

ASSIGNMENT: 09

NAME: SYEDA FAIZA ASLAM

ROLL NO: CT-25064

SECTION: B

COURSE: CODE IN PLACE

TASKS:

QUESTION NO: 01

Write a C program to simulate a simple Sign-In / Sign-Up system using arrays of strings.

The program should initially store 3 predefined user accounts (each having an email and a password) and should allow expansion up to 5 users in total.

Requirements:

Store all email IDs and passwords in two separate 2D character arrays.

```
char emails[5][50];
```

```
char passwords[5][50];
```

Initialize the program with the following 3 predefined accounts:

Emails: ghufran@gmail.com, aina@gmail.com, Saif@gmail.com

Password: Hello12345, Onepieceisreal, xyz987654321

Question 1 – User Authentication System using Array of Strings

Tasks:

The program should display a menu to the user:

```
===== Welcome to the Login System =====
```

```
1. Sign In
```

```
2. Sign Up
```

```
Enter your choice:
```

Sign In:

Ask the user to enter their email and password.

If they match any existing stored credentials, display:

Sign in successful!
Otherwise, display:
Invalid email or password.
Question 1 – Continued

Tasks:

Sign Up:

If there are already 5 users, display:

User limit reached. Cannot register more users.

Otherwise:

Ask the user to enter a new email and password.

Validate the following:

The email must not already exist in the stored list.

The password must:

Be at least 8 characters long.

Contain both letters and numbers.

If both conditions are met:

Add the new email and password to the arrays.

Display:

Account created successfully! Please sign in now.

Otherwise, show the appropriate error message such as:

"Email already exists!"

"Password must be at least 8 characters long and alphanumeric!"

Question 1 – Continued

Your Code should cover all aspects detailed before.

Output screenshots should showcase these cases:

The program should allow a user to sign in successfully using:

Any of the predefined credentials, or

A newly created account after a successful sign-up.

It should also demonstrate cases where:

A sign-in fails because of incorrect credentials.

A sign-up fails because the email already exists or the password is invalid.

SOURCECODE:

```
#include<stdio.h>
#include<string.h>
int main(void)
{
    char emails[5][50]={
                                "ghufran@gmail.com",
                                "aina@gmail.com",
                                "Saif@gmail.com"
                                };

    char pass[5][50]={
                                "Hello12345",
                                "Onepieceisreal",
                                "xyz987654321"
                                };

    char e[50];
    char p[50];
    int c;
    int tot_user=3;
    printf("=====Welcome to the login system=====\\n");
    printf("1.Sign in\\n2.Sign up\\n\\nEnter your choice: ");
    scanf("%d",&c);
    int t=0;
    if(c==1)
    {
        printf("\\nEnter your email: ");
        scanf("%s",e);
        printf("Enter your password: ");
        scanf("%s",p);
        for(int i=0; i<3; i++)
        {
            if(strcmp(e,emails[i])==0 && strcmp(p,p[i])==0 )
            {
                t=1;
            }
        }
    }
}
```

```

                break;
            }
        }
        if(t)
        {
            printf("Login successfule:");
        }
        else
        {
            printf("\n\nInvalid credentials... Failed to login");
        }
    }
else if(c==2)
{
    for(int i=tot_user; i<5; i++)
    {
        int emailexists=0;
        printf("Enter new email: ");
        scanf("%s",e);
        for(int i=0; i<tot_user; i++)
        {
            if(strcmp(e,emails[i])==0)
            {
                printf("Email already exist!\n");
                emailexists=1;
                break;
            }
        }
        if(emailexists)
        {
            continue;
        }
        printf("\nEnter new password: ");
        scanf("%s",p);
        int hasletter=0, hasdigit=0;
        for(int i=0; p[i]; i++)

```

```

        {
            if((p[i]>='a' && p[i]<='z') || (p[i]>='A' && p[i]<='Z'))
            {
                hasletter=1;
            }
            else if(p[i]>='0' && p[i]<='9')
            {
                hasdigit=1;
            }
        }

        if(strlen(p)>=8 && hasletter && hasdigit)
        {
            strcpy(emails[tot_user],e);
            strcpy(pass[tot_user],p);
            tot_user++;
            printf("\n\nAccount created successfully...Please
Sign in now:\n");
        }
    }
    if(tot_user>5)
    {
        printf("User limit reached can not register more
users:\n");
    }
}
else
{
    printf("Invalid option");
}
return 0;
}

```

OUTPUT:

```
C:\Users\AA\Desktop\PF ASSIGNMENT PRACTICALS LABS\new.exe

=====Welcome to the login system=====
1.Sign in
2.Sign up

Enter your choice: 1

Enter your email: ghufran@gmail.com
Enter your password: Hello12345
Login successfully:
-----
Process exited after 11.49 seconds with return value 0
Press any key to continue . . .
```

```
C:\Users\AA\Desktop\PF ASSIGNMENT PRACTICALS LABS\new.exe

=====Welcome to the login system=====
1.Sign in
2.Sign up

Enter your choice: 1

Enter your email: ghufran@gmail.com
Enter your password: hello12345

Invalid credentials... Failed to login
-----
Process exited after 13.6 seconds with return value 0
Press any key to continue . . .
```

C:\Users\AA\Desktop\PF ASSIGNMENT PRACTICALS LABS\new.exe

```
=====Welcome to the login system=====
1.Sign in
2.Sign up

Enter your choice: 2
Enter new email: faiza.com

Enter new password: 12345hgaf1

Account created successfully...Please Sign in now:
Enter new email: █
```

C:\Users\AA\Desktop\PF ASSIGNMENT PRACTICALS LABS\new.exe

```
=====Welcome to the login system=====
1.Sign in
2.Sign up

Enter your choice: 1

Enter your email: ghufraan@gmail.com
Enter your password: Hello12345
Login successfully:
-----
Process exited after 11.49 seconds with return value 0
Press any key to continue . . .
```