# Section 1

1. Write a function to encrypt the following message using a **simple substitution** cipher:

   Hello world

2. Write a function to decrypt the previous ciphertext that was encrypted using the **simple substitution** cipher using the generated key.

3. Write a function to implement the **Caesar** cipher encryption using the shift-by-n for different values of keys. The function should take the Plaintext and the key as inputs and return the encrypted Ciphertext.

4. Write a function to implement the **Caesar** cipher decryption. The function should take the Ciphertext and the key as inputs and return the decrypted Plaintext.

5. Given that the **Caesar** cipher is used, find the plaintext from the ciphertext KHOORZRUOG

6. Write a function to encrypt the following message:

   attackxatxdawn

   using a **double transposition** cipher using row permutation (3 5 1 4 2) and the column permutation (1 3 2).