Break the substitution cipher (A1, B1): [10 marks]

Each of you will be given a separate text file. The file will consist the ciphertext C (all capital letters, no space or punctuations marks), most frequent three characters, and some words that are present in the plain text P.

Your task is to decode the ciphertext i.e. find the plaintext P (contains only English **lowercase** alphabets) , find the key (Mapping between characters) and report the accuracy. In short, the output of the program will be:

1. The plaintext message in lower case letter (Even if you are not able to break the cipher completely, provide output as far you are able to decode, leave the remaining as they are present in the ciphertext C)

2. The mapping between P and C (for example: a = D, b = X, c = G,……)

3. Again encode the P to C and mention the accuracy. (like how many percent of characters are matched properly)

[bonus] If you can make your program dynamic, like for any given file it is able to complete the above-mentioned tasks.