

SSN COLLEGE OF ENGINEERING, KALAVAKKAM
(An Autonomous Institution, Affiliated to Anna University, Chennai)
Department of Computer Science and Engineering

UCS1411 – Operating Systems Laboratory

II Year CSE - A Section (IV Semester)

Academic Year 2019-20

Lab Exercise 13

File Organization Techniques

AIM:

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

- a) Single level Directory
- b) Hierarchical Structure

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. Tree Structured Directory
 - a. Maintain tables for each directory starting from root.
 - b. Create a structure for a node in tree which contains an array to hold directories and an array to hold files.
 - c. Limit each directory to have a maximum of three sub-directories and files.
 - d. For each sub-directory follow the same table structure as described above.

SAMPLE INPUT & OUTPUT:

File Organization techniques

1.Single Level Directory

2. Tree structures directory

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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file1	1000
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file2	3500
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- Similarly for all other structures