# EXERCISE 3

# PRAKTIKUM KRIPTOGRAFI

**Disusun oleh:**

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**PROGRAM STUDI S-1 TEKNIK INFORMATIKA**

**FAKULTAS MATEMATIKA DAN ILMU PENGETAHUAN ALAM**

**UNIVERSITAS PADJADJARAN**

**JATINANGOR**

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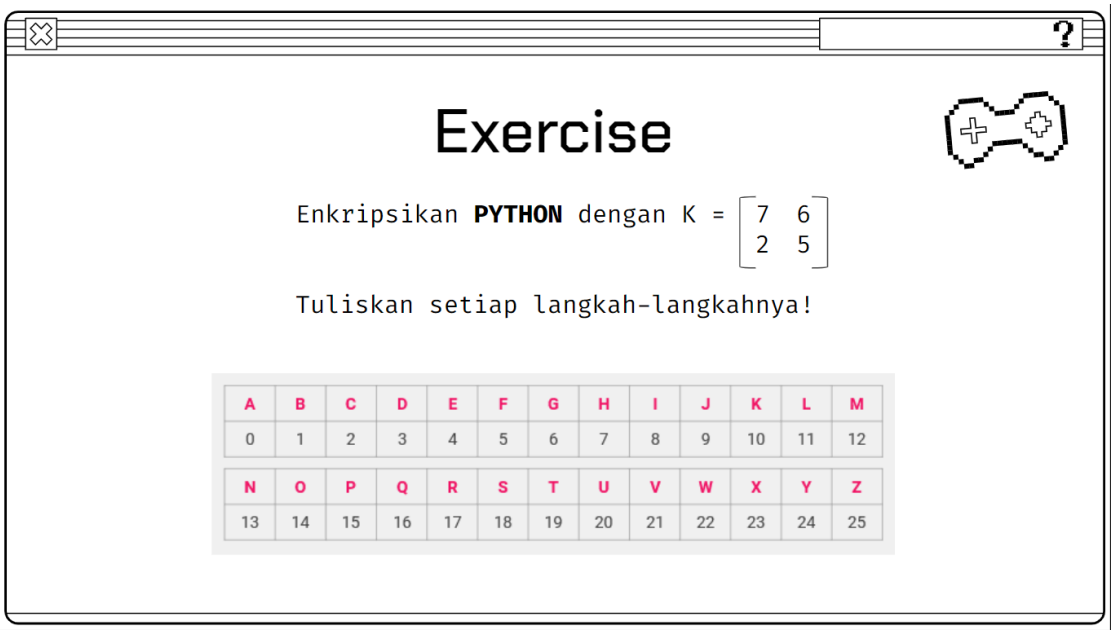


PlainText: PYTHON

Key: $\begin{bmatrix} 7 & 6 \\ 2 & 5 \end{bmatrix}$

Proses Enkripsi:

[P, Y, T, H, O, N] = [15, 24, 19, 7, 14, 13]
Matrix 1: [15, 24]
Matrix 2: [19, 7]
Matrix 3: [14, 13]

Determinan matrix kunci = (7*5) - (2*6) = 35 - 12 = 23 (prima dan koprima dengan 26)

Perkalian Matrix

$$\begin{bmatrix} 7 & 6 \\ 2 & 5 \end{bmatrix} \begin{bmatrix} 15 \\ 24 \end{bmatrix} = \begin{bmatrix} 249 \\ 150 \end{bmatrix} \bmod 26 = \begin{bmatrix} 15 \\ 20 \end{bmatrix}$$

$$\begin{bmatrix} 7 & 6 \\ 2 & 5 \end{bmatrix} \begin{bmatrix} 19 \\ 7 \end{bmatrix} = \begin{bmatrix} 175 \\ 73 \end{bmatrix} \bmod 26 = \begin{bmatrix} 19 \\ 21 \end{bmatrix}$$

$$\begin{bmatrix} 7 & 6 \\ 2 & 5 \end{bmatrix} \begin{bmatrix} 14 \\ 13 \end{bmatrix} = \begin{bmatrix} 176 \\ 93 \end{bmatrix} \bmod 26 = \begin{bmatrix} 20 \\ 15 \end{bmatrix}$$

[15, 20, 19, 21, 20, 15] = [P, U, T, V, U, P]
Hasil E(x): **PUTVUP**