

**Program 8: Simulate following File Organization Techniques:  
a) Single level directory b) Two level directory**

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

#define MAX_FILES 100
#define MAX_NAME_LENGTH 20

// Structure to represent a file
typedef struct {
    char name[MAX_NAME_LENGTH];
    int parent_index;
} File;

// Function prototypes
void singleLevelDirectory();
void twoLevelDirectory();

int main() {
    printf("Simulating Single Level Directory\n");
    singleLevelDirectory();

    printf("\nSimulating Two Level Directory\n");
    twoLevelDirectory();

    return 0;
}

// Function to simulate single level directory
void singleLevelDirectory() {
    File files[MAX_FILES];
    int file_count = 0;
```

```
// Adding files to the directory
```

```
strcpy(files[file_count].name, "file1.txt");  
files[file_count++].parent_index = -1;
```

```
strcpy(files[file_count].name, "file2.txt");  
files[file_count++].parent_index = -1;
```

```
// Listing files
```

```
printf("Files in the directory:\n");  
for (int i = 0; i < file_count; i++) {  
    printf("%s\n", files[i].name);  
}  
}
```

```
// Function to simulate two level directory
```

```
void twoLevelDirectory() {  
    File files[MAX_FILES];  
    int file_count = 0;
```

```
// Adding files to directories
```

```
strcpy(files[file_count].name, "file1.txt");  
files[file_count++].parent_index = 0; // Directory 1
```

```
strcpy(files[file_count].name, "file2.txt");  
files[file_count++].parent_index = 0; // Directory 1
```

```
strcpy(files[file_count].name, "file3.txt");  
files[file_count++].parent_index = 1; // Directory 2
```

```

// Listing files in directories
printf("Files in directory 1:\n");
for (int i = 0; i < file_count; i++) {
    if (files[i].parent_index == 0) {
        printf("%s\n", files[i].name);
    }
}

printf("\nFiles in directory 2:\n");
for (int i = 0; i < file_count; i++) {
    if (files[i].parent_index == 1) {
        printf("%s\n", files[i].name);
    }
}
}

```

### Output:

```

krishna@ubuntu:~$ cc program8.c
krishna@ubuntu:~$ ./a.out
Simulating Single Level Directory
Files in the directory:
file1.txt
file2.txt

Simulating Two Level Directory
Files in directory 1:
file1.txt
file2.txt

Files in directory 2:
file3.txt

```