Aum Sri Sairam
Assignment-2 logistic regression k-class
Parameter Tuning and performance measure **Date:1st Dec 2017**

Submitted by:

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Aims and Objectives:

Run logistic regression for k-class classification by changing the parameters (i.e. step size and error tolerance) and perfom performance analysis.

Procedure:

Run the code and pass the parameters in the command line as given below:
$:**<python> <logisticRegression.py>**
Note: if <alpha vlaue> <error tolerance> is not supplied then default values taken to be 0.01 and 25 respectively.

Analysis:

Serial no.	Alpha	Errol Tolerance	Time	Accuracy
1	0.01	50	0m29.63s	0.8068
2	0.01	40	1m13.46s	0.8209
3	0.01	30	1m25.16s	0.8345
4	0.01	25	1m35.06s	0.8461
5	0.1	600	0m25.872s	0.7475
6	0.1	550	0m32.800s	0.659
7	0.1	300	0m32.800s	0.802
8	0.1	200	1m53.20s	0.823

Conclusion:

As the error tolerance decreases the accuracy of the model increases. Hence we conclude from above analysis that the model gives better accuracy with parameters alpha and error tolerance equal to 0.01 and 25 respectively.