PRACTICAL -3

Aim: Hill Cipher Encryption.

#include <stdio.h>

#include <string.h>

int main() {

unsigned int a[3][3] = {{6, 24, 1}, {13, 16, 10}, {20, 17, 15}};

unsigned int b[3][3] = {{8, 5, 10}, {21, 8, 21}, {21, 12, 8}};

unsigned int c[20], d[20];

char msg[20];

printf("Enter plain text: ");

scanf("%s", msg);

for (int i = 0; i < 3; i++) {

c[i] = msg[i] - 65;

printf("%d ", c[i]); }

for (int i = 0; i < 3; i++) {

int t = 0;

for (int j = 0; j < 3; j++) {

t = t + (a[i][j] \* c[j]); }

d[i] = t % 26; }

printf("\nEncrypted Cipher Text :");

for (int i = 0; i < 3; i++) {

printf(" %c", d[i] + 65); }

for (int i = 0; i < 3; i++) {

int t = 0;

for (int j = 0; j < 3; j++) {

t = t + (b[i][j] \* d[j]); }

c[i] = t % 26; }

printf("\nDecrypted Cipher Text :");

for (int i = 0; i < 3; i++) {

printf(" %c", c[i] + 65); }

return 0; }