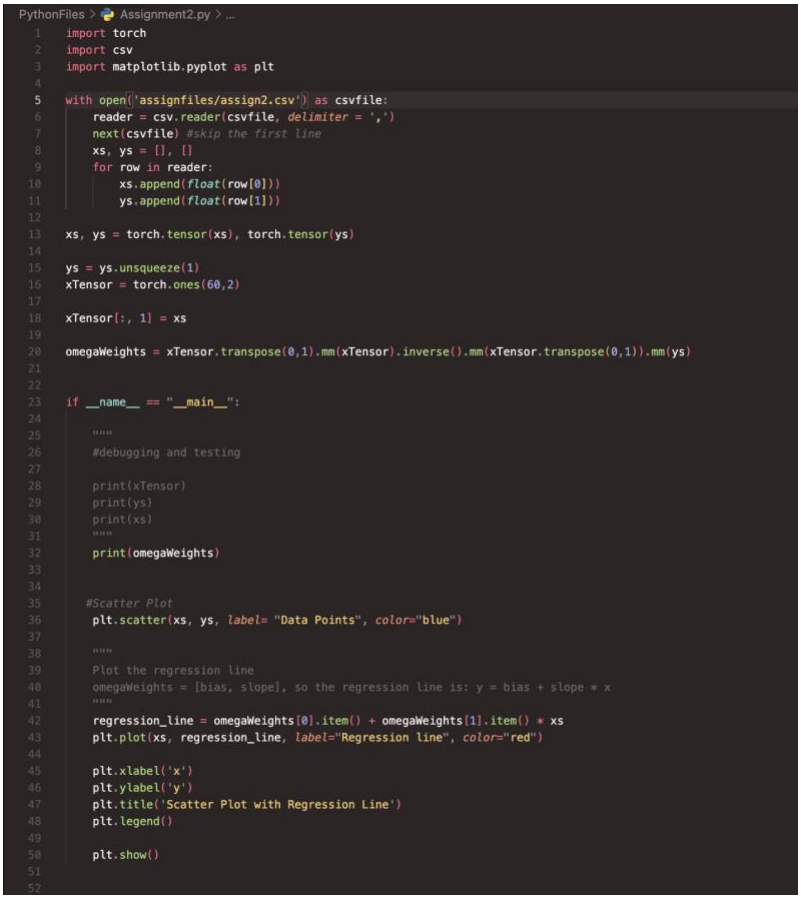
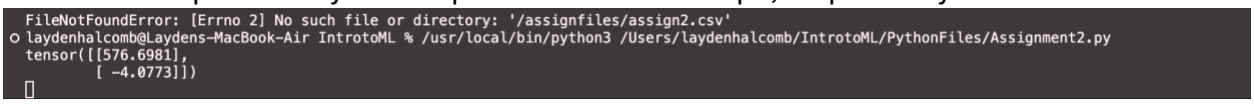
The images below is the code and its following output with the corresponding regression line computed:

