**Section 1**

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

Hello world

1. Write a function to decrypt the previous ciphertext that was encrypted using the **simple substitution** cipher using the generated key.
2. 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.
3. 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.
4. Given that the **Caesar** cipher is used, find the plaintext from the ciphertext KHOORZRUOG
5. 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).