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Assignment 10

AIM:

To develop a Node.js program that demonstrates basic file operations: creating, reading, writing, renaming, and deleting files.

LABOUTCOME:

Understanding of Node.js File System (fs) module for handling file operations.

Ability to implement basic file operations in a Node.js environment.

THEORY:

The fs module in Node.js allows interaction with the file system. It provides functions for reading, creating, updating, deleting, and renaming files. These operations can be performed synchronously or asynchronously. In this program, we'll be using the asynchronous functions to perform file operations.

Creating a File: Use fs.writeFile() to create a new file or replace an existing file.

Reading from a File: Use fs.readFile() to read the content of a file.

Writing to a File: Use fs.appendFile() to add content to an existing file.

Renaming a File: Use fs.rename() to rename an existing file.

Deleting a File: Use fs.unlink() to delete a file.

PROGRAM:

javascript

```
// Import the 'fs' module
const fs = require('fs');
// 1. Create a File
fs.writeFile('example.txt', 'Hello, this is a sample text file.', (err) => {
   if (err) throw err;
   console.log('File created successfully!');
// 2. Read the Data from the File
   fs.readFile('example.txt', 'utf8', (err, data) => {
      if (err) throw err;
      console.log('Data read from file:');
      console.log(data);

      // 3. Write Data to the File
      fs.appendFile('example.txt', '\nThis is additional text added.', (err) => {
         if (err) throw err;
         console.log('Data written to file successfully!');

         // 4. Rename the File
         fs.rename('example.txt', 'renamed_example.txt', (err) => {
            if (err) throw err;
            console.log('File renamed successfully!');

            // 5. Delete the File
            fs.unlink('renamed_example.txt', (err) => {
               if (err) throw err;
```

```
            console.log('File deleted successfully!');
        });
    });
  });
});
```

OUTPUT:

File created successfully!

Data read from file:

Hello, this is a sample text file.

Data written to file successfully!

File renamed successfully!

File deleted successfully!

CONCLUSION:

This program demonstrates basic file operations in Node.js using the fs module. By using asynchronous functions, we can efficiently handle file creation, reading, writing, renaming, and deletion. Understanding these basic operations is essential for managing files and directories in a Node.js environment, and this knowledge can be applied to various projects that involve file manipulation.