The code

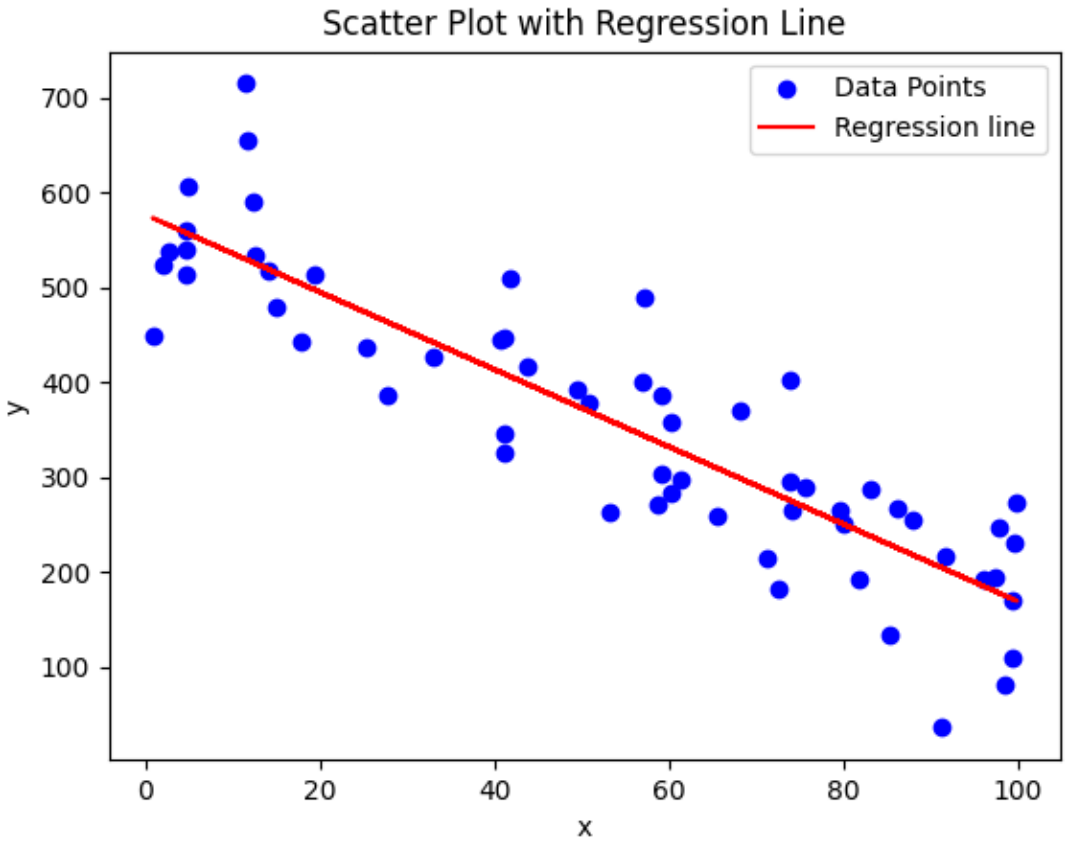


```
PythonFiles > Assignment2.py > ...
import torch
import csv
import matplotlib.pyplot as plt

with open('assignfiles/assign2.csv') as csvfile:
    reader = csv.reader(csvfile, delimiter = ',')
    next(csvfile) #skip the first line
    xs, ys = [], []
    for row in reader:
        xs.append(float(row[0]))
        ys.append(float(row[1]))

xs, ys = torch.tensor(xs), torch.tensor(ys)

ys = ys.unsqueeze(1)
xTensor = torch.ones(60,2)

xTensor[:, 1] = xs

omegaWeights = xTensor.transpose(0,1).mm(xTensor).inverse().mm(xTensor.transpose(0,1)).mm(ys)


if __name__ == "__main__":

    """
    #debugging and testing

    print(xTensor)
    print(ys)
    print(xs)
    """
    print(omegaWeights)


   #Scatter Plot
    plt.scatter(xs, ys, label= "Data Points", color="blue")

    """
    Plot the regression line
    omegaWeights = [bias, slope], so the regression line is: y = bias + slope * x
    """
    regression_line = omegaWeights[0].item() + omegaWeights[1].item() * xs
    plt.plot(xs, regression_line, label="Regression line", color="red")

    plt.xlabel('x')
    plt.ylabel('y')
    plt.title('Scatter Plot with Regression Line')
    plt.legend()

    plt.show()
```

This is the output of the y-intercept or bias and the slope, respectively.



```
FileNotFoundError: [Errno 2] No such file or directory: '/assignfiles/assign2.csv'
laydenhalcomb@Laydens-MacBook-Air IntrotoML % /usr/local/bin/python3 /Users/laydenhalcomb/IntrotoML/PythonFiles/Assignment2.py
tensor([[576.6981],
        [ -4.0773]])
```



This is pretty straight forward