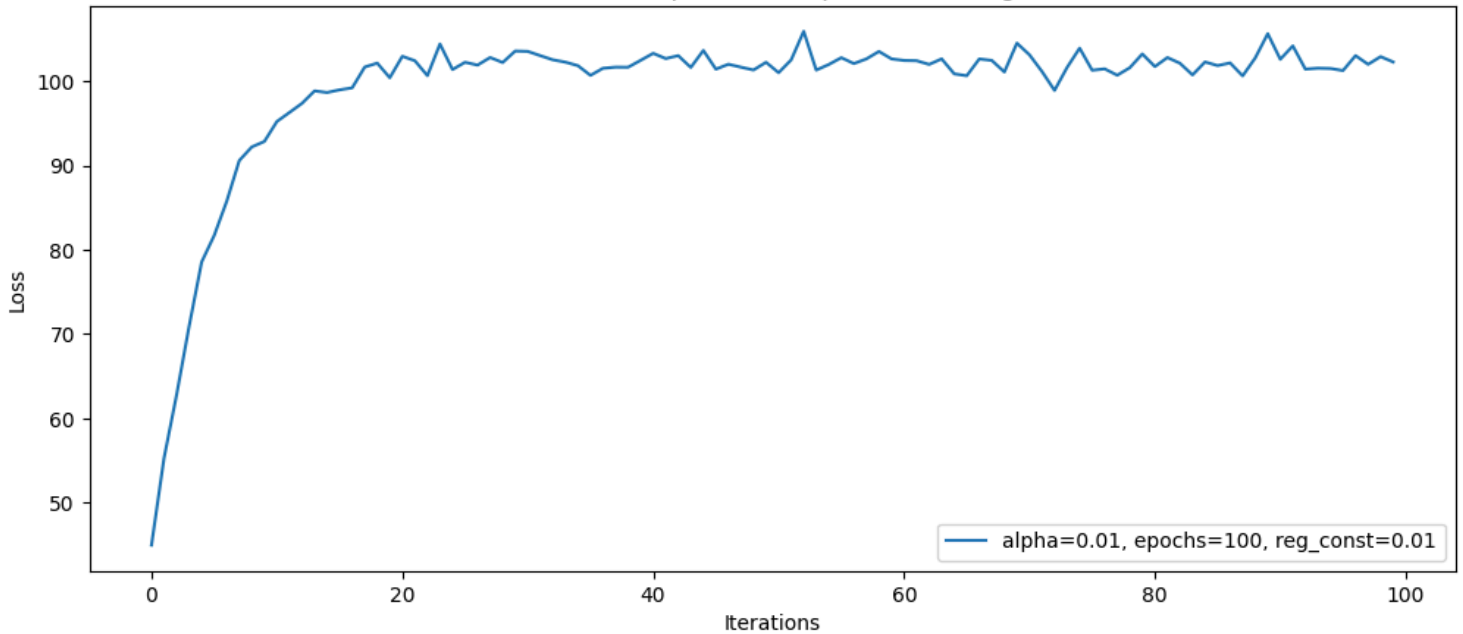


Experiment 1 with  $\alpha=0.01$ , epochs=100,  $\text{reg\_const}=0.01$

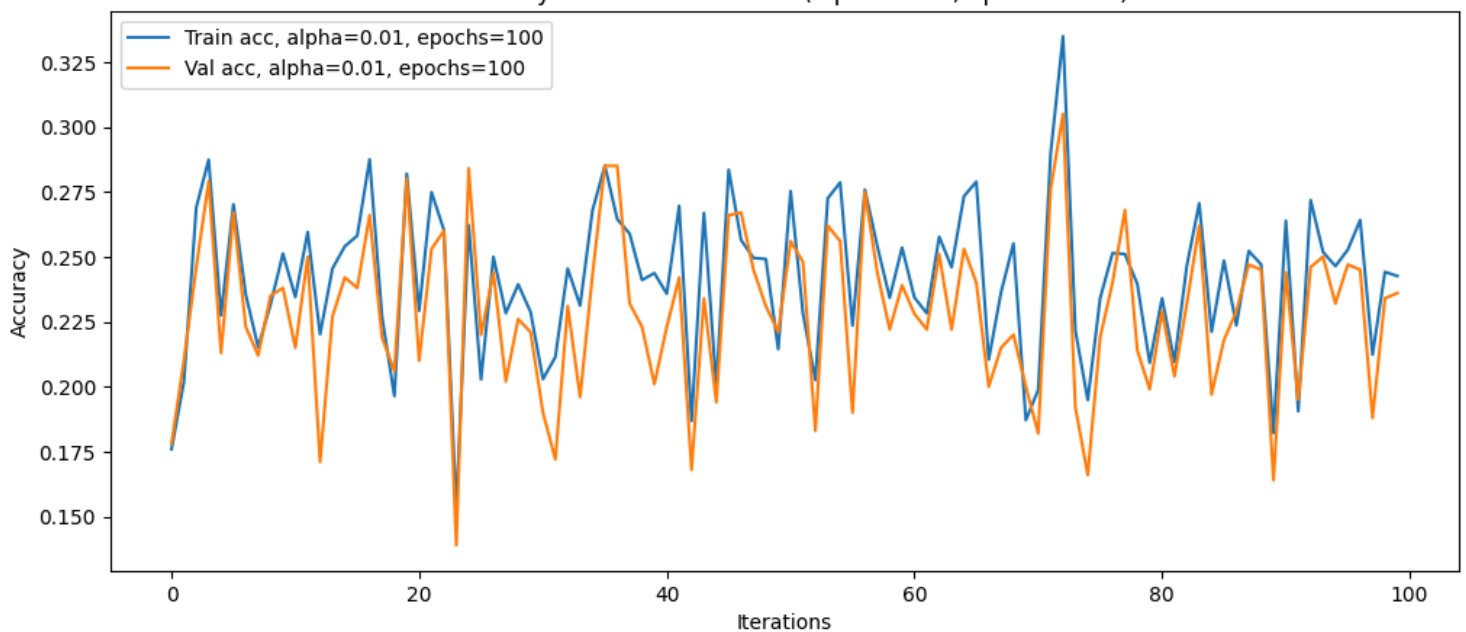
### Experiment 1 Softmax, vyeruban

Loss vs No of Iterations - ( $\alpha=0.01$ , epochs=100, reg constant=0.01)



### Experiment 1 Softmax, vyeruban

Accuracy vs No of Iterations - ( $\alpha=0.01$ , epochs=100)

