Kriptografi

Praktikum 2

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UNIVERSITAS PADJADJARAN

FAKULTAS MATEMATIKA DAN ILMU PENGETAHUAN ALAM PROGRAM

STUDI S-1 TEKNIK INFORMATIKA

2024

ENKRIPSIKAN NAMA LENGKAP ANDA MENGGUNAKKAN
AFFINE CIPHER

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

A = 9 $\qquad$ 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

= C E N X G V X H Z   X E V C E B T E N S U

P R A K T I K U M   K R I P T O G R A F I

Kriptografi Tugas 2.

Exercise SHIFT CHIPHER

HASKELL = BUMEYFF

1. Enskripsikan Haskell dengan K = 20

$$E(x) = (x+k) \mod 26$$

H = 7   E(H) = (7+20) mod 26   = B

A = 0   E(A) = (0+20) mod 26   = U

S = 18   E(S) = (18+20) mod 26   = M

K = 10   E(K) = (10+20) mod 26   = E

E = 4   E(E) = (4+20) mod 26 :   Y

L = 11   E(L) = (11+20) mod 26 :   F

L = 11   E(L) = (11+20) mod 26 :   F

ETURF

1. Deskripsikan ETURF dengan k = 12.

$$D(x) = (x-k) \mod 26$$

E = 4   D(E) = (4-12) mod 26 = S

T = 19   D(T) = (19-12) mod 26 = H

U = 20   D(U) = (20-12) mod 26 = T

R = 17   D(R) = (17-12) mod 26 = F

F = 5   D(F) = (5-12) mod 26 = T

ETURF = SHIFT

Source Code

```cpp
#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
}
```

```cpp
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 = ""; // inisialisasi 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()
{
```

```cpp
    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: