

**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

### **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<graphics.h>
void main()
{
int gd=DETECT,gm,count,i,j,mid,cir_x;
char fname[10][20];
initgraph(&gd,&gm,"c:\\tc\\bgi");

cleardevice();
setbkcolor(Green);
puts("Enter the number of files");
scanf("%d",&count);
for(i=0;i<count;i++)
{
cleardevice();
setbkcolor(GREEN);

printf("Enter the file %d name",i+1);
scanf("%s",fname[i]);

setfillstyle(1,MAGENTA);
mid=640/count; cir_x=mid/3;
bar3d(270,100,370,150,0,0);
settextstyle(2,0,4);
settextjustify(1,1);

outtextxy(320,125,"Root Directory");
setcolor(BLUE);
for(j=0;j<=i;j++,cir_x+=mid)
{
line(320,150,cir_x,250);
fillellipse(cir_x,250,30,30);
outtextxy(cir_x,250,fname[j]);
}
}
```

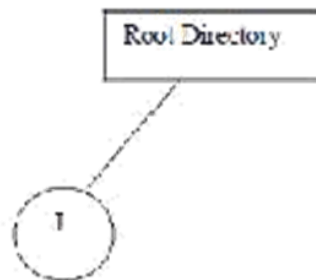
## Output:

### OUTPUT:

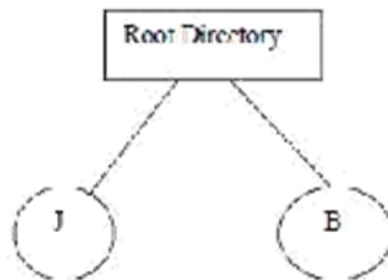
Enter the Number of files

2

Enter the file1 J



Enter the file2 B



## **B. Two Level Directory**

### **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,ftype,lx,rx,nc,level; struct tree_element
*link[5]; }; typedef struct tree_element node;
void main() {
int gd=DETECT,gm; node *root;
root = NULL; clrscr();
create(&root,0,"null",0,630,320);
clrscr();
initgraph(&gd,&gm,"c:\\tc\\bgi");
display(root);
getch();
closegraph();

}
```

```

create(node **root,int lev,char *dname,int lx,int rx,int x)
{
int i,gap;
if(*root==NULL)
{
(*root)=(node*)malloc(sizeof(node));
printf("enter name of dir/file(under %s):",dname);fflush(stdin);
gets((*root)->name);
if(lev==0||lev==1)
(*root)->ftype=1;
else

(*root)->ftype=2;
(*root)->level=lev;
(*root)->y=50+lev*50;
(*root)->x=x;
(*root)->lx=lx;
(*root)->rx=rx;
for(i=0;i<5;i++)
(*root)->link[i]=NULL;
if((*root)->ftype==1)
{
if(lev==0||lev==1)
{
if((*root)->level==0)
printf("How many users");

else
printf("How many files");
printf("(for%s):",(*root)->name);
scanf("%d",&(*root)->nc);
}
else(*root)->nc=0;
if((*root)->nc==0)
gap=rx-lx;
else
gap=(rx-lx)/(*root)->nc;
for(i=0;i<(*root)->nc;i++)
create(&((*root)->link[i]),lev+1,(*root)->name,lx+gap*i,lx+gap*i+gap,lx+gap*i+gap/2);
}
else
(*root)->nc=0;
}
}
}

```

```

display(node *root)
{
int i;
settextstyle(2,0,4);
settextjustify(1,1);
setfillstyle(1,BLUE);
setcolor(14);

if(root!=NULL)
{
for(i=0;i<root->nc;i++)
{
line(root->x,root->y,root->link[i]->x,root->link[i]->y);
}
if(root->ftype==1) bar3d(root->x-20,root->y-10,root->x+20,root->y+10,0,0); else
fillellipse(root->x,root->y,20,20); outtextxy(root->x,root->y,root->name); for(i=0;i<root-
>nc;i++)
{
display(root->link[i]);
}}}

```

## Output:

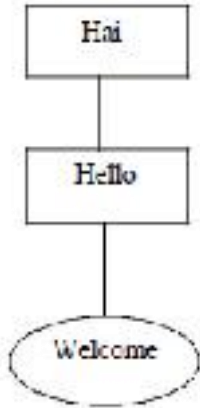
Enter the name of dir/file(under null): Hai

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:

Hence the implementation of file structures like Single level Directory and Two Level Directory has been implemented successfully.