

Exp: 12b) Aim: Two-Level Directory

Program Code:

```
#include <stdio.h>
#include <string.h>

struct File {
    char name[100];
};

struct User {
    char name[100];
    struct File files[10];
    int filecount;
};

int main() {
    struct User users[10];
    int usercount = 0;
    int choice;
    char uname[100], fname[100];

    while (1) {
        printf("\n1. Create User\n2. Create File\n3. Display Directory\n4. Exit\n");
        printf("Enter your choice: ");
        scanf("%d", &choice);

        switch (choice) {
            case 1:
                printf("Enter user name: ");
                scanf("%s", users[usercount].name);
                users[usercount].filecount = 0;
                usercount++;
                printf("User created.\n");
                break;

            case 2:
                printf("Enter user name: ");
                scanf("%s", uname);
                for (int i = 0; i < usercount; i++) {
                    if (strcmp(uname, users[i].name) == 0) {
                        printf("Enter file name: ");
                        scanf("%s", fname);
                        strcpy(users[i].files[users[i].filecount++].name, fname);
                        printf("File created.\n");
                        goto skip2;
                    }
                }
                printf("User not found.\n");
                break;

            case 3:
                for (int i = 0; i < usercount; i++) {
                    printf("\nUser: %s\nFiles:\n", users[i].name);
                    for (int j = 0; j < users[i].filecount; j++) {
                        printf("  %s\n", users[i].files[j].name);
                    }
                }
                break;

            case 4:
                return 0;
        }

        skip2: ;
    }
}
```

Output:

```
1. Create User
2. Create File
3. Display Directory
4. Exit
Enter your choice: 1
Enter user name: alic
User created.

1. Create User
2. Create File
3. Display Directory
4. Exit
Enter your choice: 1
Enter user name: bob
User created.

1. Create User
2. Create File
3. Display Directory
4. Exit
Enter your choice: 2
Enter user name: alic
Enter file name: project1.txt
File created.

1. Create User
2. Create File
3. Display Directory
4. Exit
Enter your choice: 2
Enter user name: bob
Enter file name: notes.txt
File created.

1. Create User
2. Create File
3. Display Directory
4. Exit
Enter your choice: 3

User: alic
Files:
  project1.txt

User: bob
Files:
  notes.txt
```