This Assignment is dedicated to the implementation of Haffman coding.

Matlab Tasks:

1. Design a Huffman code for an English Language character set. Calculate the average length of the code and compare it to the entropy of the English Language.

2. Encode a text file that contains an English paragraph (It will be given under a name Test1.txt) using the constructed codebook.

3. Design a Huffman code depending on the frequency of occurrence of English letters in the text file given.

4. Compare the total length of the encoded bits in both cases.

Deliverables:

● Your own developed Haffman encoder MATLAB code with all the previous steps clearly implemented as indicated above.
● The correctness of the code will be graded. A documentation of your code is required along with the code itself using MATLAB Live Editor.
● In the documentation you should explain clearly all your used modules (functions) and their corresponding inputs, outputs, internal variables, etc., and how they map to the Haffman algorithm.
● You should also display the relevant outputs of the modules in your live editor.
● This is a short video about the MATLAB live editor:
  https://www.youtube.com/watch?v=bu4g8ID3aEk