Modules



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CommonJS

CommonJS Modules

- Standard created for Node.js
- Load modules using the require method
- Uses an exports variable to determine exports

ECMAScript Modules

ESM Modules

- Shorthand for ECMAScript Modules
- Part of the ECMAScript specification
- Load modules using the import keyword
- Uses the export keyword to determine exports

CommonJS Modules

index.js (CommonJS)

```
const fs = require("node:fs/promises");
const localFile = require("./myFile");
const sampleJSON = require("./sample.json");

const loadData = async () => {
  const data = await fs.readFile("./data.json");
  return JSON.parse(data);
};

module.exports.jsonData = sampleJSON;
module.exports.loadData = loadData;
```

ESM Modules

index.js (ESM)

```
import { readFile } from "node:fs/promises";
import * as local from "./myFile.js";
import sampleJSON from "./sample.json" assert { type:
"json" };

const loadData = async () => {
  const data = await fs.readFile("./data.json");
  return JSON.parse(data);
};

export {
  jsonData: sampleJSON,
  loadData
};
```

Using Third-party Modules

Package Manager

In terms of software development, a package manager is a tool that enables you to install and manage software written by other developers into your own software projects.

Package Management Options

Package management clients:

- npm
- yarn
- pnpm

Registries:

- npm

Demo

Searching for available packages in the npm registry via the website

Creating a package.json file using the npm CLI

Installing a third-party module using the npm CLI

Exporting Values

Creating a Multi-file JavaScript Project

Working with a Relational Database



More Information

Introduction to SQL

Jon Flanders

Demo

Installing a third-party module to work with SQLite

Converting persistent data storage in our application to use SQLite

Verifying the ability to store and access data in SQLite