## Assignment 2

## 1 Tensorflow Softmax

- (a) See file q1\_softmax.py
- (b) See file q1\_softmax.py
- (c) The purpose of placeholder is to hold our input data, and the purpose of feed dictionaries is to feed input values to placeholders. See implementation in file q1\_classifier.py
  - (d) See file q1\_classifier.py
- (e) See file q1\_classifier.py. After the model's  $train\_op$  is called, the prediction  $y\_hat$  is computed in the forward propagation and the gradient of loss with respect to W and b is computed during the back propagation. The variable W and b will be changed.

## 2 Neural Transition-Based Dependency Parsing