Assignment 8 – File Systems (5%)

Introduction

Assignment 8 contributes 5% towards your final course grade and the assignment total is 15 marks. You should begin Assignment 8 after completing the materials in Module 13; it is due at the end of Module 14. Check your Course Schedule for the precise due date. Directions for submitting Assignment 8 to your Open Learning Faculty Member for grading can be found in the Assignments Overview tab. An assignment marking criteria and your assignment submission details follows at the end of this document.

In this assignment, you will answer questions about a file system works.

Questions:

This question asks that you consider the design of a file system.

1. List the 7 basic file attributes associated with a file in operating systems.

2. List the 8 basic file operations (activities you can perform on a file).

3. File type is used how by the operating system?

4. File type is used how by the application?

5. Explain how a sequential file is different from a direct access file?

6. Explain how direct access files allow for access to any item in the file?

7. List the basic operations required on a directory in file systems?

8. We have discussed three file allocation techniques for storing a file on **disk**, namely **contiguous allocation**, **linked allocation**, and **indexed allocation**. For each allocation method show how a file of 10 blocks would be allocated on disk. Note that the disk is represented as 30 blocks with blocks 0, 5, 6, 15, 25 already allocated. Note you must show the entire data structure for each allocation method as part of the answer.

Report Submission Details

You need to submit a report that consists of answers to the listed questions.

Assignment Marking Criteria	Weighting
Q 1	/1
Q 2	/1
Q 3	/1
Q 4	/1
Q 5	/1
Q 6	/1
Q 7	/1
Q 8	/8
Total	/15