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**Python Version:**

Python 3.6

**Libraries Version:**

Numpy – 1.14.3

Pandas – 0.23.0

Matplotlib – 2.2.2

**Code Explanation:**

The code can be explained in four steps.

1. **Data initialization:**  
   Here I have read the data separately for A vector and Y vector. In Y, I have assumed -1 for Iris-setosa, 0 for Iris-versicolor and 1 for Iris-virginica
2. **Linear Regression and Classification:**

Here I have calculated the beta values and then I have used that beta to predict the classes. Also, I have calculated the error and accuracy of that.

1. **N-fold:**

Here I have calculated the average error and accuracy for different number of folds.

1. **Error Visualization:**

Here I have plotted the graph for multiple N values Vs error value.

**How to run the code:**

1. Place the text file with the data in the same location
2. Run the file Main.py as

*Python Main.py*