

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
- a.Hierarchical Directory Structure
- a.Directed Acyclic Graph Structure

a.Single Level**Directory Program****code :**

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

    char dname[10],
    fname[10][10]; int fcnt;
} dir;

int
main() {
    int i;
    printf("Enter name of
    directory: "); scanf("%s",
    dir.dname); printf("Enter
    number of files: "); scanf("%d",
    &dir.fcnt);

    for(i = 0; i < dir.fcnt; i++) {
        printf("Enter file name %d: ", i
        + 1); 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;
}
```

```
Enter name of directory: root
Enter number of files: 2
Enter file name 1: first.txt
Enter file name 2: second.txt

Directory Name: root
Files:
    first.txt
    second.txt
```

OUTPUT :

a.Two-level directory

Structure Program

code:

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

    char dname[10],
        fname[10][10]; int fcnt;
} dir[10];
int main() {

    int i, j, ucnt;
    printf("Enter the name of root
directory: "); char root[10];
    scanf("%s", root);

    printf("How many users (directories under %s): ",
root); scanf("%d", &ucnt);

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

        printf("How many files for %s: ",
dir[i].dname); scanf("%d", &dir[i].fcnt);
```

```

        for(j = 0; j < dir[i].fcnt; j++) {
            printf("Enter file name %d under %s: ", j + 1,
                dir[i].dname); scanf("%s", dir[i].fname[j]);
        }
    }

    printf("\nDirectory Structure:

\n"); printf("Root Directory:
%s\n", root);

    for(i = 0; i < ucnt; i++) {
        printf(" User Directory: %s\n",
            dir[i].dname); for(j = 0; j < dir[i].fcnt; j+
            +) {
            printf(" File: %s\n", dir[i].fname[j]);
        }
    }

    return 0;
}

```

```

Enter the name of root directory: root
How many users (directories under root): 1
Enter name of user directory 1: user_1
How many files for user_1: 2
Enter file name 1 under user_1: first.txt
Enter file name 2 under user_1: second.txt

Directory Structure:
Root Directory: root
User Directory: user_1
File: first.txt
File: second.txt

```

OUTPUT :