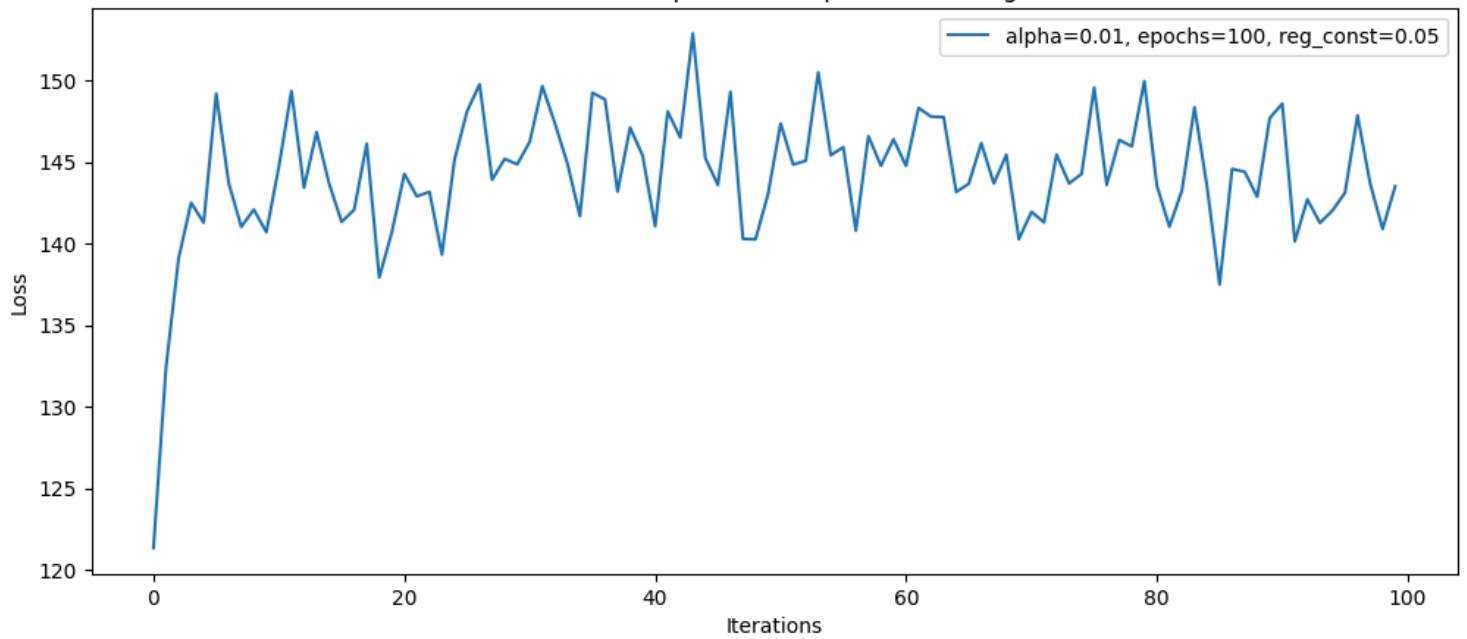


Training Accuracy: 24.259183673469387  
Validation Accuracy: 23.599999999999998  
Test Accuracy: 23.3

Experiment 2 with  $\alpha=0.01$ , epochs=100,  $\text{reg\_const}=0.05$

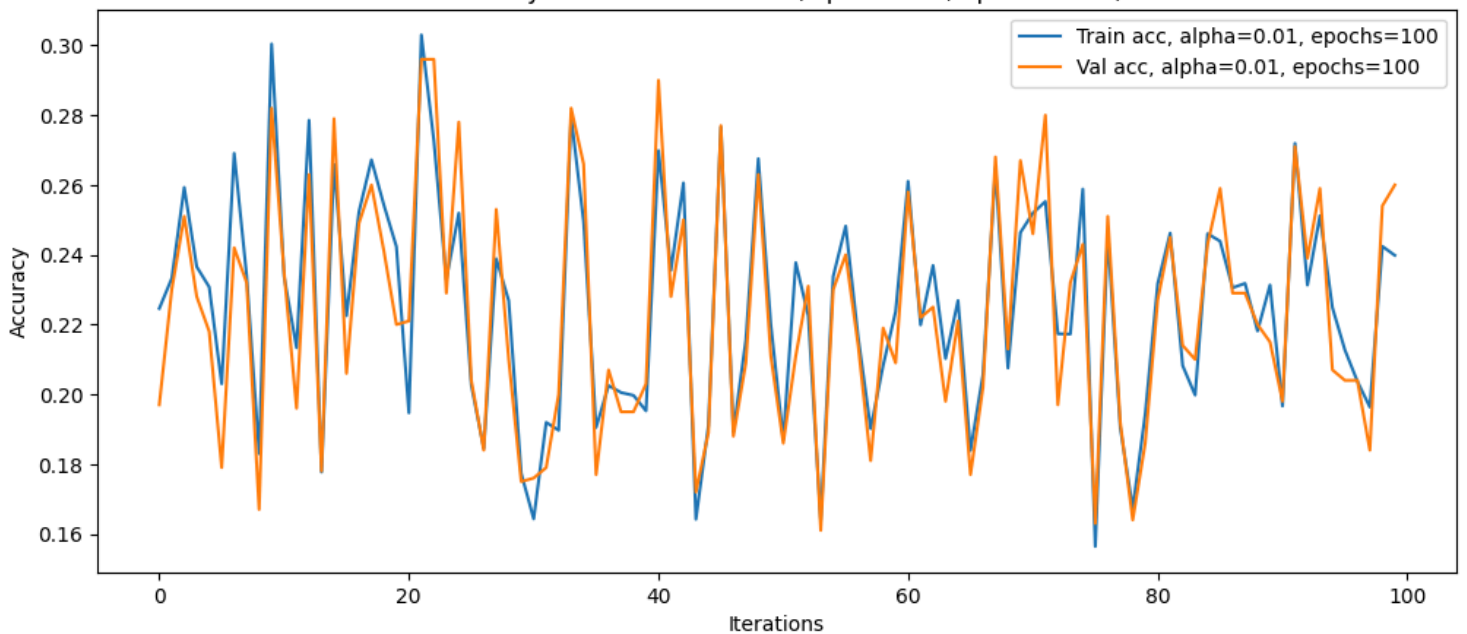
## Experiment 2 Softmax, vyeruban

Loss vs No of Iterations - (alpha=0.01, epochs=100, reg constant=0.05)



## Experiment 2 Softmax, vyeruban

Accuracy vs No of Iterations - (alpha=0.01, epochs=100)



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Training Accuracy: 23.981632653061226

