Assignment-3

Language Model:
A tensorflow DNN model was trained using the following parameters:
Embedding_size = 25,lstm with hidden dimensions = 18,optimizer - 'adam',
N_grams used were 5. Then I divided the data into batches of 100 each
and ran the model for about 10 epochs. Then the perplexity scores were
calculated using the formula and were printed in the respective text files.

Average training score: 395.89782142810435
Average test score: 550.0456336384723

Machine Translation Model:
Same as before after data tokenization and making word-to-index and
index-to-word dictionaries. Every sequence in both datasets was padded to
make them the same length through padding. Again a tensorflow model
was implemented with parameters:
Embedding_size:20,lstm with hidden dimension = 256,optimizer-'adam'.
The bleu scores were calculated using the formula and were reported for
both training and test data.

Corpus_bleu train(MT-1):3.8730069227219783e-156
Corpus_bleu test(MT-1):5.6735037164176805e-232
Corpus_bleu test(MT-2):2.6540068227211783e-232
Corpus_bleu train(MT-2):4.6540068227211783e-165

The scores were pretty bad probably because machine translation is simply
not feasible in such a short amount of time and requires a larger dataset as
well. Also for MT-2 the scores were probably more worse because the
language models weights that we used ran for less epochs.