

Ex. No.: 12  
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## 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 <stdlib.h>
#include <graph.h>
Void main()
{
    int gd=DETECT,gm,count,i,j,mid,
        cin=0;
    char fname[10][20];
    intgraph(gd,gm,"C:\\tcl\\vgi");
    cleardevice();
    setbkcolor(Green);
    puttext("Enter the number of fiber");
    scanf("%d",&count);
    for(i=0;i<count;i++)
        cleardevice();
```

setcolor(GREEN)

printf("Enter the file name",  
      it);

scanf("%s", fname);

setfillstyle(1, MAGENTA);

mid = 640/count; cir\_x = mid;

bar3d(270, 100, 370, 150, 0);

setrectstyle(2, 0, 1);

setrectstyle(1, 1);

Outtextxy(320, 125, "Root

setcolor(BLUE), Director);

for(i=0; i < v-1; i++)  
    cir\_x = mid;

S

line(320, 150, cir\_x, 250);

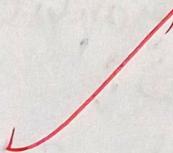
fillellipse(cir\_x, 250, 30);

Outtextxy(cir\_x, 250,  
                  fname);

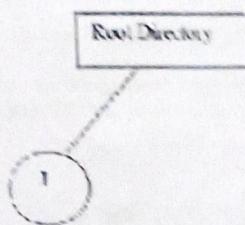
g

y

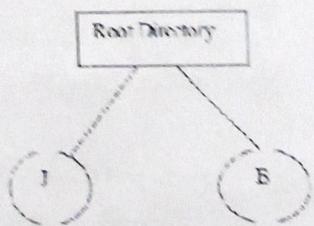
x



OUTPUT:  
Enter the Number of files  
2  
Enter the file 1



Enter the file 2



## 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 <graphics.h>
struct tree_element
{
    char name[20];
    int x, y, filetype, loc, size, nc, level;
    struct tree_element *link[5];
};

typedef struct tree_element node;
void main()
{
    int gd = DETECT, gm; node *root;
    root = NULL;
    clrscr();
    createC(root, 0, "null", 0, 630, 320);
    clrscr();
    int graphIC & gd, &gm, "C:\\\\tel\\\\begin");
    display(root);
    getch();
    closegraph();
}
```

Create C node \*\*root, int lev, char\* dname, int  
lev, int ans, int &ds

int i, gap;

if (C\*root == NULL) {

C\*root = (node\*) malloc(sizeof(node));

printf("enter name of dir/file  
(under / ~) : ", dname);

flush(stdin);

getchar(C\*root) → name);

if (lev == 0 || lev == 1)

C\*root) → flag = 1;

else {

C\*root) → flag = 2;

C\*root) → level = lev;

C\*root) → y = 50 + lev \* 50;

C\*root) → x = x;

C\*root) → bx = bx;

C\*root) → bw = bw;

for (int i = 0; i < 5; i++)

C\*root) → link[i] = NULL;

if (C\*root) → flag == -1) {

if (C\*root) → level == 0)

printf("How  
many files");

else

printf("How many  
files");

printf("%s(%d).%s", (\*root)

→ name)

scanf("%s.%d", &C \* root) →  
name;

y

else (\*root) → nc = 0;

if (\*root) → nc == 0

gap = nc - nc;

else

gap = (nc - nc) / (\*root) → nc;

for (i=0; i < (\*root) → nc; i++)

createC(&CC \* root) → link

lex[i], (\*root) = name;

nc + gap \* i, i, gap,

nc + gap \* i, gap);

y

else

(\*root) → nc = 0

y

display(node \*root)

y

int i;

settextstyle(2, 0, 1);

setjustify(1, 1);

setfillstyle(1, 1, BLUE);

setcolor(14)

if (root != NULL) {

for ( $i=0$ ;  $i < \text{root} \rightarrow \text{he}, \text{if}$ );  
lineC( $\text{root} \rightarrow x$ ,  $\text{root}$ ,  
 $\text{root} \rightarrow \text{link}[i]$ )

}

if ( $\text{C root} \rightarrow \text{flepre} = 1$ )

for ( $j=0$ ;  $j < \text{root} \rightarrow x$ ;  
 $\text{root} \rightarrow y_{j-10}; \text{root}$   
 $\rightarrow y + (0, 0, 0))$

}

else

fillelliptic( $\text{root} \rightarrow x$ ,  
 $\text{root} \rightarrow y, 20, 20)$ ;

outtextbox( $\text{root} \rightarrow x$ ,  
 $\text{root} \rightarrow y$ ,  $\text{root} \rightarrow \text{name}$ )

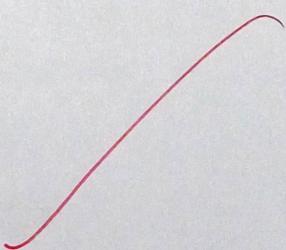
}

for ( $i=0$ ;  $i < \text{root} \rightarrow \text{he}, \text{if}$ );

displayC( $\text{root} \rightarrow$   
 $\text{link}[i])$ )

}

}

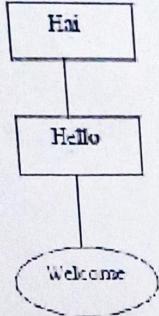


y

g C M - ! star

### Sample Output:

```
Enter the name of dir/file(under null): Hai  
How many users(for Hai):1  
Enter name of dir/file(under Hai):Hello  
How many files(for Hello):1  
Enter name of dir/file(under Hello):welcome
```



### Result:

Using C the file organization structure, the single level directory & two level directory are implemented

81