Validation Accuracy: 26.0

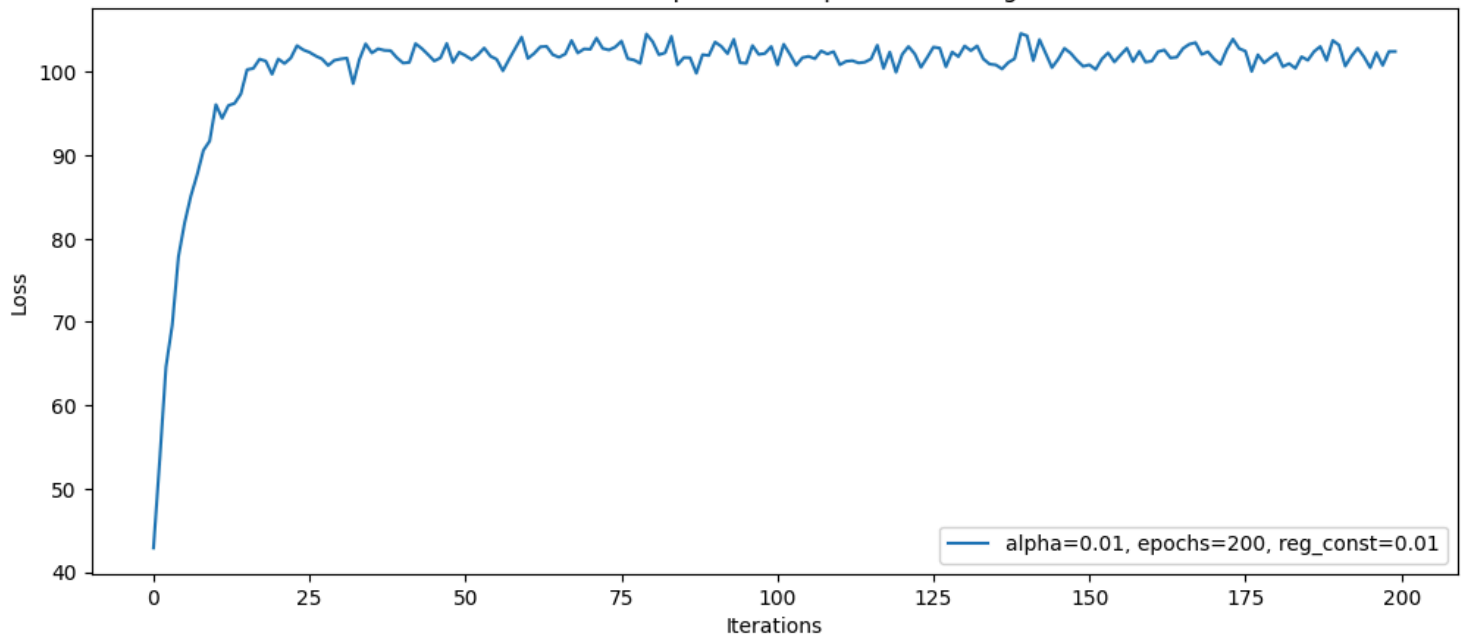
Test Accuracy: 23.7

---

Experiment 3 with alpha=0.01, epochs=200, reg\_const=0.01

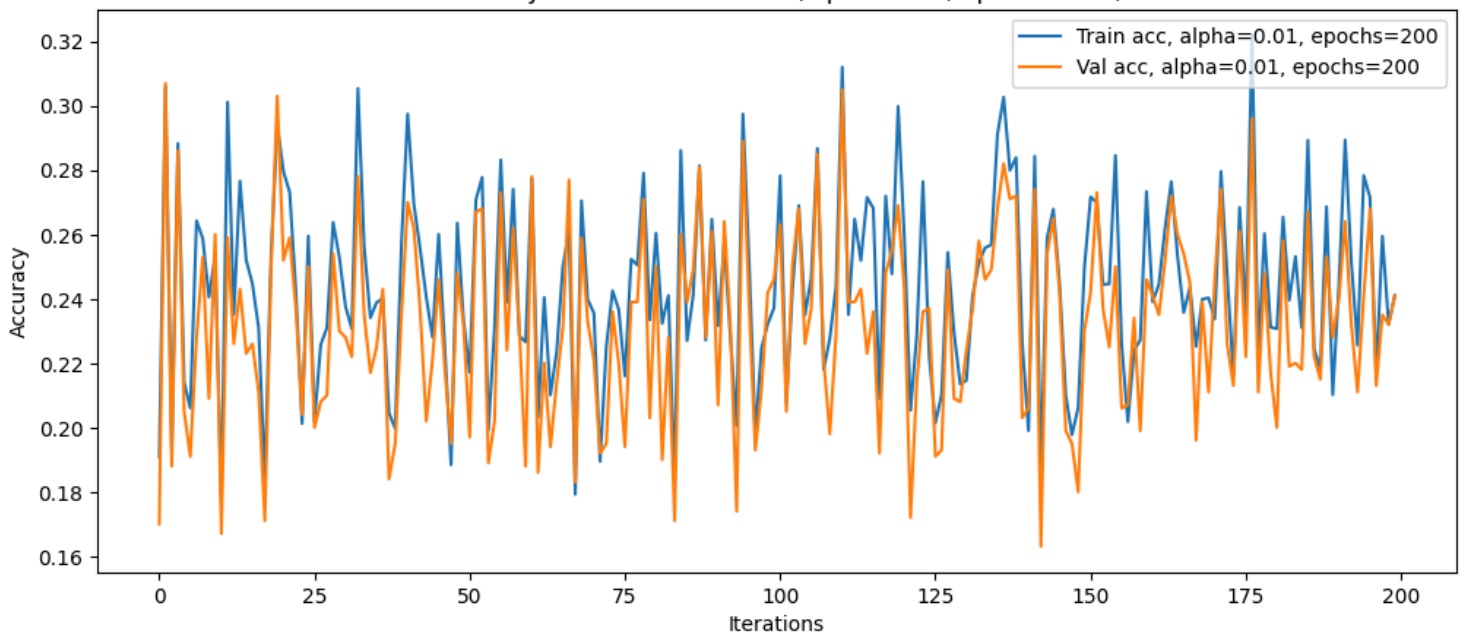
## Experiment 3 Softmax, vyeruban

Loss vs No of Iterations - (alpha=0.01, epochs=200, reg constant=0.01)



## Experiment 3 Softmax, vyeruban

Accuracy vs No of Iterations - (alpha=0.01, epochs=200)

