The key to cracking the code to Vigenere’s Cipher is based on knowing that, in English, the letter ‘E’ appears significantly more often than all other letters (25% more) in the language. Knowing this we use two steps to “crack the code”.

Step one is to find the length of the password. This is done by “brute force”, comparing characters to characters a distance away and counting the number of times those characters match for each distance. To do this you need a routine that loops through the file many times, comparing character 1 to character 1+n to see if they match. If they do, you increment the counter for that distance. The loop will go through the file with a distance of 2, then 3, … up to however many times you think you need. The prof. does it 30 times in the .PDF example. In the end, you should see a pattern where at certain distance the count is 25% greater than the other counts. Those high counts represent E’s!

Once you have the length of the password, you reevaluate characters in the file again, but only those that re at a distance the length of the password. E.g. 0 vs , 13 , 26 vs, . Out of these counts you choose the letter with the most occurrences. This letter represents the first encrypted E. A little math will convert this encrypted letter back to the password letter. This routine should then compare the next set of letters E.g 1 vs , 14 vs, 27 vs, 40 vs, to find the next letter that is an encrypted E.

Repeat this for the length of the password and you will have the answer.