1. Implement Linear regression (2D linear regression) function. The function must take a train data and a test data as input (do it using sklearn). Normalize the feature in train and test data. Compute the weights using closed form solution, gradient descent algorithm (play with number of iterations and learning rate to obtain best prediction on test data) and statistical linear regression. Plot the regression line of all three methods on the same figure using matplotlib.
2. Use the above function and predict sepalLength given sepalWidth in iris dataset (take train:test ratio of 0.8). Compute R2 score of each method on predictions (use sklearn)
3. Implement Multiple Linear regression function. The function must take a train data and a test data as input (do it using sklearn). Normalize the features in train and test data. Compute the weights using closed form solution, gradient descent algorithm (play with number of iterations and learning rate to obtain best prediction on test data)
4. Use the above function and predict sepalLength given sepalWidth, petalLength and petalWidth in iris dataset (take train:test ratio of 0.8). Compute R2 score of each method on predictions (use sklearn)