

Cryptography Lab - Assignment 3

Vipul Panchal - 2021PIS5123

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1 Pseudocode for Playfair Cipher:

1. 6X6 Key-matrix Generation:

- Write the letters of the key without repetition followed by remaining letters in alphabetical order then followed by digits.

2. Encryption of the given plain-text:

- Make the length of plain-text even by appending "x".
- Divide plain-text into pairs of two letters.
- If both letters are same in a pair then insert "x" after the first letter.
- Now take the key-matrix and the plain-text and encode each of plain-text pair according to the following rules:
 - If both letters are in same row select the values to the right of both and if at the right-most position, then wrap around.
 - If both letter are in same column select the values at the bottom of both, and if at the bottom-most position, then wrap around
 - Else form a grid as the letter pair as the opposite corners and select values at the opposite end

3. Decryption of the given cipher-text:

- Divide cipher-text into pairs of two letters and perform the following operations on each pair.
 - If both letter are in same row select the values to the right of both else wrap around
 - If both letter are in same column select the values at the bottom of both else wrap around
 - Else take the grid which is formed by the two letters and select values at the opposite end