1. Prepare the train.txt Dataset for insertion into a RNN.
   1. The data is not in proper format. Each line lists a word and 3 tags. Your task is to form the words into sequences and form target sequences as well.
      1. Your target is the last (third) tag.
   2. Sentences are listed vertically. A blank line indicates a new sentence.
      1. Form the sentences into sequences
      2. Form the third tag into a sequence of targets.
   3. Encode the data to integers. You will need two dictionaries:
      1. Word to integer
      2. Target Category to integer
   4. You should turn in the functions and code you use to perform this task—I will use them on a hidden dataset to test your success at encoding. Padding is required—this data should be ready to put into a neural network.
2. Train a single direction RNN/LSTM/GRU (pick one) for accuracy.
   1. Provide the accuracy/precision/recall of EACH category
   2. Provide the overall Accuracy EXCLUDING the “O” tag
3. Repeat exercise #2 for a bi-directional network of the same type and compare your metrics