

Assignment 1

Total Marks: 25

Weight: 2.5%

Submission: Please submit online in PDF format.

1. (3 marks) What is steganography and cryptography? Explain the difference.
2. (4 marks) What is the difference between the original Caesar Cipher without keyword and the Caesar Cipher with keyword? Explain how to crack the two cipher schemes.
3. (3 marks) Monoalphabetic vs. polyalphabetic cipher. Explain how the two work? What is the problem that polyalphabetic cipher aims to address over monoalphabetic cipher?
4. (10 marks) The following message was encrypted using the Vignere cypher with the keyword "HOUSE":

AVYUL HWLEE UCZLL LTYVI YOFJI ZSLNI ICUJH ZOCVC LGNVV KOSLL HHULE
EWHUV LOMWM ZBYWH LRHGA

Decrypt the message and show your working (you need to show the cipher alphabets that you use and how the ciphertext is split for mapping).
5. (5 marks) Briefly explain the idea of cracking Vigenere cipher.