

CSc11300 Programming Languages Midterm Project

Fall 2017

November 10, 2017

Instructor: Ahmet C. Yuksel

Deadline: Nov 28, 2017

Using Python3, implement a Caesar cipher to a text file (*.txt) (not case sensitive) by assigning a random n value between $[-1,25]$. Your algorithm should use a text file as the input in the encrypting phase. Also it is required to select a special alphabetic character randomly, and leave that special key character unchanged. After encrypting the file, the program should produce two outputs, a key file containing the n value and the special character, and the encrypted text file. You should avoid encrypting the special character, white space, numerical characters, punctuation marks, and other UTF-8 symbols.

For the decryption phase, your program should take those two files generated by the encryption phase, read the necessary clues from the key file, and apply the decryption on the encrypted text file resulting the original text file (not case sensitive). You should come up with your own method to distinguish between the key character and an actual ciphered character.

Your program should successfully encrypt and decrypt the instructor's test files that contain at least 100 lines. External modules can be used, but if an external module is doing all the work, or you fail to understand/explain what does the module actually do, in your report, this will also be considered as copy/paste code. Sharing your codes with other teams are not allowed. You are supposed to let the instructor know who is in your team by Nov 14. Submit your code and minimum two page report by the end of the day on Nov 28.

Good luck.