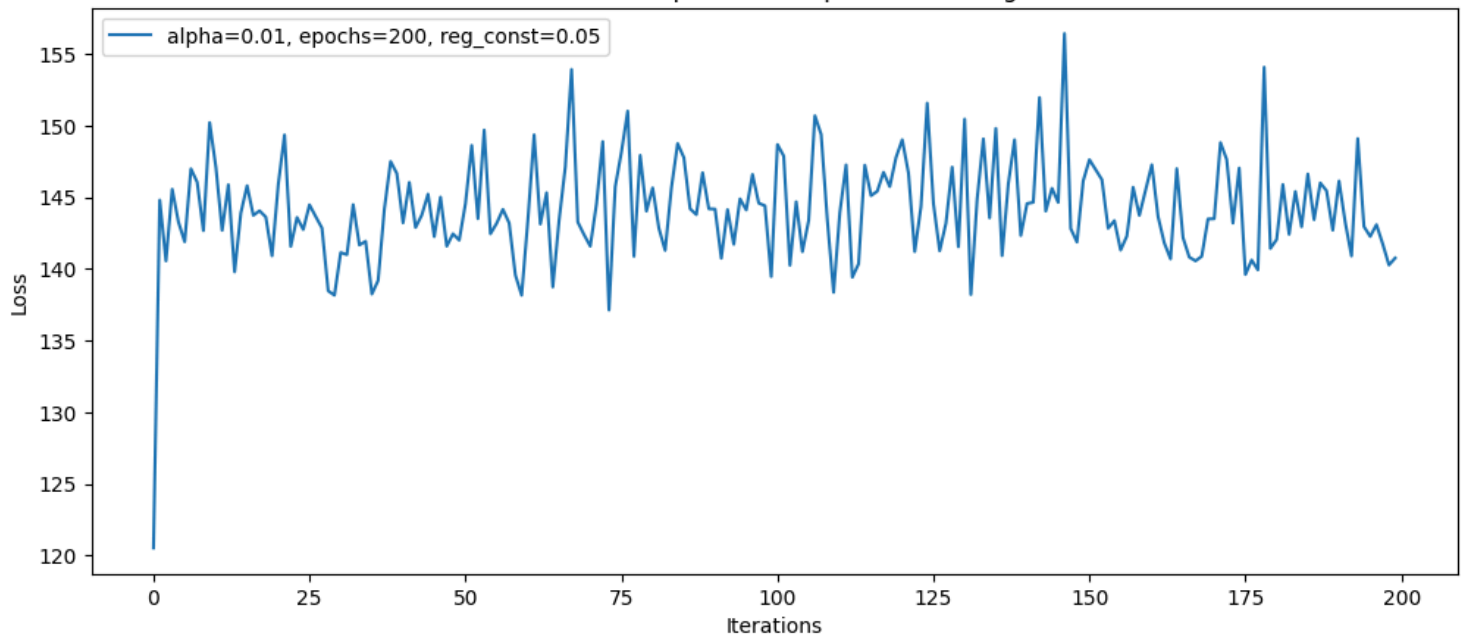


-----  
Training Accuracy: 24.10408163265306  
Validation Accuracy: 24.099999999999998  
Test Accuracy:22.48  
-----

Experiment 4 with alpha=0.01, epochs=200, reg\_const=0.05

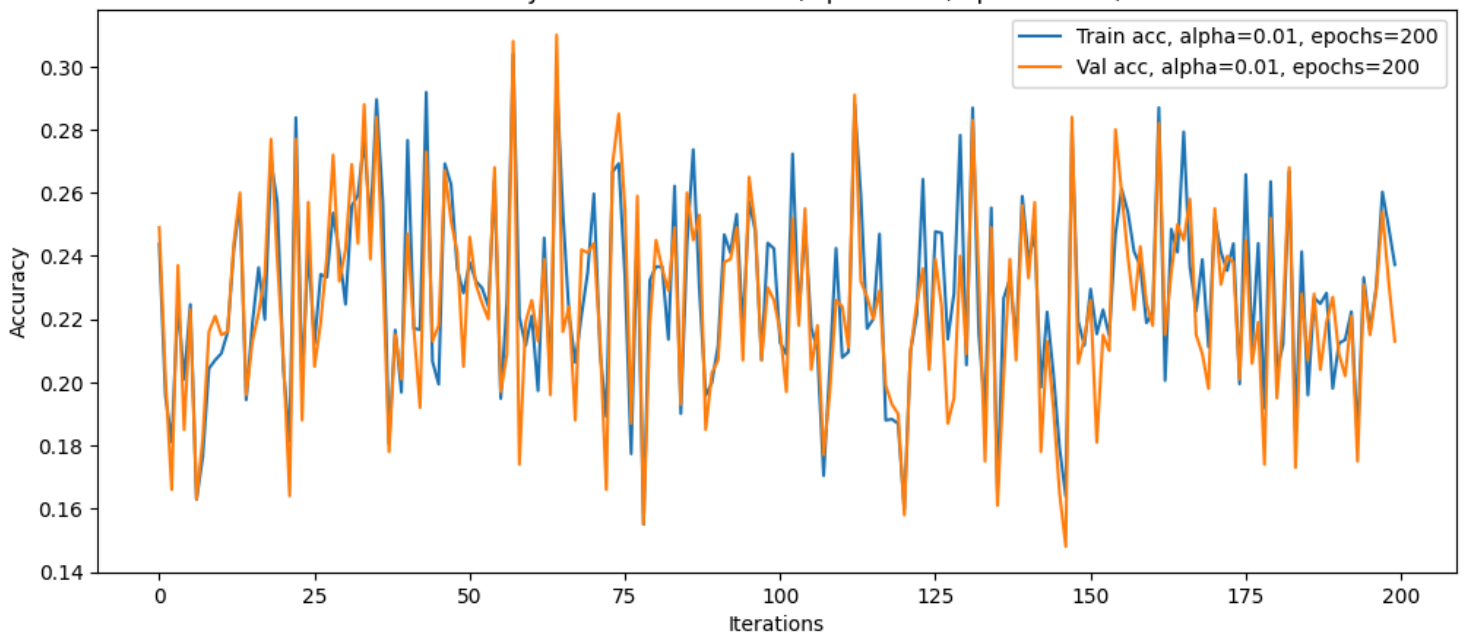
## Experiment 4 Softmax, vyeruban

Loss vs No of Iterations - (alpha=0.01, epochs=200, reg constant=0.05)



## Experiment 4 Softmax, vyeruban

Accuracy vs No of Iterations - (alpha=0.01, epochs=200)



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Training Accuracy: 23.72448979591837

