EXP-25

Aim: To write a program to plot two or more lines with leesends different widths and colours

pseudocode:

- import matplotlib.pyplot and pandas libraries
- create x and y data points for each line
- plot each line with different colours and line widths
- display the plot

sample input:

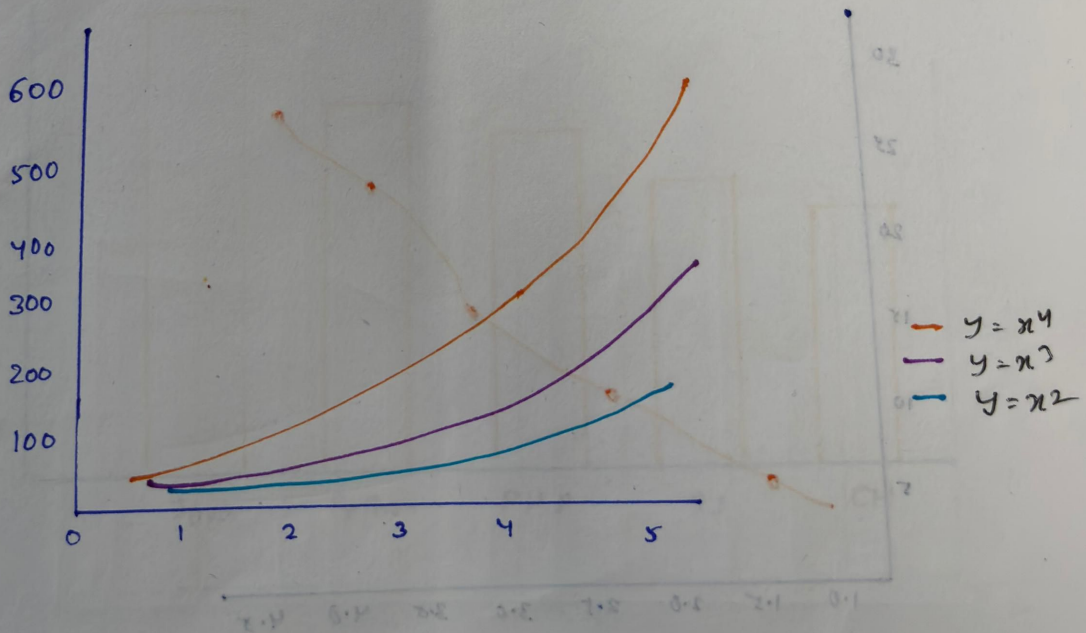
x-values: [0, 1, 2, 3, 4, 5]

y-values: (for $y = x^2$): [0, 1, 4, 9, 16, 25]

y^2-values: (for $y = x^3$): [0, 1, 8, 27, 64, 125]

y^3-values: (for $y = x^4$): [0, 1, 16, 81, 256, 625]

sample output:



Result:

This code was executed successfully and got the output

```python
import matplotlib.pyplot as plt

x = [1, 2, 3, 4, 5]
y1, y2, y3 = [1, 4, 9, 16, 25], [1, 3, 6, 10, 15], [2, 3, 5, 7, 11]

plt.plot(x, y1, label='y = x^2', color='blue', linewidth=2)
plt.plot(x, y2, label='y = x*(x+1)/2', color='green', linewidth=3)
plt.plot(x, y3, label='y = prime numbers', color='red', linewidth=1.5)

plt.xlabel("X-axis"), plt.ylabel("Y-axis"), plt.title("Multiple Lines with Different Styles"), plt.legend()
plt.show()
```