

NAMA : AWANI TITIN SITUMORANG

NIM : 1815015107

KELAS : TI – C 2018

KRIPTOGRAFI

TUGAS I

Membuat enkripsi dan dekripsi menggunakan nama lengkap dengan Metode Caesar :

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25

➤ Enkripsi ($C_i = (P + K) \bmod 26$), dimana $K=3$.

A	W	A	N	I		T	I	T	I	N		S	I	T	U	M	O	R	A	N	G
D	Z	D	Q	L		W	L	W	L	Q		V	L	W	X	P	R	U	D	Q	J

- **Huruf A**
 $C_i = (0 + 3) \bmod 26$
 $= 3 \bmod 26$
 $= \text{"D"}$
- **Huruf W**
 $C_i = (22 + 3) \bmod 26$
 $= 25 \bmod 26$
 $= \text{"Z"}$
- **Huruf N**
 $C_i = (13 + 3) \bmod 26$
 $= 16 \bmod 26$
 $= \text{"Q"}$
- **Huruf I**
 $C_i = (8 + 3) \bmod 26$
 $= 11 \bmod 26$
 $= \text{"L"}$
- **Huruf T**
 $C_i = (19 + 3) \bmod 26$
 $= 22 \bmod 26$
 $= \text{"W"}$
- **Huruf S**
 $C_i = (18 + 3) \bmod 26$
 $= 21 \bmod 26$
 $= \text{"V"}$
- **Huruf M**
 $C_i = (12 + 3) \bmod 26$
 $= 15 \bmod 26$
 $= \text{"P"}$

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- **Huruf O**

$$\begin{aligned}Ci &= (14 + 3) \bmod 26 \\&= 17 \bmod 26 \\&= \text{“R”}\end{aligned}$$

- **Huruf R**

$$\begin{aligned}Ci &= (17 + 3) \bmod 26 \\&= 20 \bmod 26 \\&= \text{“U”}\end{aligned}$$

- **Huruf G**

$$\begin{aligned}Ci &= (6 + 3) \bmod 26 \\&= 8 \bmod 26 \\&= \text{“J”}\end{aligned}$$

- **Huruf U**

$$\begin{aligned}Ci &= (20 + 3) \bmod 26 \\&= 23 \bmod 26 \\&= \text{“X”}\end{aligned}$$

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➤ Deskripsi ($P_i = (C - K) \bmod 26$), dimana $K=3$.

D	Z	D	Q	L		W	L	W	L	Q		V	L	W	X	P	R	U	D	Q	J
A	W	A	N	I		T	I	T	I	N		S	I	T	U	M	O	R	A	N	G

- **Huruf D**

$$\begin{aligned}P_i &= (3 - 3) \bmod 26 \\&= 0 \bmod 26 \\&= \text{"A"}\end{aligned}$$

- **Huruf Z**

$$\begin{aligned}P_i &= (25 - 3) \bmod 26 \\&= 22 \bmod 26 \\&= \text{"W"}\end{aligned}$$

- **Huruf Q**

$$\begin{aligned}C_i &= (16 - 3) \bmod 26 \\&= 13 \bmod 26 \\&= \text{"N"}\end{aligned}$$

- **Huruf L**

$$\begin{aligned}C_i &= (11 - 3) \bmod 26 \\&= 11 \bmod 26 \\&= \text{"I"}\end{aligned}$$

- **Huruf W**

$$\begin{aligned}C_i &= (22 - 3) \bmod 26 \\&= 19 \bmod 26 \\&= \text{"T"}\end{aligned}$$

- **Huruf V**

$$\begin{aligned}C_i &= (21 - 3) \bmod 26 \\&= 18 \bmod 26 \\&= \text{"S"}\end{aligned}$$

- **Huruf P**

$$\begin{aligned}C_i &= (15 - 3) \bmod 26 \\&= 12 \bmod 26 \\&= \text{"M"}\end{aligned}$$

- **Huruf R**

$$\begin{aligned}C_i &= (17 - 3) \bmod 26 \\&= 14 \bmod 26 \\&= \text{"O"}\end{aligned}$$

- **Huruf U**

$$\begin{aligned}C_i &= (20 - 3) \bmod 26 \\&= 17 \bmod 26 \\&= \text{"R"}\end{aligned}$$

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- **Huruf J**

$$C_i = (9 - 3) \bmod 26$$

$$= 6 \bmod 26$$

$$= \text{"G"}$$

- **Huruf X**

$$C_i = (23 - 3) \bmod 26$$

$$= 20 \bmod 26$$

$$= \text{"U"}$$