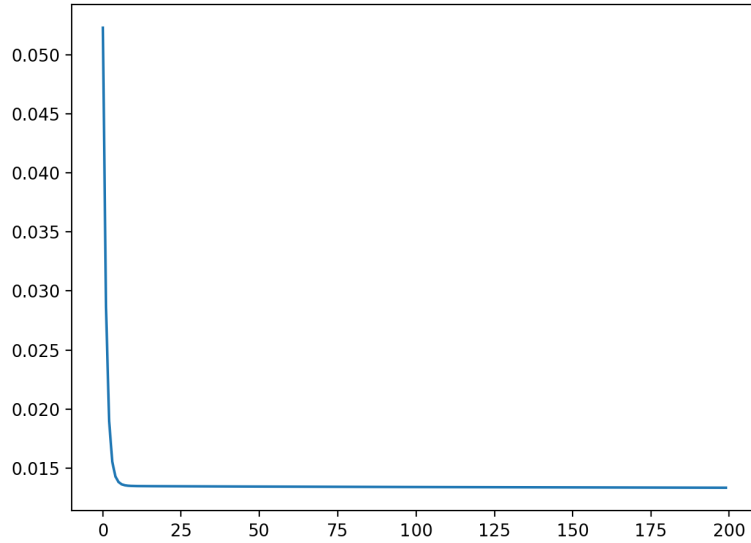
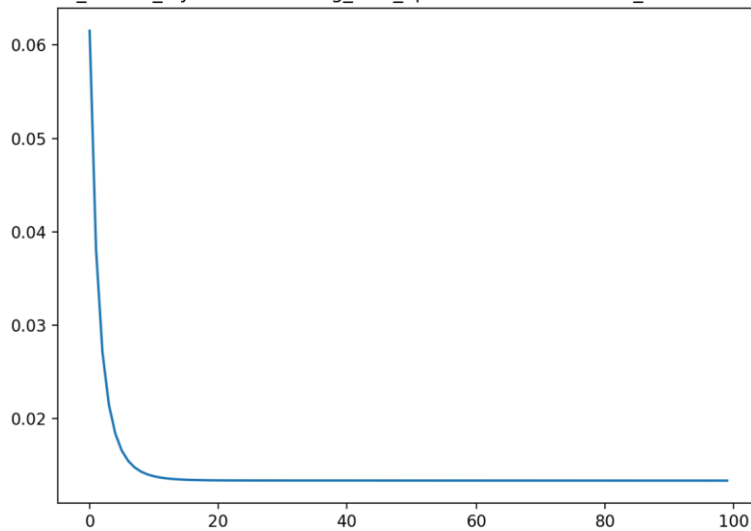


Nam Nguyen – npn190000

Display a diagram about MSE Error from each epochs  
num\_hidden\_layers: 2 learning\_rate\_options 0.010000 max\_iterations 200

