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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.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;
}
```

OUTPUT:

```
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
```

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;
}
```

OUTPUT:

```
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
```