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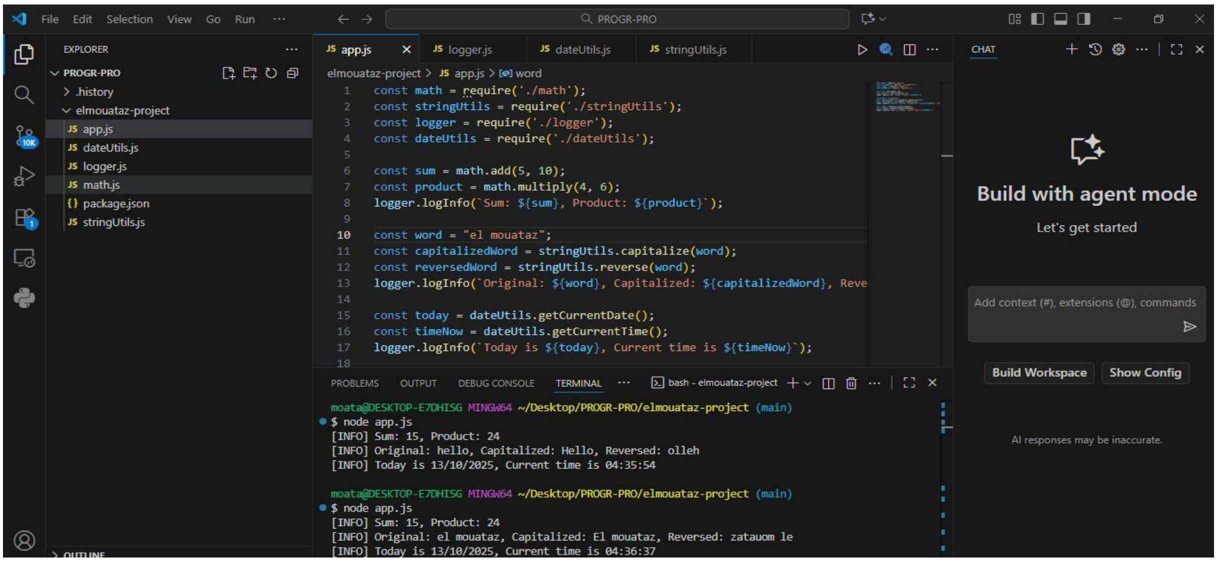
Modularization Concept:
Modularization is a technique in software development where code is divided into separate modules or files, each responsible for a specific functionality. This improves code readability, maintainability, and reusability.

Project Structure Explanation:

- **math.js** → Contains math-related functions (add, multiply).
- **stringUtils.js** → Contains string manipulation functions (capitalize, reverse).
- **logger.js** → Provides standardized logging (logInfo, logError).
- **dateUtils.js** → Provides date and time utilities (getCurrentDate, getCurrentTime).
- **app.js** → Main file that imports all modules and uses their functions to perform tasks.

How Modules Work Together:

- app.js imports all modules using require.
- Each module exposes functions via module.exports.
- Functions from modules are called in app.js to perform tasks like calculations, string manipulations, logging, and date/time display.



```
const math = require('./math');
const stringUtils = require('./stringUtils');
const logger = require('./logger');
const dateUtils = require('./dateUtils');

const sum = math.add(5, 10);
const product = math.multiply(4, 6);
logger.logInfo(`Sum: ${sum}, Product: ${product}`);

const word = "el mouataz";
const capitalizedWord = stringUtils.capitalize(word);
const reversedWord = stringUtils.reverse(word);
logger.logInfo(`Original: ${word}, Capitalized: ${capitalizedWord}, Reve

const today = dateUtils.getCurrentDate();
const timeNow = dateUtils.getCurrentTime();
logger.logInfo(`Today is ${today}, Current time is ${timeNow}`);
```

```
moata@DESKTOP-E7DHISG MINGW64 ~/Desktop/PROGR-PRO/elmouataz-project (main)
$ node app.js
[INFO] Sum: 15, Product: 24
[INFO] Original: hello, Capitalized: Hello, Reversed: olleh
[INFO] Today is 13/10/2025, Current time is 04:35:54

moata@DESKTOP-E7DHISG MINGW64 ~/Desktop/PROGR-PRO/elmouataz-project (main)
$ node app.js
[INFO] Sum: 15, Product: 24
[INFO] Original: el mouataz, Capitalized: El mouataz, Reversed: zatauom le
[INFO] Today is 13/10/2025, Current time is 04:36:37
```

How to Use the Project

https://www.npmjs.com/package/elmouataz-project

1. Installation

1. Make sure you have **Node.js** and **npm** installed on your computer.
   You can verify this by running:
2. node -v
3. npm -v
4. Install the package globally or locally depending on your needs:

Globally (accessible anywhere):

```
npm install -g elmouataz-project
```

Locally (inside your project folder):

```
npm install elmouataz-project
```

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2. Importing the Package

If you installed it locally, import it in your JavaScript file:

```
const project = require('elmouataz-project');
```

or (if using ES Modules):

```
import project from 'elmouataz-project';
```

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3. Using the Functions

After importing, you can use the functions or classes provided by the package.
For example:

```
const result = project.exampleFunction('Hello World');

console.log(result);
```

(Replace exampleFunction with the actual function name your package provides.)

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4. Running the Project

If the project includes a command-line interface (CLI), you can run it directly from the terminal:

```
project-name
```

or

```
npx project-name
```

---

5. Updating the Package

To get the latest version:

```
npm update elmouataz-project
```

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6. Uninstalling

If you no longer need it:

```
npm uninstall elmouataz-project
```

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7. Example Output

Input: hello

Output: Hello