Validation Accuracy: 21.3

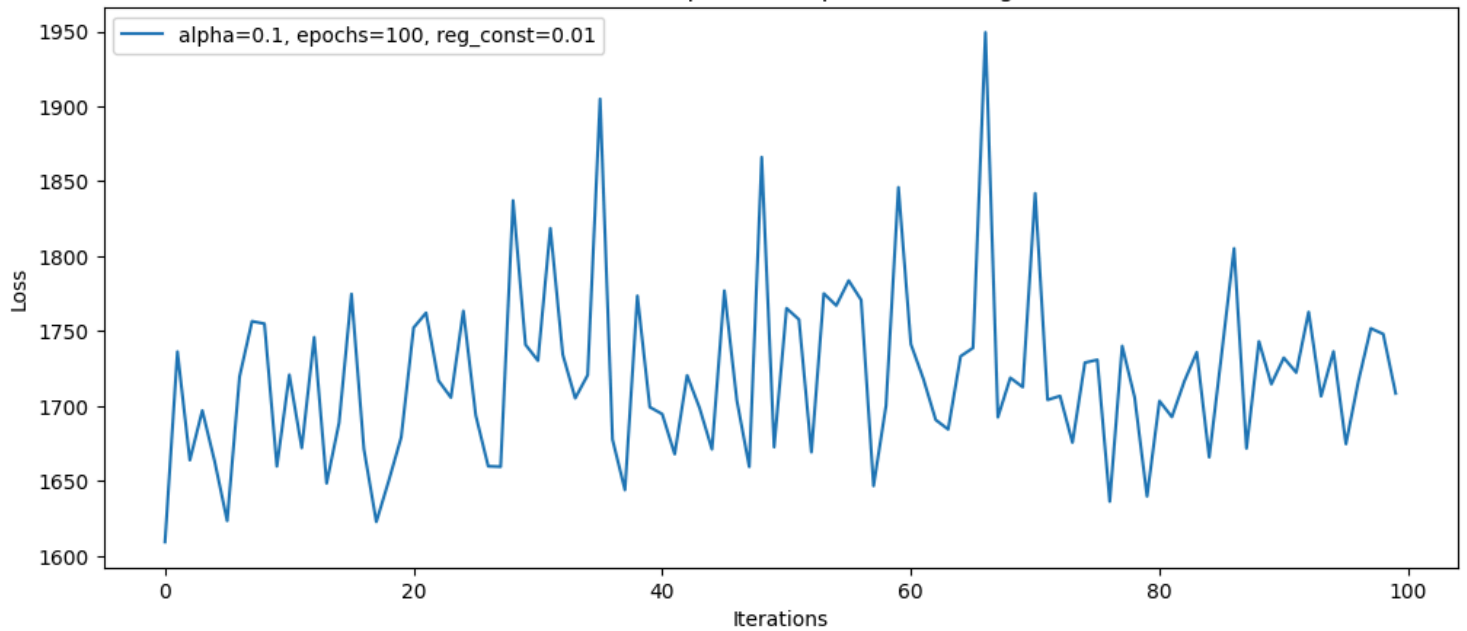
Test Accuracy: 22.54

---

Experiment 5 with alpha=0.1, epochs=100, reg\_const=0.01

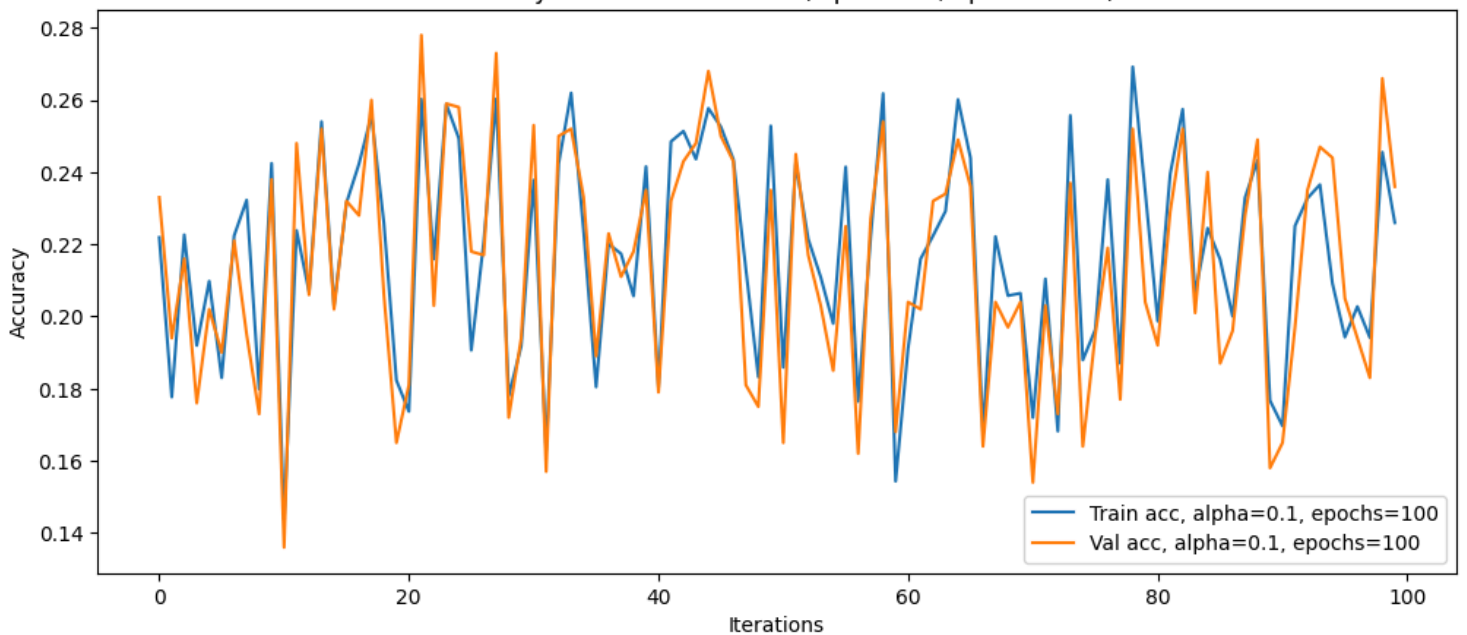
## Experiment 5 Softmax, vyeruban

Loss vs No of Iterations - (alpha=0.1, epochs=100, reg constant=0.01)



## Experiment 5 Softmax, vyeruban

Accuracy vs No of Iterations - (alpha=0.1, epochs=100)



