

Exercise 1

Download and unzip [exercise 1.tar.gz](http://exercise.1.tar.gz) into your Deep Learning folder in your virtual machine. Lots of hints can be found in: <http://cs231n.github.io/neural-networks-case-study/>

Q1: Two-layer Neural Network

The IPython Notebook `two_layer_net.ipynb` will walk you through implementing a two-layer neural network on CIFAR-10. You will write a hard-coded 2-layer Neural Network, implement its backprop pass, and tune its hyperparameters.

This part of the exercise also has you implementing 1st and 2nd order methods for parameter updates. We have not covered this part in class yet, but it is part of the reading material for the next lesson and includes writing 2-4 lines of code

Q2: Modular Neural Network

The IPython Notebook `layers.ipynb` will walk you through a modular Neural Network implementation. You will implement the forward and backward passes of an affine layer and a ReLU layer. Later we will expand on these layers to include dropout, convolution and pooling layers.