Steps for successfully build and run the python code in Windows:

1. Install Python 3.9.7 from python.org and make sure to include Path in Environment variables.
2. Open start and type 'cmd'
3. Run Command Prompt
4. Install the following libraries by typing the following:
    - pip install numpy
    - pip install pandas
    - pip install matplotlib
    - pip install -U scikit-learn
    - pip install tensorflow
    - pip install keras
    - pip install wget
    - pip install tqdm
5. Change directory to where the **machineTranslation.py** file is present
6. For running part1.py, type in Command Prompt
    - python machineTranslation.py

Libraries used for part2.py:

1. os
2. string
3. matplotlib.pylab
4. pandas
5. numpy
6. pad_sequences
7. Tokenizer
8. read_excel
9. train_test_split
10. tqdm
11. wget

Note:

1. The **LogFile** contains all the combinations of the various parameters.
2. The graph folder contains subfolders to all the corresponding graphs of various combinations. The mapping of graphs and log file is:

    i^{th} row in the log file => run_id_{i – 2} graph
3. The dataset is huge and so various combinations are done. For the sake of running the code quickly, the parameters are commented in the same line.
4. During the execution of the code, another log file and graphs will be generated on the same folder based on the parameters mentioned in the main function.
5. Line 305: the for loop contains the number of number of rows for training (as dataset is huge), output sentence length and training size (based on stochastic training)
6. Line 308: contains the number of nodes in the hidden layer as there is only as single hidden layer.
7. Line 293: contains the statement parameter, i.e., the statement to be translated based on the training.