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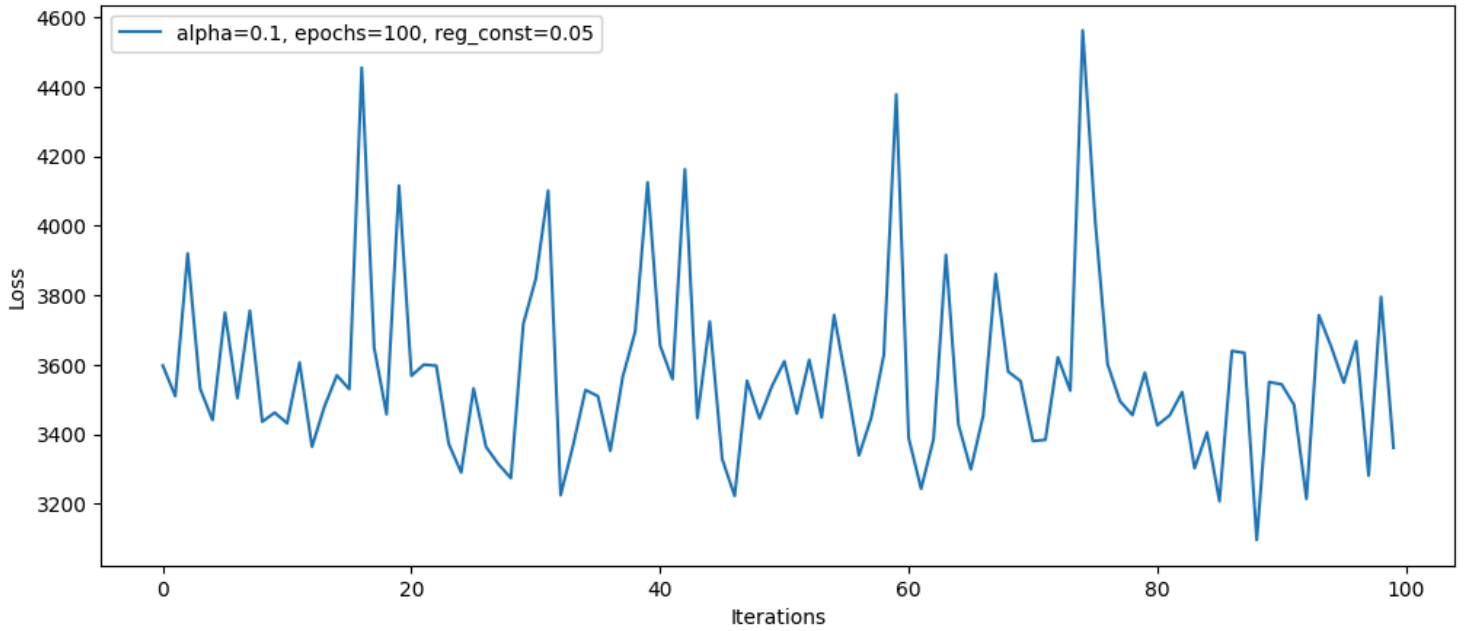
Training Accuracy: 22.6  
Validation Accuracy: 23.599999999999998  
Test Accuracy: 23.02

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Experiment 6 with alpha=0.1, epochs=100, reg\_const=0.05

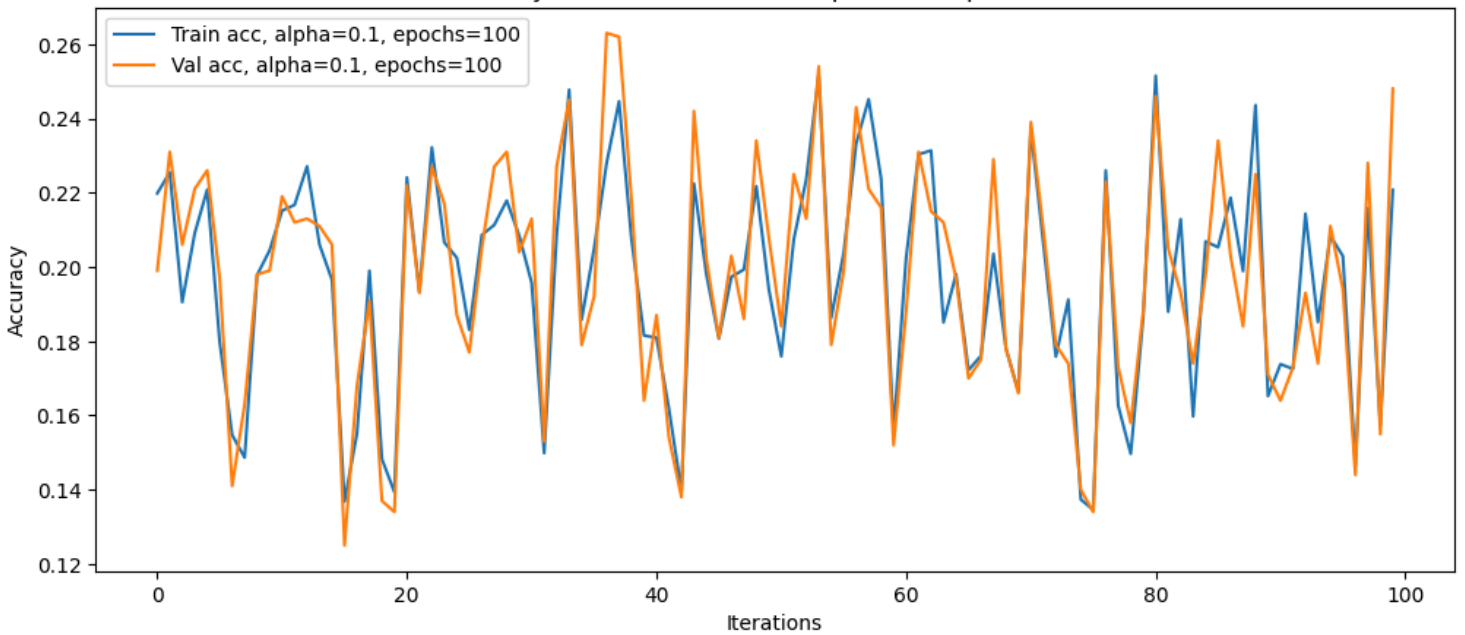
## Experiment 6 Softmax, vyeruban

Loss vs No of Iterations - (alpha=0.1, epochs=100, reg constant=0.05)



## Experiment 6 Softmax, vyeruban

Accuracy vs No of Iterations - (alpha=0.1, epochs=100)



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Training Accuracy: 22.0734693877551