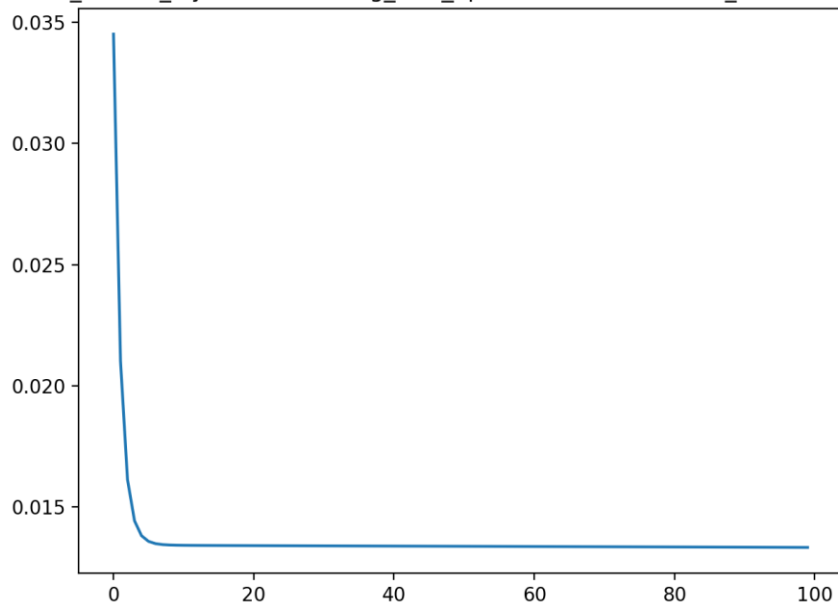


Display a diagram about MSE Error from each epochs  
num\_hidden\_layers: 2 learning\_rate\_options 0.010000 max\_iterations 100

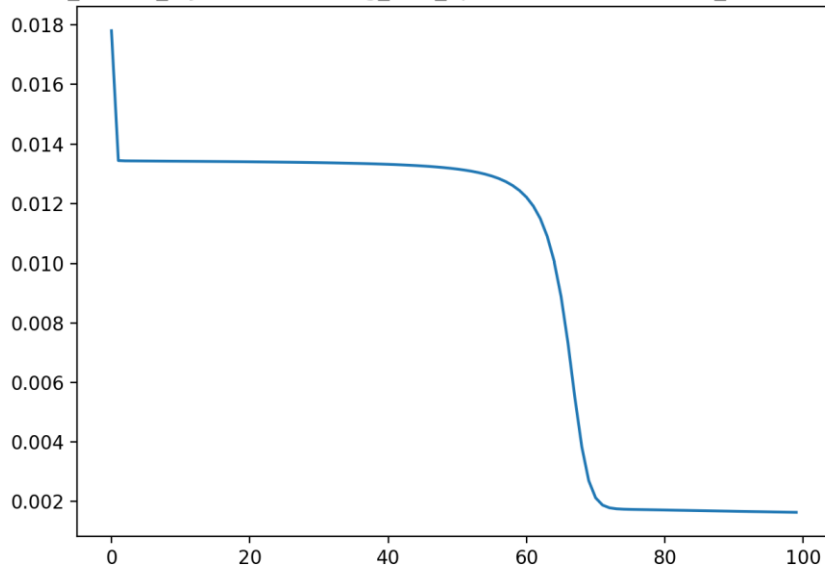


By both figures above. We can recognize that when increasing the interactions, the result of predict function is accurate with the real value result.

Display a diagram about MSE Error from each epochs  
num\_hidden\_layers: 3 learning\_rate\_options 0.010000 max\_iterations 100

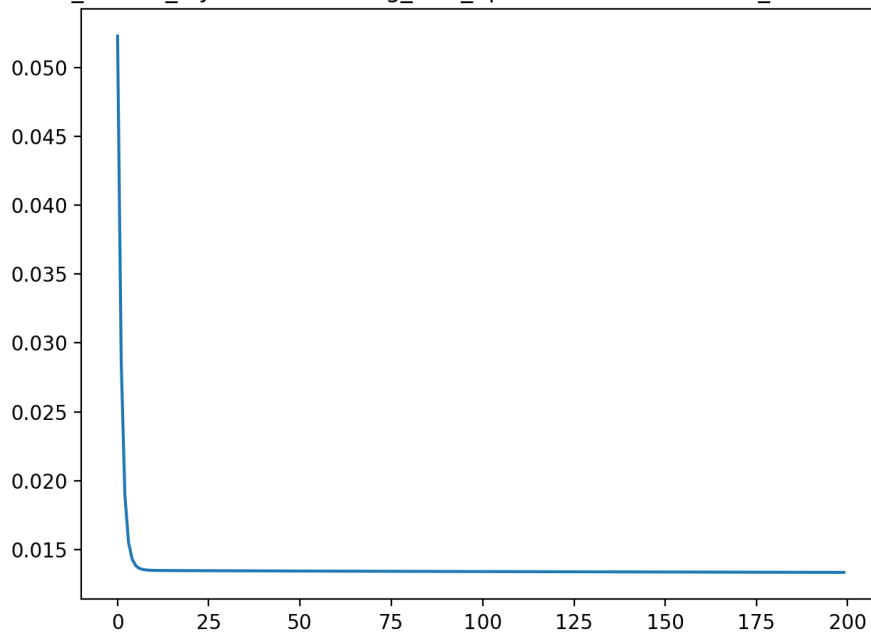


Display a diagram about MSE Error from each epochs  
num\_hidden\_layers: 3 learning\_rate\_options 0.100000 max\_iterations 100

