

SSN COLLEGE OF ENGINEERING, KALAVAKKAM
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
CS6413 - OPERATING SYSTEM LAB

Lab Exercise 14 File Organization Techniques

AIM:

To develop a C program to implement the following file organization techniques

- a) Single level Directory
- b) Two level Directory
- c) Hierarchical Structure
- d) DAG

Procedure:

1. Single Level Directory
 - a. Maintain a table containing the filename and the starting address location of that file.
 - b. Give options for creating a new file.
 - c. When creating the file, check for name collision.
 - d. Update the table accordingly.
2. Two level Directory
 - a. Maintain tables for MFD and UFD.
 - b. Each MFD entry is a directory which in turn has entries for files.
 - c. Give options for creating a directory, creating a file and searching for a file.
 - d. Update the respective tables accordingly.
3. Tree Structured Directory
 - a. Maintain tables for each directory starting from root.
 - b. Limit each directory to have a maximum of five sub-directories and files.
 - c. For each sub-directory follow the same table structure as described above.
4. DAG
 - a. Data structure is same as tree structured directory but can create a link to an existing file.
 - b. Give options for creating a directory, file and also links.

SAMPLE INPUT & OUTPUT:

File Organization techniques

1.Single Level Directory

2.Two Level Directory

3. Tree structures directory

4.DAG

Enter your option: 1

1.Create a file

2.List the files

Enter your option:1

Enter the name of the file: file1

File created!

1.Create a file

2.List the files

Enter your option:1

Enter the name of the file: file2

File created!

1.Create a file

2.List the files

Enter your option:1

Enter the name of the file: file2

File already exists!

Enter your option:2

Contents of root directory

File Name	Location
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*****	***
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- Similarly for all other structures