Matplotlib 12_ Twin Axes

June 8, 2022

1 Twin Axes

Dalam sesi ini kita akan mempelajari twin axes pada Matplotlib

1.1 1. Import Modules

[1]:
```
%matplotlib inline
```

[2]:
```
import matplotlib
import matplotlib.pyplot as plt
import numpy as np

print(matplotlib.__version__)
print(np.__version__)
```

```
3.3.4
1.20.1
```

1.2 2. Kasus Twin Axes 1

[3]:
```
x = np.linspace(1, 10, 25)
```

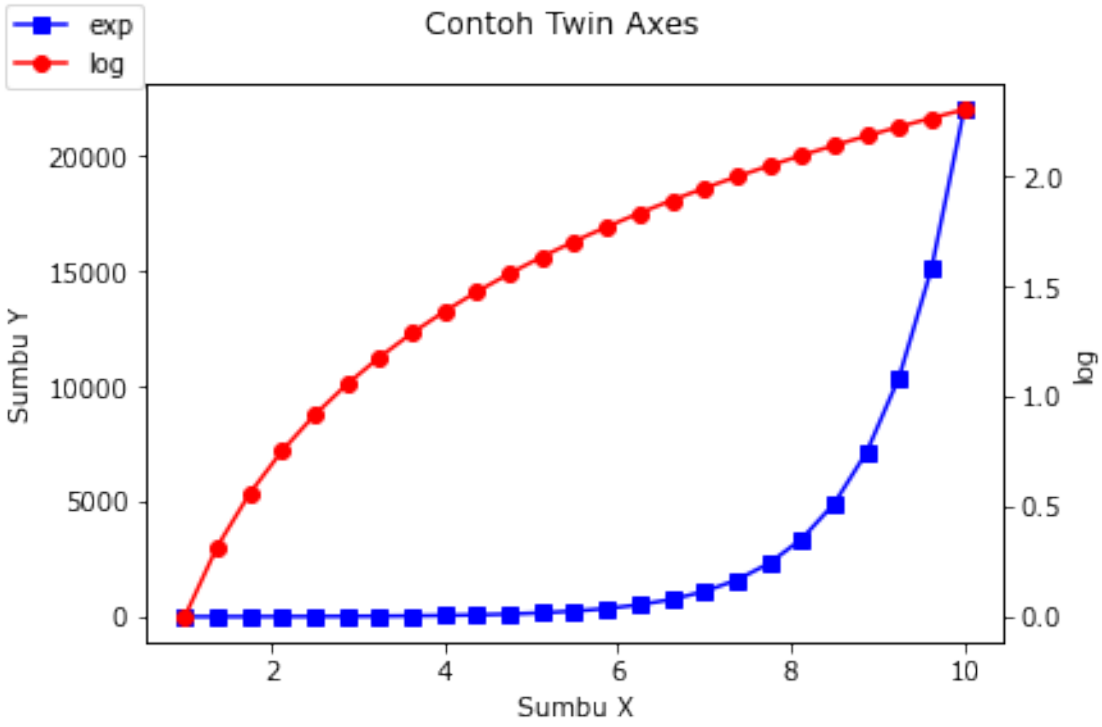
[4]:
```
fig, ax1 = plt.subplots()

ax1.plot(x, np.exp(x), 'bs-', label='exp')
ax1.set_xlabel('Sumbu X')
ax1.set_ylabel('Sumbu Y')

ax2 = ax1.twinx()
ax2.plot(x, np.log(x), 'ro-', label='log')
ax2.set_ylabel('log')

fig.suptitle('Contoh Twin Axes')
fig.legend(loc='upper left')

plt.show()
```



1.3 3. Kasus Twin Axes 2

[5]:
```
x = np.random.randint(16, 40, size=30)
x
```

[5]:
```
array([36, 25, 31, 35, 16, 37, 24, 31, 19, 38, 26, 35, 37, 28, 35, 37, 39,
       25, 19, 26, 28, 20, 19, 33, 25, 28, 25, 16, 23, 23])
```

[6]:
```
def C2F(celcius=0):
    return (celcius * 1.8) + 32

def konversi_sumbu(ax1):
    y1, y2 = ax1.get_ylim()
    ax2.set_ylim(C2F(y1), C2F(y2))
    ax2.figure.canvas.draw()

fig, ax1 = plt.subplots()
ax2 = ax1.twinx()

ax1.callbacks.connect('ylim_changed', konversi_sumbu)
ax1.plot(x)

ax1.set_xlabel('Hari')
```

```
ax1.set_ylabel('Celcius')
ax2.set_ylabel('Fahreinhet')

fig.suptitle('Temperatur Udara')
plt.show()
```