

Kriptografi  
Praktikum 2



Nama Pembuat:

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FAKULTAS MATEMATIKA DAN ILMU PENGETAHUAN ALAM PROGRAM  
STUDI S-1 TEKNIK INFORMATIKA

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ENKRIPSIKAN NAMA LENGKAP ANDA MENGGUNAKAN  
AFFINE CIPHER

M. ILHAM SYAH R  $E(x) = (ax + b) \bmod 26$

$A = 9$   $B = 59$

$M = 12$   $(9 \cdot 12 + 59) \bmod 26 = 11$  L

$I = 8$   $(9 \cdot 8 + 59) \bmod 26 = 1$  B

$L = 11$   $(9 \cdot 11 + 59) \bmod 26 = 2$  C

$H = 7$   $(9 \cdot 7 + 59) \bmod 26 = 18$  S

$A = 0$   $(9 \cdot 0 + 59) \bmod 26 = 7$  H

$M = 12$   $(9 \cdot 12 + 59) \bmod 26 = 11$  L

$S = 18$   $(9 \cdot 18 + 59) \bmod 26 = 13$  N

$Y = 24$   $(9 \cdot 24 + 59) \bmod 26 = 15$  P

$A = 0$   $(9 \cdot 0 + 59) \bmod 26 = 7$  H

$H = 7$   $(9 \cdot 7 + 59) \bmod 26 = 18$  S

$R = 17$   $(9 \cdot 17 + 59) \bmod 26 = 4$  E

M. ILHAM SYAH R = L. BCSHL NPHS. E

# Exercise ROT 13

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

## Exercise

= CENXGVXH? XEVCERTENS U

PRAKTIKUM KRIPTOGRAFI



## Exercise SHIFT CHIPHER

HASKELL = BUMETFF

1. Enskripsikan Haskell dengan
- $K = 20$

$$E(x) = (x + K) \bmod 26$$

$$H = 7 \quad E(H) = (7 + 20) \bmod 26 = B$$

$$A = 0 \quad E(A) = (0 + 20) \bmod 26 = U$$

$$S = 18 \quad E(S) = (18 + 20) \bmod 26 = M$$

$$K = 10 \quad E(K) = (10 + 20) \bmod 26 = E$$

$$E = 4 \quad E(E) = (4 + 20) \bmod 26 = Y$$

$$L = 11 \quad E(L) = (11 + 20) \bmod 26 = F$$

$$L = 11 \quad E(L) = (11 + 20) \bmod 26 = F$$

## ETURF

1. Deskripsiikan ETURF dengan
- $K = 12$
- .

$$D(x) = (x - K) \bmod 26$$

$$E = 4 \quad D(E) = (4 - 12) \bmod 26 = S$$

$$T = 19 \quad D(T) = (19 - 12) \bmod 26 = H$$

$$U = 20 \quad D(U) = (20 - 12) \bmod 26 = I$$

$$R = 17 \quad D(R) = (17 - 12) \bmod 26 = F$$

$$F = 5 \quad D(F) = (5 - 12) \bmod 26 = T$$

ETURF = SHIFT

## Source Code

```
#include<iostream>

#include<string.h>

using namespace std;

void enkripsi()
{
    string plainteks, cipherteks;

    int i, k;

    char c;

    cout << "Ketikkan pesan: ";
    cin.ignore(); getline(cin, plainteks);
    cout << "Masukkan jumlah pergesaran (0-25):";
    cin >> k;

    cipherteks = ""; // inisialisasi cipherteks dengan null string
    for(i = 0; i < plainteks.length(); i++){
        c = plainteks[i];
        if(isalpha(c)){
            c = toupper(c);
            c = c - 65;
            c = (c + k) % 26; // enkripsi, geser sejauh k ke kanan
            c = c + 65;
        }
        cipherteks = cipherteks + c; // sambungkan ke cipherteks
    }

    cout << "Cipherteks: " << cipherteks << endl; // cetak cipherteks
}
```

```

void dekripsi()
{
    string plainteks, cipherteks;

    int i, k;

    char c;

    cout << "Ketikkan cipherteks: ";

    cin.ignore(); getline(cin, cipherteks);

    cout << "Masukkan jumlah pergesaran (0-25):";

    cin >> k;

    plainteks = ""; // inialisasi plainteks dengan null string
    for(i = 0; i < cipherteks.length(); i++){
        c = cipherteks[i];
        if(isalpha(c)){
            c = toupper(c);

            c = c - 65;

            if(c - k < 0)
                c = 26 + (c - k);

            else
                c = (c - k) % 26;

            c = c + 65;

            c = tolower(c); // plainteks dinyatakan sebagai huruf kecil
        }

        plainteks = plainteks + c; // sambungkan ke plainteks
    }

    cout << "Plainteks: " << plainteks << endl; // cetak plainteks
}

```

```

main()

```

```

{

```

```

int pil; bool stop;

stop = false;

while(!stop){

    cout << "Menu:" << endl;

    cout << "1. Enkripsi" << endl;

    cout << "2. Dekripsi" << endl;

    cout << "3. Exit" << endl;

    cout << "Pilih menu: ";

    cin >> pil;

    switch(pil){

        case 1: enkripsi(); break;

        case 2: dekripsi(); break;

        case 3: stop = true; break;

    }

}

}

```

```

PS C:\Users\HP GAMING\OneDrive\Desktop\Materi Kuliah\Kriptografi\Praktikum> & 'c:\Users\HP GAMING\.vscode\extensions\ms-vscode.cpptools-1.21.6-win32-x64\debugAd
apters\bin\WindowsDebugLauncher.exe' '--stdin=Microsoft-MIEngine-In-02ryx3go.k0d' '--stdout=Microsoft-MIEngine-Out-n1pxrqow.cwv' '--stderr=Microsoft-MIEngine-Err
or-klezyflo.hnr' '--pid=Microsoft-MIEngine-Pid-cnydltty.0xn' '--dbgExe=C:\mingw64\bin\gdb.exe' '--interpreter=mi'
Menu:
1. Enkripsi
2. Dekripsi
3. Exit
Pilih menu: 1
Ketikkan pesan: M ilham syah r
Masukkan jumlah pergesaran (0-25):59
Cipherteks: T PSOHT ZFHO Y
Menu:
1. Enkripsi
2. Dekripsi
3. Exit
Pilih menu: 

```

Link Repository

<https://github.com/ilhamsyhrdn/Shift-cipher.git>