The Cesars Cypher Program

1. The program begins by importing the encrypted files. I have defined the letters of the alphabet below the imports. Next, I have the get_words function, which takes in a file as parameter where we generate a map of the words and do a flatmap to split the words. The words are then counted but mapping a lambda function and reduceByKey to count the number of words. The complete total words are summed and collectedAsMap values, which will be printed in the output In the get_char function, a flatmap of the input file is created. Next, the character count is calculated by using a map and lambda functions. The count is filtered to only show letters, therefore it omits the special characters. Then the frequency is calculated for the characters in the file and then printed to the output. The get shift function compares the character to the letter E to find the shift in the text and then it is printed to the output. The decrypt function will shift all the letters accordingly using the shift value passed in from the shift function. Word check will check if the word is valid using spell. Finally the result function will call all of the functions and pass the necessary parameters and then the results function is called 3 times for each file which will create its own result text file.
2. I have a terminaloutput file which shows the output that is seen in the terminal instead of screenshots
3. My implementation does show the required values since the text that is in the output file is easily readable after the shifts are made to the encrypted text.