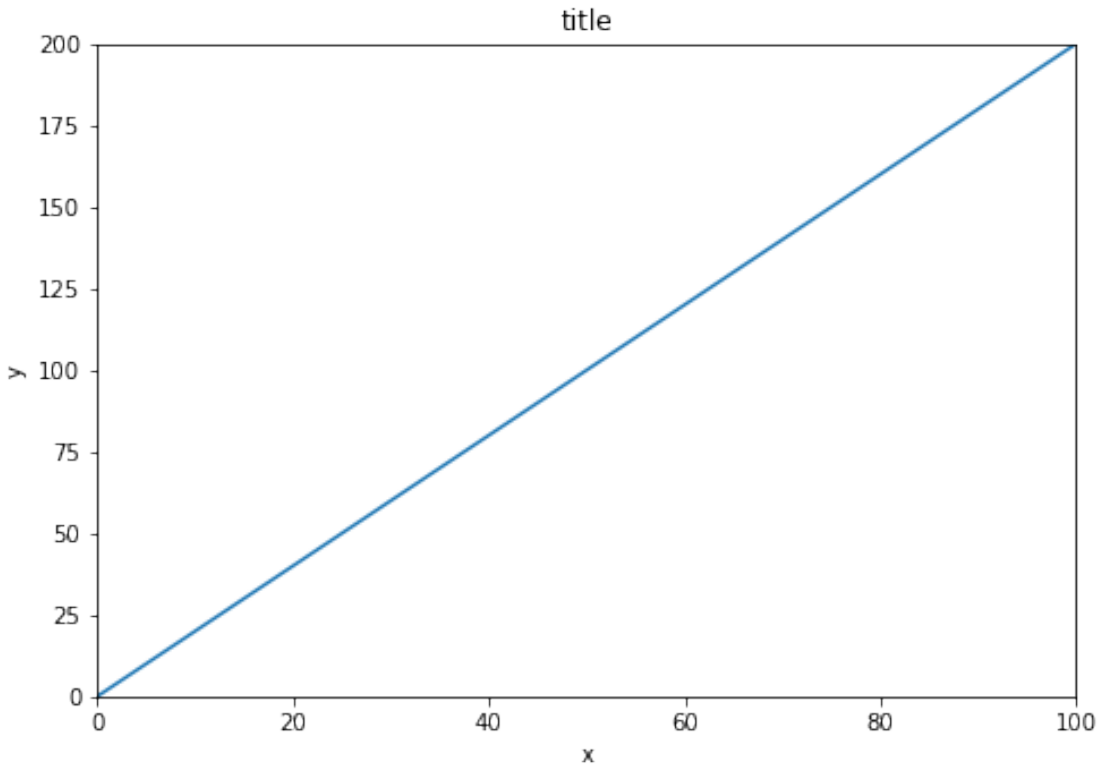
exercises

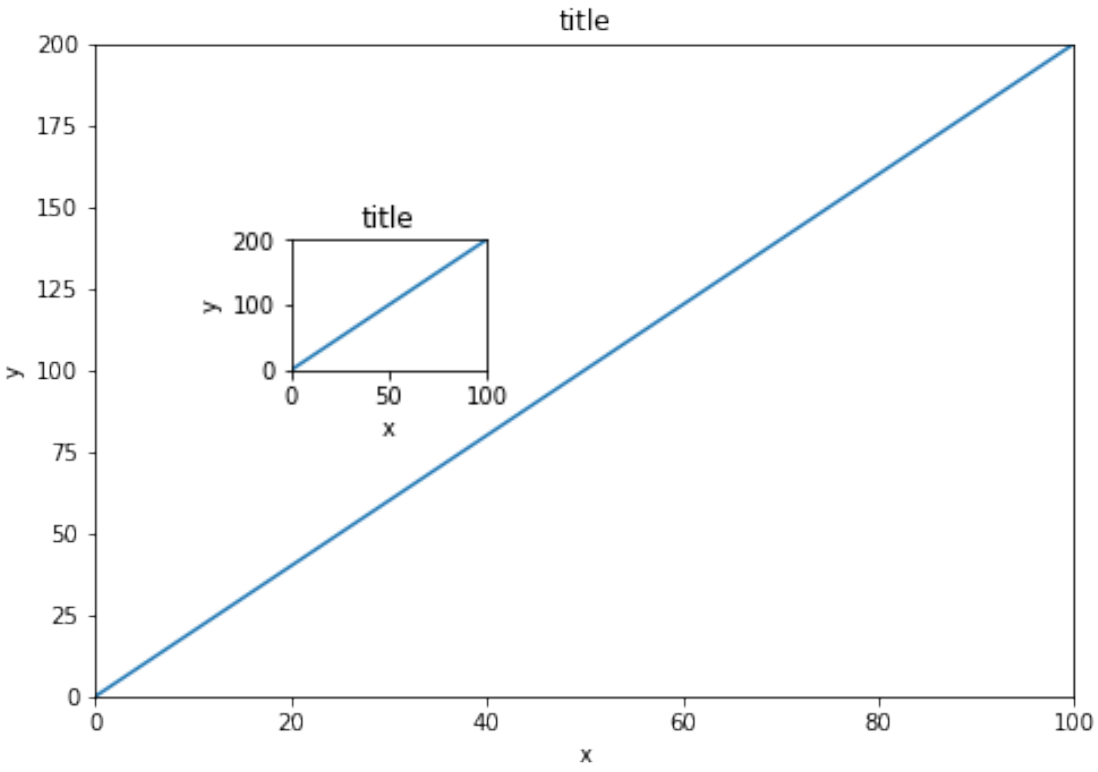
August 9, 2023

[1]:
```
import numpy as np
import matplotlib.pyplot as plt
import pandas as pd
```

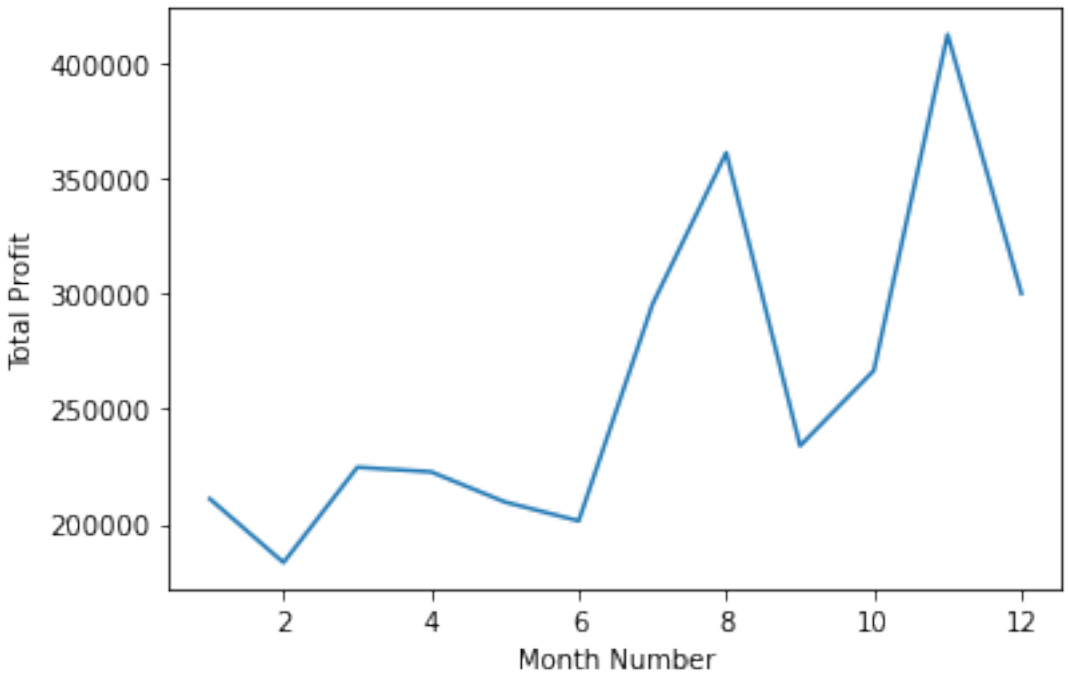
[2]:
```
# Exercise 1

fig = plt.figure()

ax = fig.add_axes([0, 0, 1, 1])

x = np.linspace(0, 100, 50)
y = x * 2

ax.plot(x, y)
ax.set_title('title')
ax.set_xlabel('x')
ax.set_ylabel('y')

ax.set_xlim([min(x), max(x)])
ax.set_ylim([min(y), max(y)])

plt.show()
```