Validation Accuracy: 24.8

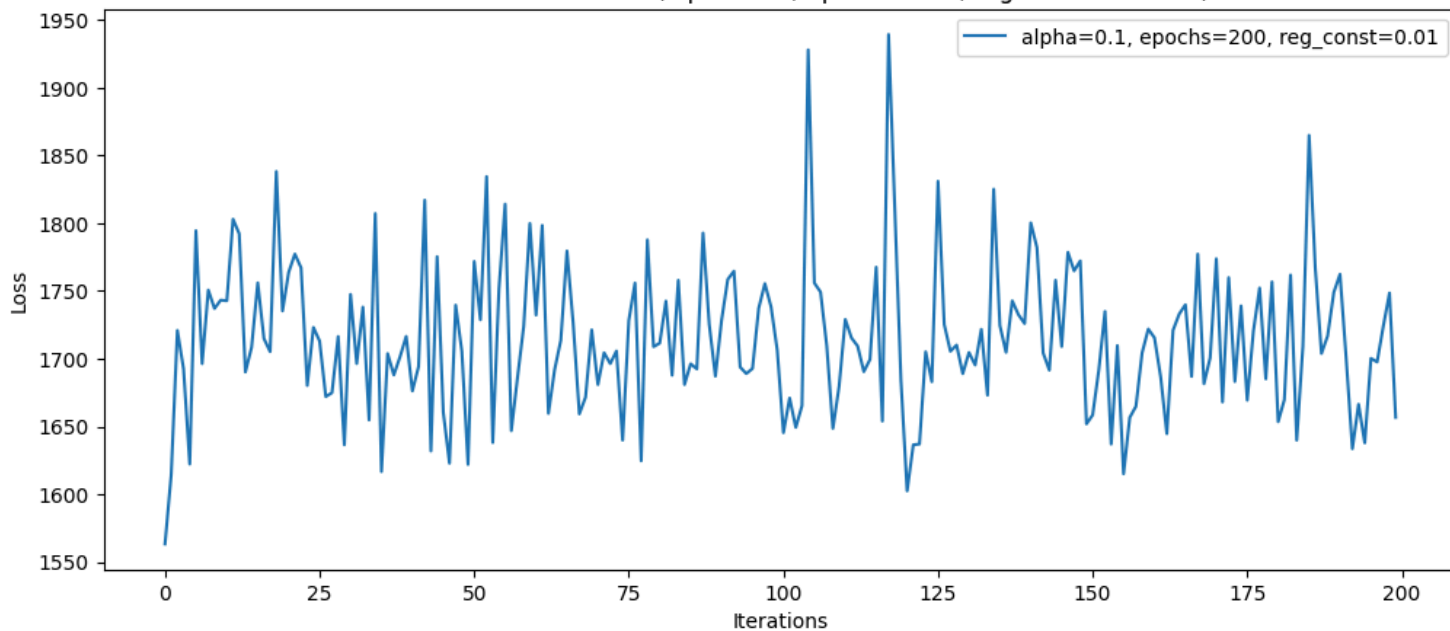
Test Accuracy: 21.6

---

Experiment 7 with alpha=0.1, epochs=200, reg\_const=0.01

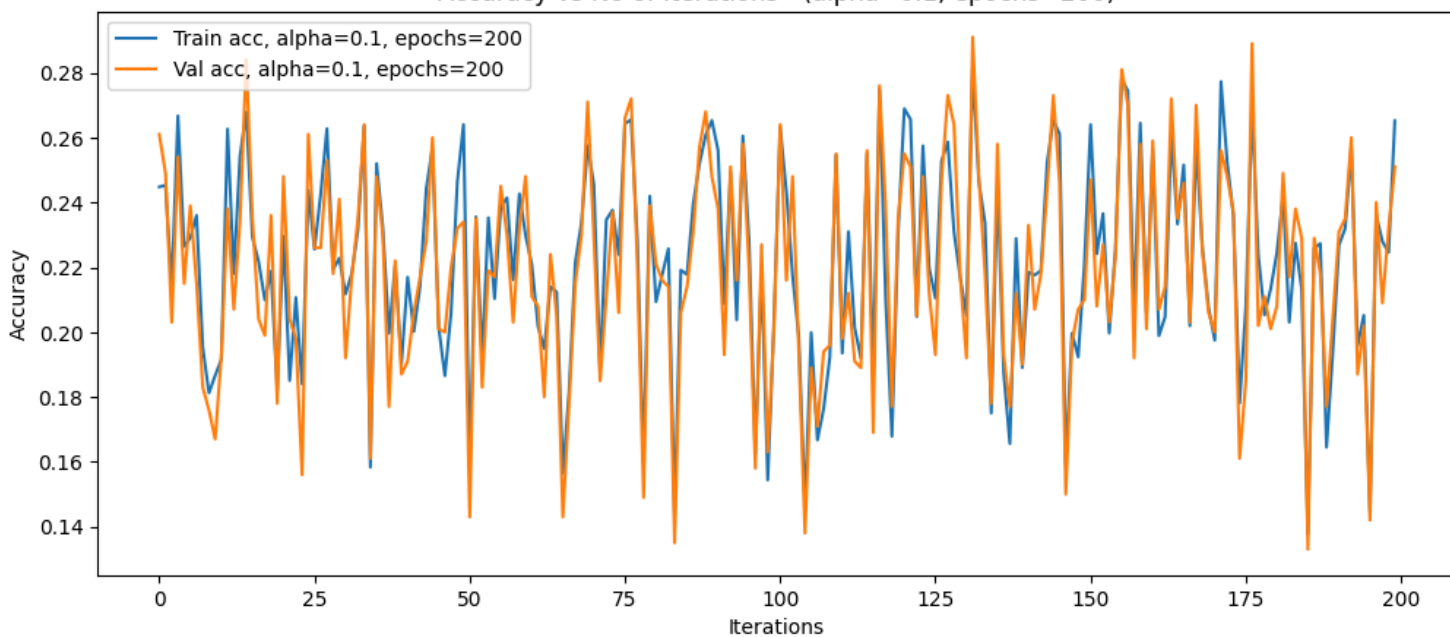
## Experiment 7 Softmax, vyeruban

Loss vs No of Iterations - (alpha=0.1, epochs=200, reg constant=0.01)



## Experiment 7 Softmax, vyeruban

Accuracy vs No of Iterations - (alpha=0.1, epochs=200)



