

Objective: Understand File Systems

FILE ALLOCATION TECHNIQUES.

Exercise 1 - Contiguous File Allocation

- Write a C program that simulates Contiguous File Allocation Technique

Exercise 2 - Linked File Allocation

- Write a C program that simulates Indexed File Allocation Technique

Exercise 3 - Indexed File Allocation

- Write a C program that simulates Indexed File Allocation Technique

Discussion

- Describe the effects of a corrupted data block for a given file for:
 - contiguous,
 - linked, and
 - indexed (or table based)
- Consider a file whose size varies between 4 KB and 4 MB during its lifetime. Which of the three allocation schemes (contiguous, linked and table/indexed) will be most appropriate? Why?

Exercise 4 – Disk Defragmentation

- Write a C program that simulates Disk Defragmentation

FILE ORGANIZATION TECHNIQUES

Exercise 5 - SINGLE LEVEL DIRECTORY

- Write a C program that simulates File Organization using Single Level Directory Technique

Exercise 6 - HIERARCHICAL

- Write a C program that simulates File Organization using Hierarchical Technique