#include <stdio.h>

#include <stdlib.h>

#include <string.h>

#include <time.h>

#define MAX\_PASSWORD\_LENGTH 16 // Maximum length of the password

#define MAX\_TRIES 10000 // Maximum number of tries to crack the password

// Struct to hold user information

typedef struct {

char name[50];

char address[100];

char phone[15];

char email[50];

char father\_name[50];

char mother\_name[50];

} UserInfo;

int main() {

char username[50], password[MAX\_PASSWORD\_LENGTH], entered\_password[MAX\_PASSWORD\_LENGTH];

char choice;

// Ask the user to set a password

printf("Enter your username: ");

scanf("%s", username);

printf("Please enter a pin (at least 4 digits): ");

scanf("%s", password);

// Ask the user if they want to crack the password

printf("Do you want to crack your password (y/n)? ");

scanf(" %c", &choice);

if (choice == 'y') {

int i;

char candidate[MAX\_PASSWORD\_LENGTH];

time\_t start\_time, end\_time;

double elapsed\_time;

// Record the start time

time(&start\_time);

// Try all numbers from 0 to 9999 as passwords

for (i = 0; i < MAX\_TRIES; i++) {

// Generate the next candidate password

sprintf(candidate, "%04d", i); // Pad with zeros to make it 4 digits long

// Check if the candidate password matches the actual password

if (strcmp(candidate, password) == 0) {

// Record the end time

time(&end\_time);

elapsed\_time = difftime(end\_time, start\_time);

printf("Password cracked successfully: %s\n", password);

printf("Elapsed time: %f seconds\n", elapsed\_time);

// Prompt the user to enter the password again to access user information

printf("Enter your password again to access your user information: ");

scanf("%s", entered\_password);

if (strcmp(entered\_password, password) == 0) {

// Save user information

UserInfo user\_info;

strcpy(user\_info.name, "Pemba Tamang");

strcpy(user\_info.address, "Soyambhu, Kathmandu");

strcpy(user\_info.phone, "9865488522");

strcpy(user\_info.email, "pemba@gmail.com");

strcpy(user\_info.father\_name, "Raja Tamang");

strcpy(user\_info.mother\_name, "Rani Tamang");

// Print the user information

printf("\nName: %s\n", user\_info.name);

printf("Address: %s\n", user\_info.address);

printf("Phone: %s\n", user\_info.phone);

printf("Email: %s\n", user\_info.email);

printf("Father's Name: %s\n", user\_info.father\_name);

printf("Mother's Name: %s\n", user\_info.mother\_name);

} else {

printf("Incorrect password. Access to user information denied.\n");

}

return 0;

}

// Print the current password attempt every 1000 tries

if (i % 1000 == 0) {

printf("Attempted password: %s\n", candidate);

}

}

printf("Unable to crack the password.\n");

} else {

printf("Exiting.\n");

}

return 0;

}