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Given article text here Working with the file system in TypeScript is crucial for various programming tasks. Leveraging the npm fs module, you can efficiently perform file operations. This guide covers essential file system operations using TypeScript and npm fs. #### Getting Started with npm fs To start, initialize a TypeScript project and install the npm fs module by running `npm init -y` and `npm install @types/node`. Then, import the fs module in your TypeScript file using `import * as fs from 'fs';`. #### Reading Files To read a file's contents, use the `fs.readFile` method asynchronously. For example: ```typescript fs.readFile('example.txt', 'utf-8', (err, data) => { if (err) { console.error(err); return; } console.log(data); }); ``` #### Writing to Files To write data to a file, use the `fs.writeFile` method. For example: ```typescript fs.writeFile('newFile.txt', 'Hello, World!', (err) => { if (err) { console.error(err); return; } console.log('Data written to file successfully.'); }); ``` #### File Manipulation npm fs provides methods for renaming, copying, and deleting files. For instance: ```typescript fs.rename('oldFile.txt', 'newFile.txt', (err) => { if (err) { console.error(err); return; } console.log('File renamed successfully.'); }); ``` By mastering file system operations in TypeScript with npm fs, you can create robust file handling mechanisms for your applications. Given article text here fs and path built-in modules used readdirSync and readFileSync methods.The readdirSync method reads directory contents, while readFileSync reads file contents.The example assumes another-file.ts in the same directory as fs-related code is present.There is no output shown after running the provided snippet.Next, using promises version of fs module is demonstrated.# Using async fs module asynchronously import { promises } from 'fs'; import * as path from 'path'; async function readFile() { try { // Read directory contents const dirContents = await fs.readdir(__dirname); console.log(dirContents); // Read file contents const fileContents = await fs.readFile(path.join(__dirname, './another-file.ts'), { encoding: 'utf-8' } ); console.log(fileContents); } catch (err) { console.log('error is: ', err); } } readFile(); Node.js treats each file as a separate module, which is implemented using a function that wraps the module. This allows top-level variables to be scoped to the module and not global throughout the project. The Node.js process has its own set of objects, including the "global" object, which is similar to the window object in browser JavaScript. When running Node.js in a terminal, it does not wrap code in a module, so the "this" keyword references to the global object instead. The process object is available throughout an application and provides information about the environment, such as the installed version of Node.js. The process.argv property holds an array containing command line arguments passed when launching the Node.js process. To run scripts using TypeScript in a Node.js project, npm needs to be initialized, and TypeScript and ts-node need to be installed. A new script can then be added to the package.json file to run ts-node from within the node_modules directory. We use a tsconfig file like the one below: tsconfig.json We're ready to start using TypeScript with Node.js! With TypeScript and Node.js, we use imports and exports like in ES6 Modules, but since Node.js doesn't support them yet, ts-node transpiles our code to CommonJS. For more information on how ES6 Modules work, you can check out my other article: Webpack 4 course – part one. Entry, output, and ES6 modules. Understanding Node.js and TypeScript fundamentals involves learning about module functionality, the role of the global object, foundational file system concepts, and techniques for passing extra arguments during script execution. With numerous subjects still to explore, further updates are forthcoming.

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