

Ex. no: 11b

Name : Ashish P Shaji

Roll NO : 230701041

### File Organization Technique- Single and Two level directory

AIM:

To implement File Organization Structures in C are

- a. Single Level Directory
- b. Two-Level Directory
- c. Hierarchical Directory Structure
- d. Directed Acyclic Graph Structure

A. Single Level

Directory

ALGORITHM

1. Start
2. Declare the number, names and size of the directories and file names.
3. Get the values for the declared variables.
4. Display the files that are available in the directories.
5. Stop.

PROGRAM:

```

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

struct Directory {
    char dname[10], fname[10][10];
    int fcnt;
};

int main() {
    struct Directory dir;
    int i;

    dir.fcnt = 0;

    printf("Enter name of directory: ");
    scanf("%s", dir.dname);

    printf("Enter number of files: ");
    scanf("%d", &dir.fcnt);

    printf("Enter file names:\n");
    for (i = 0; i < dir.fcnt; i++)
        scanf("%s", dir.fname[i]);

    printf("\nDirectory Name: %s\n", dir.dname);
    printf("Files:\n");
    for (i = 0; i < dir.fcnt; i++)
        printf("%s\n", dir.fname[i]);

    return 0;
}

```

OUTPUT :

```

Enter name of directory: student
Enter number of files: 3
Enter file names:
file1
file2
file3

Directory Name: student
Files:
file1
file2
file3

```

B. Two-level directory Structure

ALGORITHM:

1. Start

2. Declare the number, names and size of the directories and subdirectories and file names.
3. Get the values for the declared variables.
4. Display the files that are available in the directories and subdirectories.
5. Stop.

PROGRAM:

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

struct Directory {
    char dname[10], fname[10][10];
    int fcnt;
};

int main() {
    struct Directory dir[10];
    int i, j, count;

    printf("Enter number of users: ");
    scanf("%d", &count);

    for (i = 0; i < count; i++) {
        printf("Enter name of user %d: ", i + 1);
        scanf("%s", dir[i].dname);

        printf("Enter number of files in %s: ", dir[i].dname);
        scanf("%d", &dir[i].fcnt);

        printf("Enter file names:\n");
        for (j = 0; j < dir[i].fcnt; j++)
            scanf("%s", dir[i].fname[j]);
    }

    printf("\nDirectory Structure:\n");
    for (i = 0; i < count; i++) {
        printf("\nUser: %s\n", dir[i].dname);
        printf("Files:\n");
        for (j = 0; j < dir[i].fcnt; j++)
            printf("%s\n", dir[i].fname[j]);
    }

    return 0;
}
```

OUTPUT :

```
Enter number of users: 2
Enter name of user 1: diwi
Enter number of files in diwi: 2
Enter file names:
assignment
report
Enter name of user 2: stea
Enter number of files in stea: 1
Enter file names:
code
```

Directory Structure:

```
User: diwi
Files:
assignmentreport
report
```

```
User: stea
Files:
code
```