CSA5122-CRYPTOGRAPHY FOR NETWORK AND SECURITY

LAB PROGRAMS EXECUTION

1.CAESER CIPHER

CODE :

#include <stdio.h>

#include <string.h>

#include <ctype.h>

void encrypt(char msg[], int key) {

for (int i = 0; msg[i] != '\0'; i++) {

if (isalpha(msg[i])) {

char base = isupper(msg[i]) ? 'A' : 'a';

msg[i] = (msg[i] - base + key) % 26 + base;

}

}

printf("Encrypted: %s\n", msg);

}

void decrypt(char msg[], int key) {

for (int i = 0; msg[i] != '\0'; i++) {

if (isalpha(msg[i])) {

char base = isupper(msg[i]) ? 'A' : 'a';

msg[i] = (msg[i] - base - key + 26) % 26 + base;

}

}

printf("Decrypted: %s\n", msg);

}

int main() {

char msg[100];

int key, choice;

printf("1. Encrypt\n2. Decrypt\nChoice: ");

scanf("%d", &choice);

getchar(); // Clear newline

printf("Enter message: ");

fgets(msg, sizeof(msg), stdin);

msg[strcspn(msg, "\n")] = '\0';

printf("Enter key (0-25): ");

scanf("%d", &key);

if (choice == 1)

encrypt(msg, key);

else if (choice == 2)

decrypt(msg, key);

else

printf("Invalid choice.\n");

return 0;

}