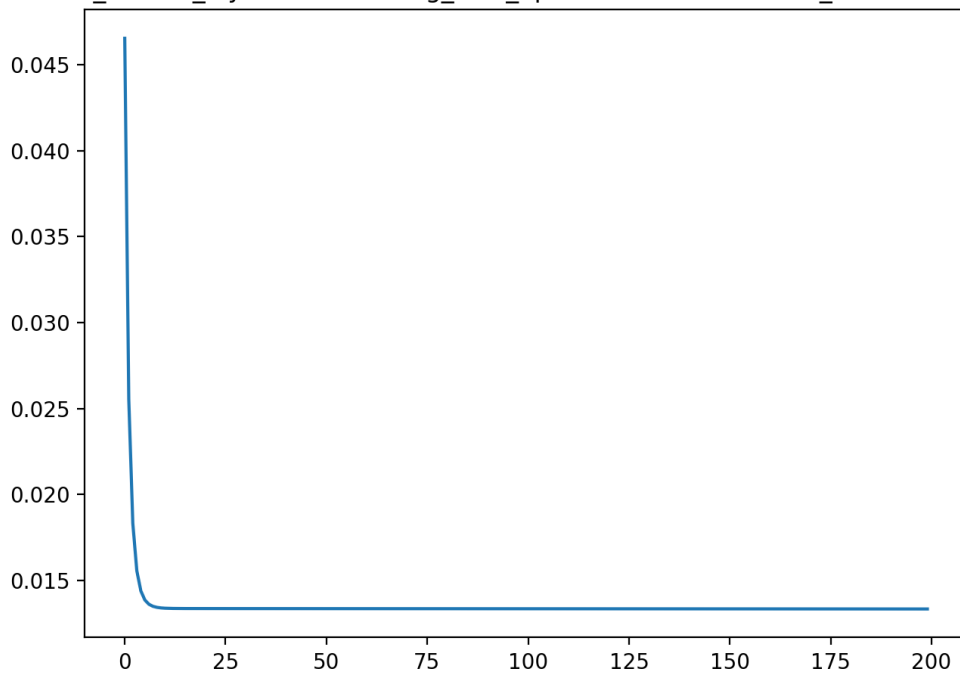


By both figures above we can recognize that when reduce learning rate, the fix\_update function work smoothly and make the data set of result have concave shape.

