 2022

2140232

Joel Varghese

[ ]:
```
# display current date
#1
import datetime

print(datetime.date.today())
```

```
2022-07-19
```

[ ]:
```
# 2. Access users first and last name
f = input("enter the first name : ")
b = input("enter the last name : ")

print("Hello, ",f,b)
```

```
enter the first name : Joel
enter the last name : Varghese
Hello,  Joel Varghese
```

[ ]:
```
# 3. Accept a number and check if it is odd or even
o = int(input("Enter a number : "))

if o%2 == 0:
    print(o, "is an even number")
else:
    print(o, "is an odd number")
```

```
Enter a number : 67
67 is an odd number
```

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# 4. Enter a number, reverse it, also check if it is a palindrom
h = int(input("Enter a number : "))
k = h
s = 0
while h>0:
    j = h%10
```

```
    s = j + s*10
    h = h//10

print("The number in reverse is : " ,s)

if s == k:
    print("The number is the same in reverse")
else:
    print("not the same as original")
```

```
Enter a number : 89098
The number in reverse is :  89098
The number is the same in reverse
```

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# 5. Divide 2 numbers if denominator is not zero
n = int(input("Enter the numerator : "))
d = int(input("Enter the denominator: "))

if d == 0:
    print("the denominator is zero, therefore not defined")
else:
    print("the solution is : ", n/d)
```

```
Enter the numerator : 34
Enter the denominator: 2
the solution is :  17.0
```

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# 6. identify the largest of three numbers

x,y,z = (input("Enter 3 numbers : ")).split(",")

print("largest of the three numbers is : ", max([x,y,z]))
```

```
Enter 3 numbers : 12,99,32
largest of the three numbers is :  99
```

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#7. Plot a scatter plot in 2D, 3D and subplot with four 2D plots

import matplotlib.pyplot as plt
import numpy as np

x = np.random.randint(80, size =(50))
y = np.random.randint(60, size =(50))

fig, axs = plt.subplots(2, 2)
axs[0, 0].plot(x, y)
axs[0, 0].set_title('Axis [0, 0]')
```
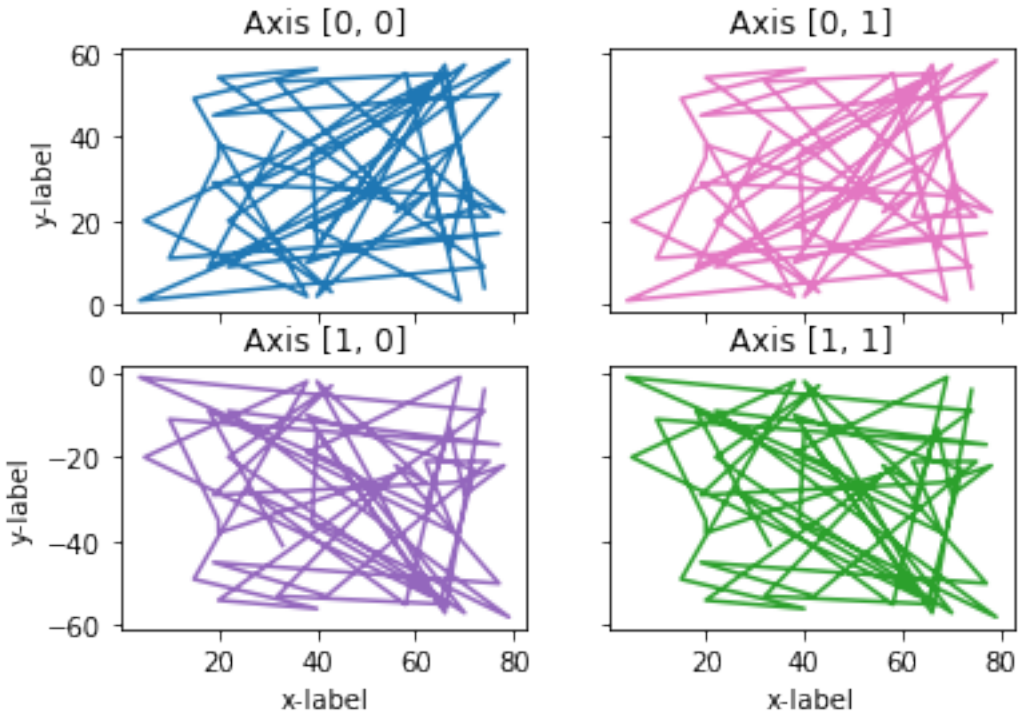

```
axs[0, 1].plot(x, y, 'tab:pink')
axs[0, 1].set_title('Axis [0, 1]')
axs[1, 0].plot(x, -y, 'tab:purple')
axs[1, 0].set_title('Axis [1, 0]')
axs[1, 1].plot(x, -y, 'tab:green')
axs[1, 1].set_title('Axis [1, 1]')

for ax in axs.flat:
    ax.set(xlabel='x-label', ylabel='y-label')

for ax in axs.flat:
    ax.label_outer()
```



