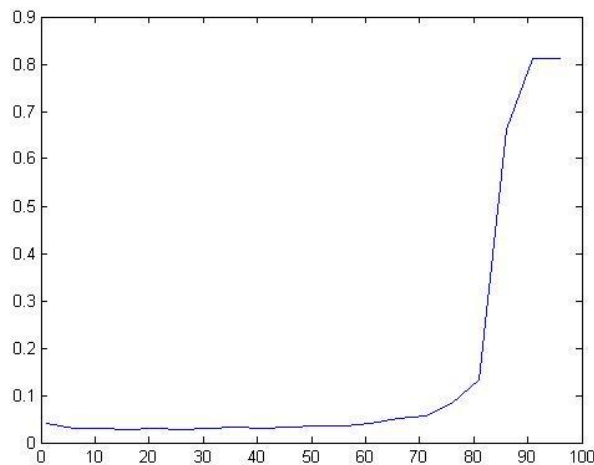


## Question 3

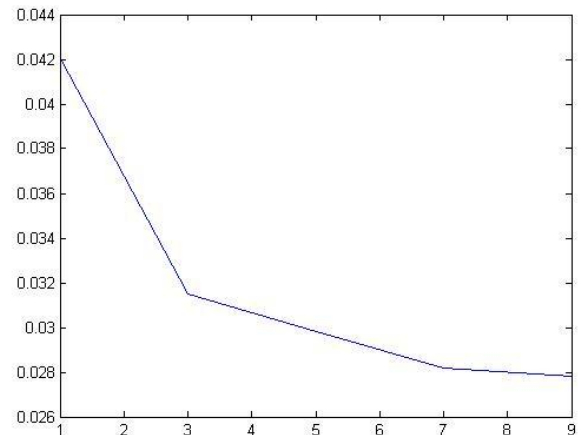
### C. DEEP LEARNING

#### Variation of Error with learning Rate

The following plots show the variation of error with learning rate. Left plot shows the variations on larger scale while the right plot shows on smaller scale.



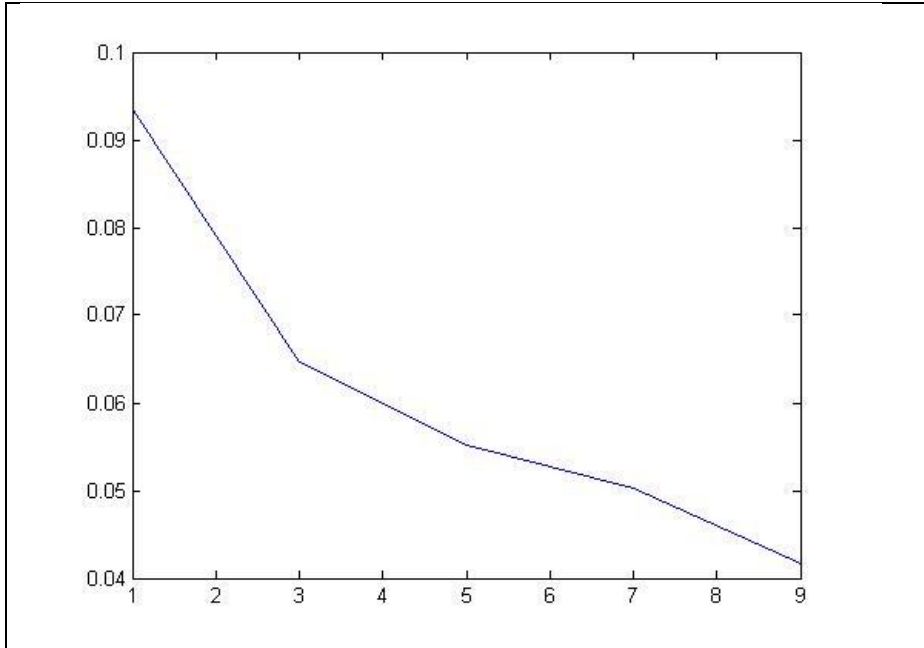
On bigger scale- X-axis shows the **learning rate** while y axis shows the **error**. Increasing the learning rate too much will lead to overshooting of minima so the error rate increases when learning rate is kept too much



On smaller scale- X-axis shows the **learning rate** while y axis shows the **error**.

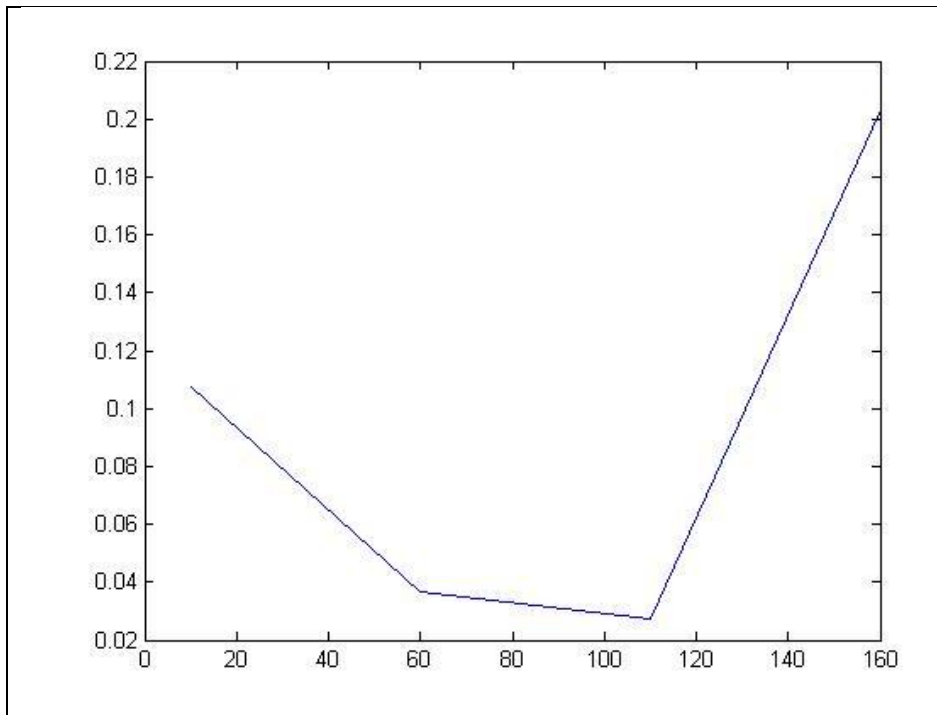
#### Variation of Number of epochs

With increase in number of epochs the networks learns to perform better. But we should not increase the number of epoch too much as it may lead to over fitting.



The plot shows the variation of error on y axis with number of epochs on x axis

### Variation of architecture (number of nodes)



Shows the variation with number of nodes in the architecture of neural network.