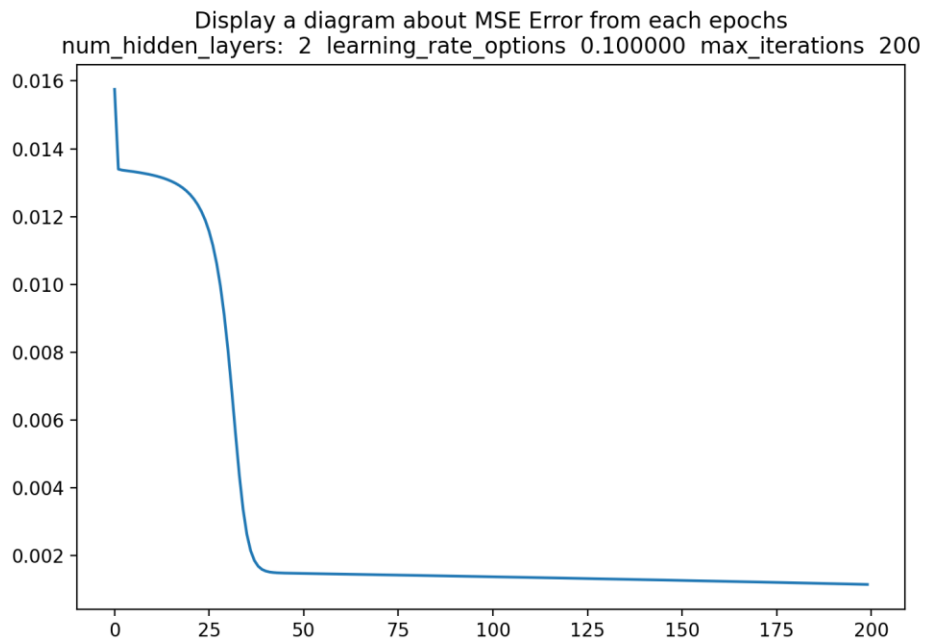
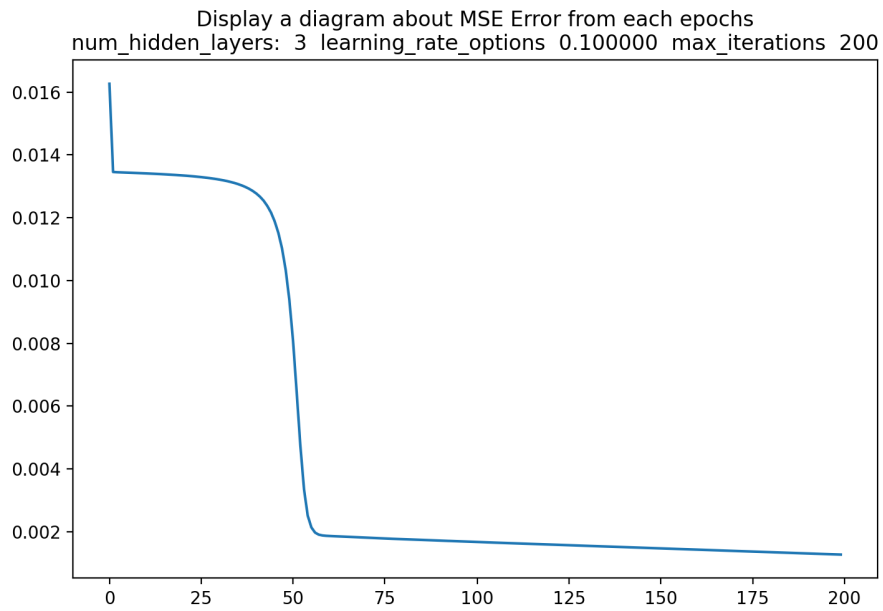
Display a diagram about MSE Error from each epochs  
num\_hidden\_layers: 2 learning\_rate\_options 0.010000 max\_iterations 200



Display a diagram about MSE Error from each epochs  
num\_hidden\_layers: 3 learning\_rate\_options 0.010000 max\_iterations 200

