Ex. No. 12(a)	FILE ORGANIZATION TECHNIQUE – SINGLE AND TWO LEVEL DIRECTORY
Date: 17.04.2025	

Aim:

To implement File Organization Structures in C - Single Level Directory and Two Level Directory

a) SINGLE-LEVEL DIRECTORY

Program:

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

struct File {
char name[20];
  int size;
};

int main() {    struct
File files[20];    int n,
i;

  printf("Enter 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 Single Level Directory:\n");
printf("File Name\tSize\n");    for (i = 0; i < n;
i++) {
     printf("%s\t\t%d KB\n", files[i].name, files[i].size);
  }

  return 0;
}
```

Output:

```
Enter number of files: 3
Enter name of file 1: file1.txt
Enter size of file 1: 100
Enter name of file 2: data.csv
Enter size of file 2: 200
Enter name of file 3: report.pdf
Enter size of file 3: 300

Files in Single Level Directory:
File Name   Size
file1.txt       100 KB
data.csv        200 KB
report.pdf      300 KB
```

b) TWO-LEVEL DIRECTORY

Program:

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

struct File {
   char name[20];
};

struct Directory {
char user[20];
struct File files[10];
int fileCount;
};

int   main()   {            struct
Directory dirs[10];     int n,
i, j;

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

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

```
        for (j = 0; j < dirs[i].fileCount; j++) {            printf("Enter name of
file %d for user %s: ", j + 1, dirs[i].user);            scanf("%s",
dirs[i].files[j].name);
        }
    }

    printf("\nTwo-Level Directory Structure:\n");
for (i = 0; i < n; i++) {        printf("\nUser: %s\n",
dirs[i].user);        printf("Files: ");        for (j = 0; j
< dirs[i].fileCount; j++) {
            printf("%s ", dirs[i].files[j].name);
        }
        printf("\n");
    }

    return 0;
}
```

Output:

Result:

Thus, the single-level and two-level directory program was implemented successfully.