# Lab - 4 : Linear & multi-linear

## Linear Regression

```python
import numpy as np
import matplotlib as plt

x = np.array ([1, 2, 3, 4, 5])
y = np.array (2, 4, 5, 4, 5])

x_mean = np.mean (x)
y = mean = np.mean y

numerator = np.sum(( x - x_mean) *
                    (y - y_mean))
denominator = np.sum (( x - x_mean)+2
b1 = numerator / denominator
b0 = y-mean - (b1 * x_mean)

y = pred = b0 + b1 * 2

plt.scatter ( x, y, color = 'blue',
label = 'Data')

plt.xlabel ('x')
plt.ylabel ('y')
plt.title ('Linear Reg')
```

output: