Node.js Assignment: File System Module (fs)

Objective:

Learn and practice file reading/writing using both synchronous and asynchronous methods, and work with file streams.

Task 1: Using readFile and readFileSync

Instructions:

1. Create a file called input.txt with some sample content.

2. Write a Node.js script (readFileExample.js) that:

   - Reads the contents of input.txt asynchronously using fs.readFile

   - Reads the same file synchronously using fs.readFileSync

   - Prints both contents to the console.

Task 2: Using writeFile and writeFileSync

Instructions:

1. Create a Node.js script (writeFileExample.js) that:

   - Takes a string variable (like "Hello from writeFile!")

   - Writes it to a file named output-async.txt using fs.writeFile (asynchronous)

   - Writes another message to output-sync.txt using fs.writeFileSync

   - Confirm both files are created and print a success message.

Task 3: Using createReadStream and createWriteStream

Instructions:

1. Create a file called longText.txt (you can copy-paste some long paragraph or sample data).

2. Write a Node.js script (streamExample.js) that:

   - Uses fs.createReadStream to read the file

   - Uses fs.createWriteStream to write the contents into a new file called copiedText.txt

   - Add event listeners to track the progress (e.g., on 'data', 'end', 'error').

Deliverables:

- input.txt, longText.txt

- readFileExample.js

- writeFileExample.js

- streamExample.js

- Output files: output-async.txt, output-sync.txt, copiedText.txt

Bonus:

Modify the stream code to count the number of chunks read and log it.