

# OPERATING SYSTEM - CS23431

## EXP 12

### FILE ORGANISATION TECHNIQUE – SINGLE AND TWO LEVEL DIRECTORY

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PROGRAM:

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Single level directory:

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

```
struct directory{
```

```
    char dname[20];
```

```
    char fname[10][20];
```

```
    int f_count;
```

```
};
```

```
int main()
```

```
{
```

```
    struct directory d;
```

```
    printf("Enter directory name: ");
```

```
    scanf("%s",d.dname);
```

```
    printf("Enter number of files in the directory: ");
```

```
    scanf("%d",&d.f_count);
```

```
    printf("Enter names for files:\n");
```

```
    for(int i=0;i<d.f_count;i++)
```

```
    {
```

```
        printf("Enter name for file %d: ",i+1);
```

```
        scanf("%s",d.fname[i]);
```

```
        printf("\n\t\t%s\n",d.dname);
```

```
        for (int j = 0; j <= i; j++) {
```

```
            printf("\t\t |\n");
```

```
            printf("\t\t --> (%s)\n", d.fname[j]);
```

```
        }
```

```
        printf("\n");
```

```
    }
```

```
    return 0;
```

```
}
```

## OUTPUT:

```
Enter directory name: SUBJECTS
Enter number of files in the directory: 2
Enter names for files:
Enter name for file 1: JAVA
```

```
      SUBJECTS
      |
      --> (JAVA)
```

```
Enter name for file 2: PYTHON
```

```
      SUBJECTS
      |
      --> (JAVA)
      |
      --> (PYTHON)
```

Two level directory:

```
#include <stdio.h>
#include<string.h>
struct directory{
    char dname[20];
    char subnames[10][20];
    int sub_count;
};
int main()
{
    struct directory d;
    struct directory sub[10];
    printf("Enter the name of dir/file(under null): ");
    scanf("%s",d.dname);
    printf("How many users(for %s): ",d.dname);
    scanf("%d",&d.sub_count);
    for(int i=0;i<d.sub_count;i++)
    {
        printf("Enter the name of dir/file(under %s): ",d.dname);
        scanf("%s",d.subnames[i]);
        printf("How many users(for %s): ",d.subnames[i]);
        scanf("%d", &sub[i].sub_count);
        strcpy(sub[i].dname, d.subnames[i]);
    }
}
```

```

        for (int j = 0; j < sub[i].sub_count; j++) {
            printf("Enter name of dir/file(under %s): ", sub[i].dname);
            scanf("%s", sub[i].subnames[j]);
        }

    }

    for (int i = 0; i < d.sub_count; i++) {
        for (int j = 0; j < sub[i].sub_count; j++) {
            printf("\t\t | %s |\n", d.dname);
            printf("\t\t |\n");
            printf("\t\t | %s |\n", sub[i].dname);
            printf("\t\t |\n");
            printf("\t\t ( %s )\n", sub[i].subnames[j]);
        }
        printf("\n");
    }

    return 0;
}

```

OUTPUT:

```

Enter the name of dir/file(under null): SUBJECTS
How many users(for SUBJECTS): 2
Enter the name of dir/file(under SUBJECTS): JAVA
How many users(for JAVA): 1
Enter name of dir/file(under JAVA): STRINGS
Enter the name of dir/file(under SUBJECTS): PYTHON
How many users(for PYTHON): 1
Enter name of dir/file(under PYTHON): MATPLOT

      | SUBJECTS |
      |
      | JAVA |
      |
      ( STRINGS )

      | SUBJECTS |
      |
      | PYTHON |
      |
      ( MATPLOT )

```