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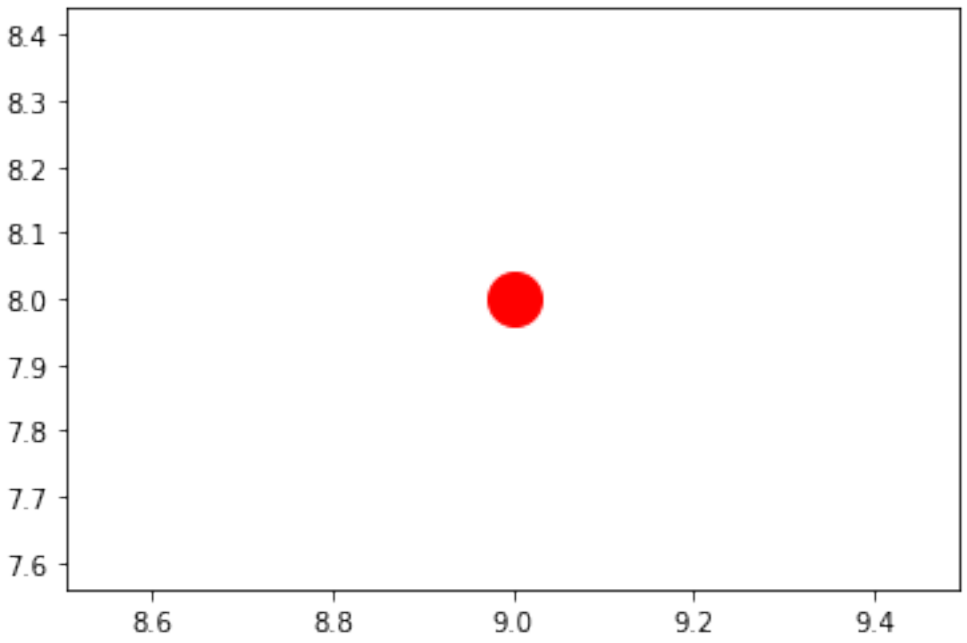
```
plt.plot(9,8,marker='o',color = "red",markersize=20)
plt.show()
```



[ ]:
```
from mpl_toolkits import mplot3d

%matplotlib inline
import numpy as np
import matplotlib.pyplot as plt

fig = plt.figure()
ax = plt.axes(projection='3d')

zline =  15 * np.random.random(100)
xline = np.sin(zline)
yline = np.cos(zline)
ax.scatter3D(xline, yline, zline, 'gray')
```

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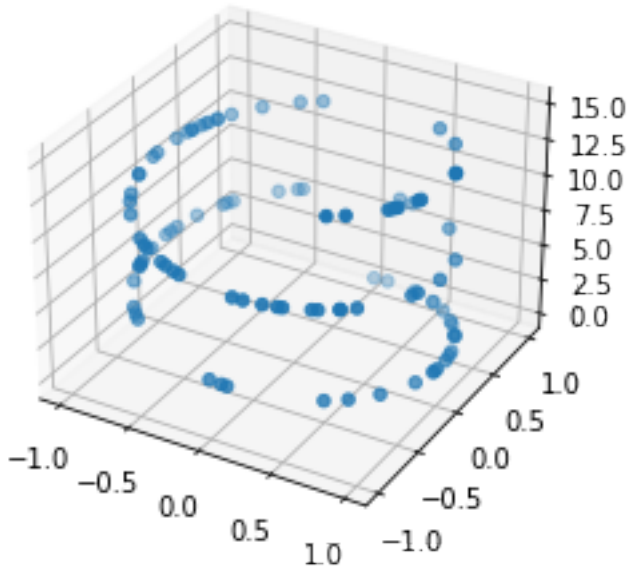
```
<mpl_toolkits.mplot3d.art3d.Path3DCollection at 0x222cfc53100>
```


15.0
12.5
10.0
7.5
5.0
2.5
0.0
1.0
0.5
0.0
−0.5
−1.0
−1.0
−0.5
0.0
0.5
1.0