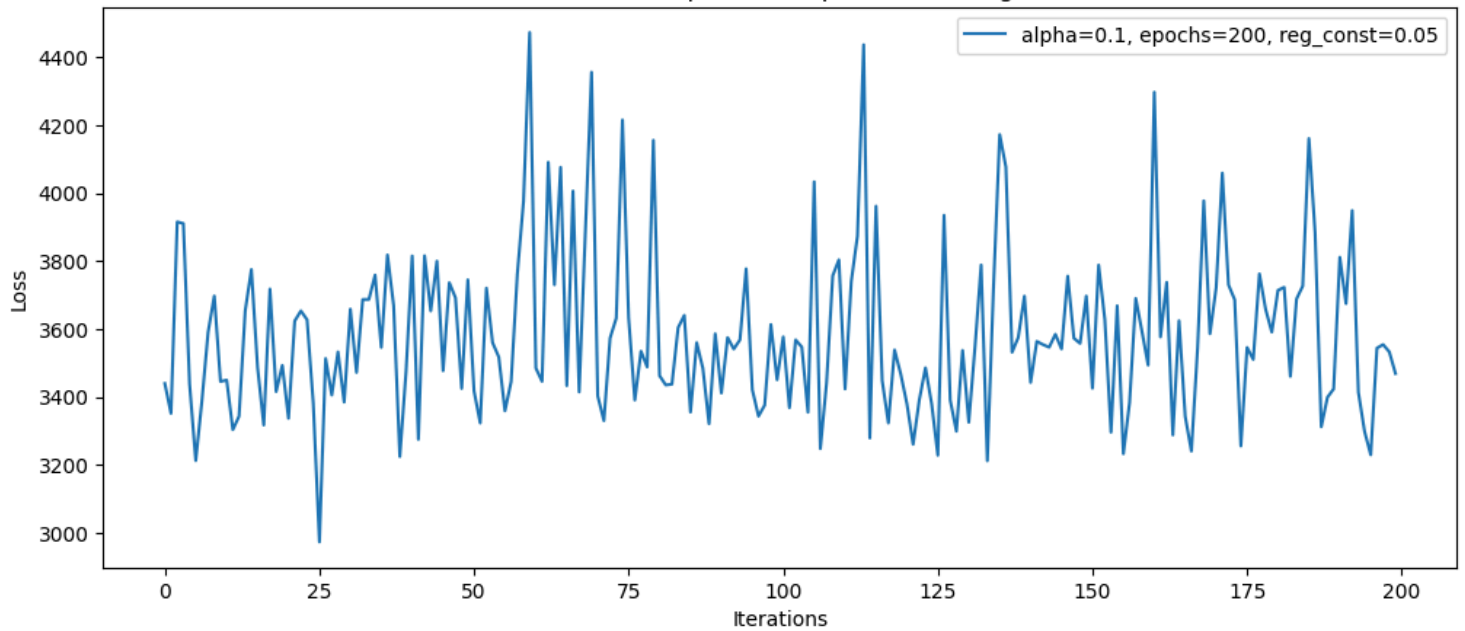
-----  
Training Accuracy: 26.518367346938774  
Validation Accuracy: 25.1  
Test Accuracy: 25.319999999999997  
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Experiment 8 with alpha=0.1, epochs=200, reg\_const=0.05



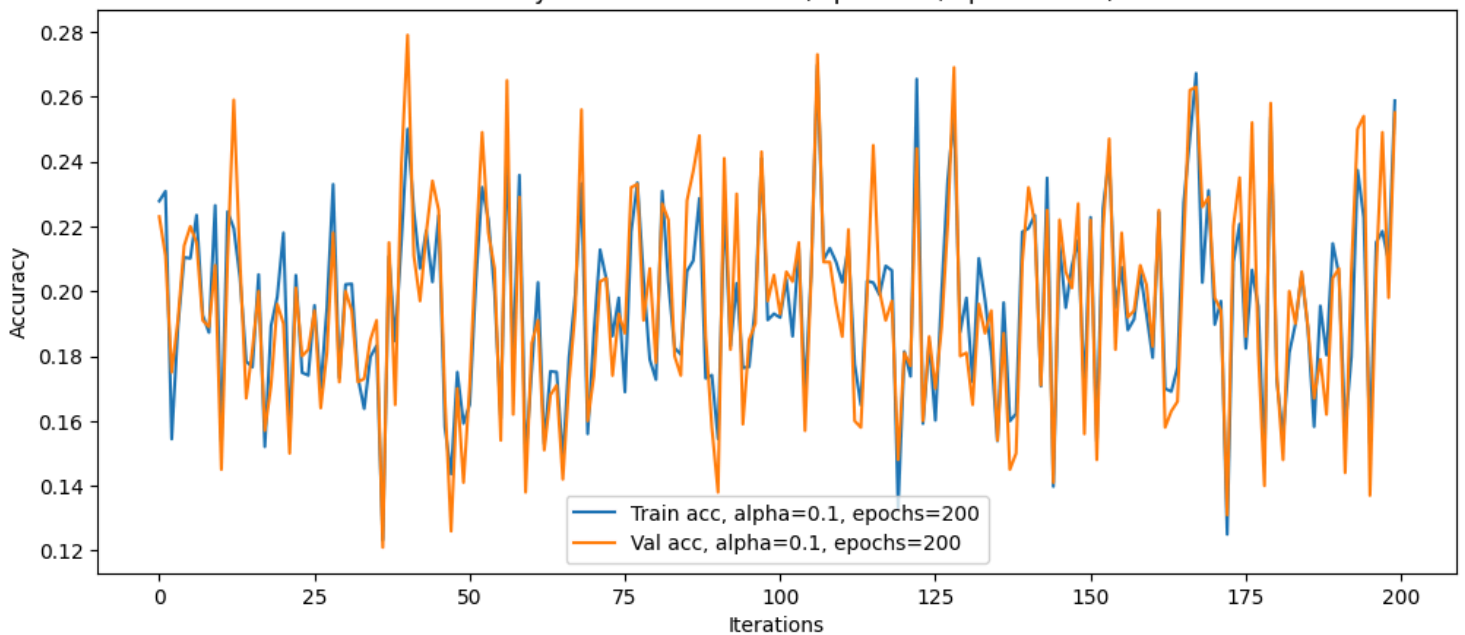
## Experiment 8 Softmax, vyeruban

Loss vs No of Iterations - (alpha=0.1, epochs=200, reg constant=0.05)



## Experiment 8 Softmax, vyeruban

Accuracy vs No of Iterations - (alpha=0.1, epochs=200)



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Training Accuracy: 25.875510204081632

Validation Accuracy: 25.5

Test Accuracy: 26.279999999999998

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Best alpha: 0.1, Best epochs: 200, Best accuracy: 26.279999999999998, Best Regularization Constant: 0.05