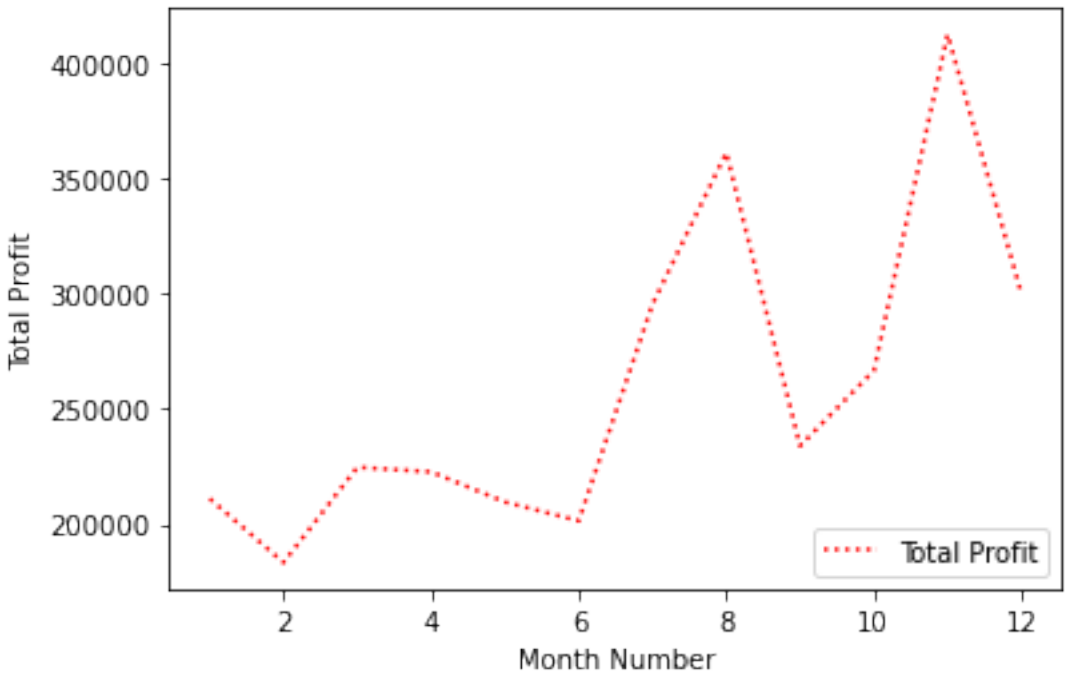
[3]:
```
# Exercise 2

fig = plt.figure()

pts = [[0, 0, 1, 1], [0.2, 0.5, 0.2, 0.2]]

for p in pts:
    ax = fig.add_axes(p)
    ax.plot(x, y)

    ax.set_title('title')
    ax.set_xlabel('x')
    ax.set_ylabel('y')

    ax.set_xlim([min(x), max(x)])
    ax.set_ylim([min(y), max(y)])

plt.show()
```



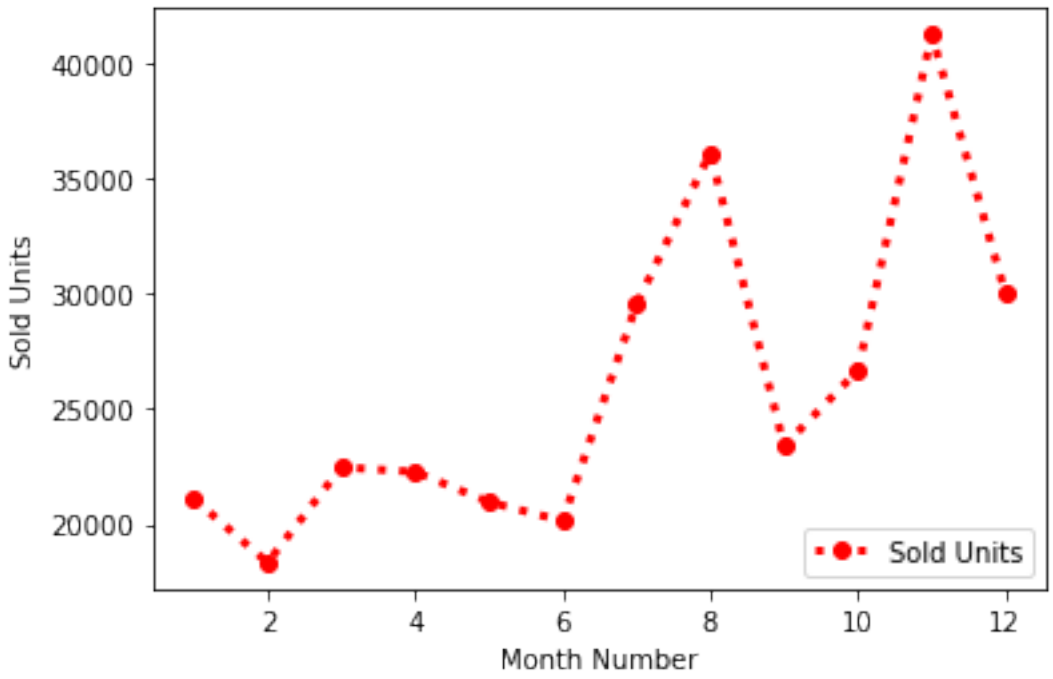
[4]:
```
# Exercise 3

file_path = 'company_sales_data.csv'
df = pd.read_csv(file_path)

plt.plot(df['month_number'], df['total_profit'])
plt.xlabel('Month Number')
plt.ylabel('Total Profit')

plt.show()
```



[5]:
```
# Exercise 4

file_path = 'company_sales_data.csv'
df = pd.read_csv(file_path)

plt.plot(df['month_number'], df['total_profit'], 'r:')
plt.xlabel('Month Number')
plt.ylabel('Total Profit')
plt.legend(['Total Profit'], loc='lower right')

plt.show()
```



[6]:
```
plt.plot(df['month_number'], df['total_units'], 'ro:', linewidth=3)
plt.xlabel('Month Number')
plt.ylabel('Sold Units')
plt.legend(['Sold Units'], loc='lower right')

plt.show()
```


40000
35000
30000
25000
20000
Sold Units
2
4
6
8
10
12
Month Number
Sold Units

[ ]: