# Ex No.: 12 FILE ORGANIZATION TECHNIQUE

Date : 24.04.2025

## Aim :

To implement File Organization Structures in C are:

- Single Level Directory
- Two-Level Directory

## a. Single Level Directory :

## Code:

```
#include <stdio.h>

#include <string.h>

struct File {

    char name[20];

    int size;

};

int main() {

    int n, i;

    struct File files[20];

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

    scanf("%d", &n);

    for (i = 0; i < n; i++) {

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

        scanf("%s", files[i].name);

        printf("Enter size of file %d: ", i + 1);

        scanf("%d", &files[i].size);
```

```
    }
    printf("\nFiles in the directory:\n");
    printf("Name\tSize\n");
    for (i = 0; i < n; i++) {
        printf("%s\t%d KB\n", files[i].name, files[i].size);
    }
    return 0;
}
```

**Output:**

```
Enter the number of files: 3
Enter name of file 1: A
Enter size of file 1: 17
Enter name of file 2: B
Enter size of file 2: 7
Enter name of file 3: C
Enter size of file 3: 12

Files in the directory:
Name    Size
A       17 KB
B       7 KB
C       12 KB
```

**Result:**

Thus the implementation of File Organization technique for Single level Directory has been executed successfully.

## b. Two-Level Directory :

### Code:

```
#include <stdio.h>
#include <string.h>
struct File {
    char name[20];
    int size;
};
struct Directory {
    char name[20];
    int fileCount;
    struct File files[20];
};
int main() {
    int dirCount, i, j;
    struct Directory dirs[10];

    printf("Enter the number of directories: ");
    scanf("%d", &dirCount);

    for (i = 0; i < dirCount; i++) {
        printf("\nEnter name of directory %d: ", i + 1);
        scanf("%s", dirs[i].name);
        printf("Enter number of files in directory '%s': ", dirs[i].name);
        scanf("%d", &dirs[i].fileCount);
```

```
        for (j = 0; j < dirs[i].fileCount; j++) {
            printf("Enter name of file %d in directory '%s': ", j + 1, dirs[i].name);
            scanf("%s", dirs[i].files[j].name);
            printf("Enter size of file %d: ", j + 1);
            scanf("%d", &dirs[i].files[j].size);
        }
    }
    printf("\nDirectory Structure:\n");
    for (i = 0; i < dirCount; i++) {
        printf("\nDirectory: %s\n", dirs[i].name);
        printf("Files:\n");
        printf("Name\tSize\n");
        for (j = 0; j < dirs[i].fileCount; j++) {
            printf("%s\t%d KB\n", dirs[i].files[j].name, dirs[i].files[j].size);
        }
    }
    return 0;
}
```

**Output:**

```
Enter the number of directories: 2

Enter name of directory 1: Dir1
Enter number of files in directory 'Dir1': 2
Enter name of file 1 in directory 'Dir1': AA
Enter size of file 1: 12
Enter name of file 2 in directory 'Dir1': AB
Enter size of file 2: 16

Enter name of directory 2: Dir2
Enter number of files in directory 'Dir2': 1
Enter name of file 1 in directory 'Dir2': AAA
Enter size of file 1: 9

Directory Structure:

Directory: Dir1
Files:
Name    Size
AA      12 KB
AB      16 KB

Directory: Dir2
Files:
Name    Size
AAA     9 KB
```

**Result:**

Thus the implementation of File Organization technique for Two-level Directory has been executed successfully.