

**EXP NO:** 12 **FILE ORGANIZATION TECHNIQUE-SINGLE AND TWO LEVEL**

**DATE:2/4/25**

**PROGRAM:**

**singleLevel.c**

#include <stdio.h>

#define MAX\_FILES 10

void singleLevelDirectory() {

    int n;

    char fileNames[MAX\_FILES][50];

    printf("Enter the number of files in the directory: ");

    scanf("%d", &n);

    printf("Enter the names of the files:\n");

    for (int i = 0; i < n; i++) {

        printf("File %d: ", i + 1);

        scanf("%s", fileNames[i]);

    }

    printf("\nFiles in the directory:\n");

    for (int i = 0; i < n; i++) {

        printf("%s\n", fileNames[i]);

    }

}

int main() {

    singleLevelDirectory();

    return 0;

}

**OUTPUT:**

Enter the number of files in the directory: 2

Enter the names of the files:

File 1: base

File 2: bin

Files in the directory:

base

bin

**PROGRAM:**

**twoLevel.c**

#include <stdio.h>

#define MAX\_DIRECTORIES 10

#define MAX\_SUBDIRECTORIES 10

#define MAX\_FILES 10

void twoLevelDirectory() {

    int n, m, k;

    char dirNames[MAX\_DIRECTORIES][50];

    char subDirNames[MAX\_DIRECTORIES][MAX\_SUBDIRECTORIES][50];

    char fileNames[MAX\_DIRECTORIES][MAX\_SUBDIRECTORIES][MAX\_FILES][50];

    printf("Enter the number of directories: ");

    scanf("%d", &n);

    for (int i = 0; i < n; i++) {

        printf("Enter the name of directory %d: ", i + 1);

        scanf("%s", dirNames[i]);

        printf("How many subdirectories for %s: ", dirNames[i]);

        scanf("%d", &m);

        for (int j = 0; j < m; j++) {

            printf("Enter the name of subdirectory %d in %s: ", j + 1, dirNames[i]);

            scanf("%s", subDirNames[i][j]);

            printf("How many files in %s: ", subDirNames[i][j]);

            scanf("%d", &k);

            for (int l = 0; l < k; l++) {

                printf("Enter the name of file %d in %s/%s: ", l + 1, dirNames[i], subDirNames[i][j]);

                scanf("%s", fileNames[i][j][l]);

            }

        }

    }

    printf("\nFiles in the directories and subdirectories:\n");

    for (int i = 0; i < n; i++) {

        printf("\nDirectory: %s\n", dirNames[i]);

        for (int j = 0; j < MAX\_SUBDIRECTORIES && subDirNames[i][j][0] != '\0'; j++) {

            printf("\tSubdirectory: %s\n", subDirNames[i][j]);

            for (int l = 0; l < MAX\_FILES && fileNames[i][j][l][0] != '\0'; l++) {

                printf("\t\tFile: %s\n", fileNames[i][j][l]);

            }

        }

    }

}

int main() {

    twoLevelDirectory();

    return 0;

}

**OUTPUT:**

Enter the number of directories: 2

Enter the name of directory 1: code

How many subdirectories for code: 2

Enter the name of subdirectory 1 in code: python

How many files in python: 2

Enter the name of file 1 in code/python: main.py

Enter the name of file 2 in code/python: fib.py

Enter the name of subdirectory 2 in code: java

How many files in java: 2

Enter the name of file 1 in code/java: main.java

Enter the name of file 2 in code/java: stairs.java

Enter the name of directory 2: game

How many subdirectories for game: 1

Enter the name of subdirectory 1 in game: coc

How many files in coc: 2

Enter the name of file 1 in game/coc: clashOfClans

Enter the name of file 2 in game/coc: clashRoyals

Files in the directories and subdirectories:

Directory: code

Subdirectory: python

File: main.py

File: fib.py

Subdirectory: java

File: main.java

File: stairs.java

Directory: game

Subdirectory: coc

File: clashOfClans

File: clashRoyals