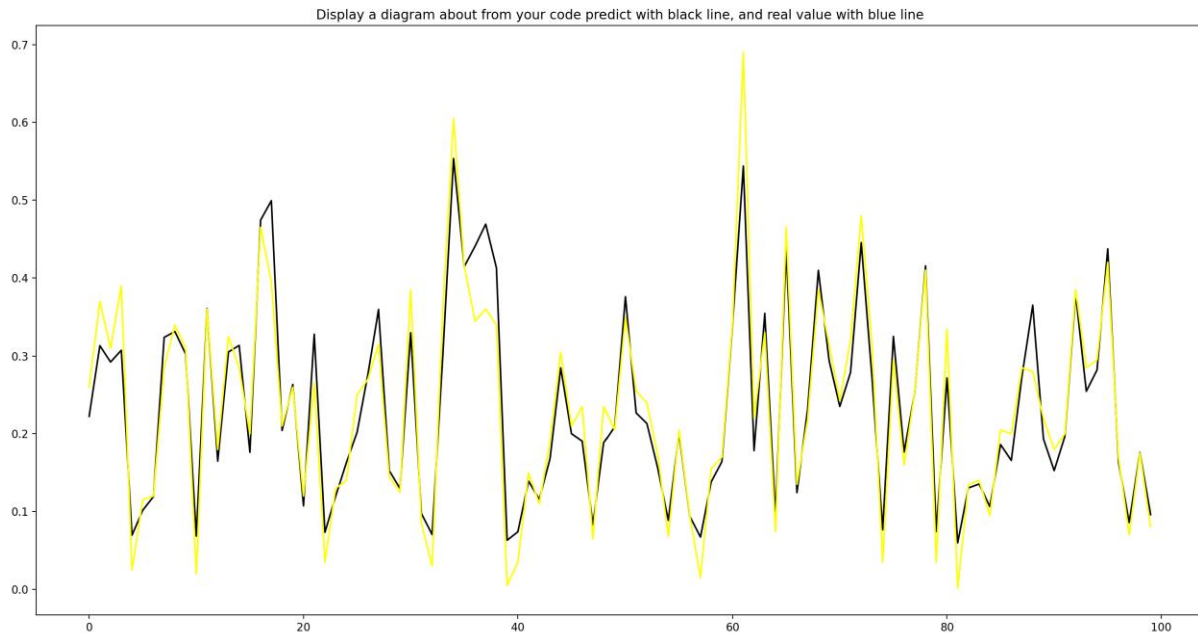


By both figures above we can recognize that when increase number hidden layer, the result is not really different.

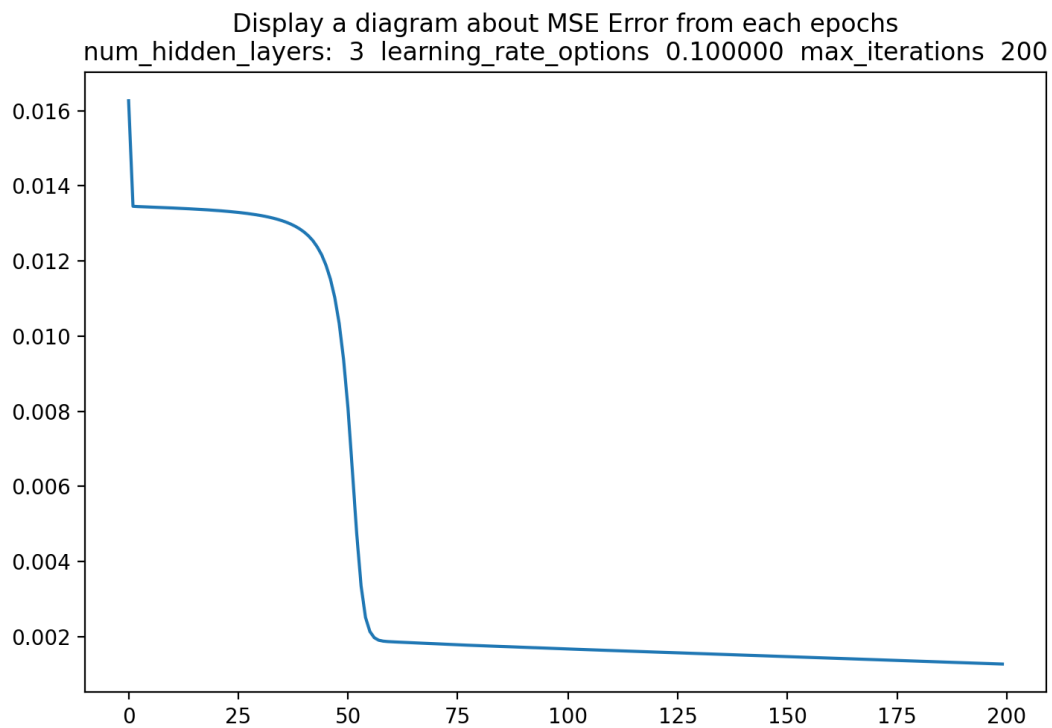


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By both figures above we can recognize that when increase number hidden layer, the result is different of beginning step, and stay same for later step.



```
label = "line Predict", color = 'black'  
label = "line Real Value", color = 'blue'
```



After processing of neural network. We can have plot show the actual result is accurate the predict function.

