1. JSDoc

JSDoc is a widely used documentation generator for JavaScript projects. It parses specially formatted comments directly in your code and automatically generates clean, professional HTML documentation.
It integrates seamlessly with editors like VS Code, providing IntelliSense and inline documentation hints without requiring TypeScript or compilation.

Why JSDoc?

JSDoc is chosen because ShebaBondhu is built using JavaScript, not TypeScript. It's lightweight, easy to integrate, and automatically generates documentation without a build step.
Even large projects such as Node.js and React use JSDoc to document their APIs effectively.

Suitability for ShebaBondhu

Feature	Suitability	Notes
Inline Documentation	Suitable	Uses /** */ comments directly in JS files.
Ease of Use	Suitable	No compilation required; runs directly on JS files.
Integration	Suitable	Works perfectly with VS Code and Node.js projects.
Customization	Partially Suitable	Basic templates can be customized with themes.
Collaboration	Partially Suitable	Docs are static HTML; no live collaboration.
Type Safety	Partially Suitable	Provides type hints but not true compile-time safety.
Deployment	Suitable	Can host on GitHub Pages or any static server.

Advantages

• Automatically generates professional HTML documentation from comments.
• Supports functions, classes, and modules — ideal for ShebaBondhu's modular structure.
• Integrates with editors to provide live IntelliSense.
• Lightweight and requires no compilation or build step.
• Can be hosted easily on GitHub Pages.

Disadvantages

• Requires consistent comment formatting in code.
• Limited to JavaScript.
• Generated site design may need customization for branding.

Installation & Implementation

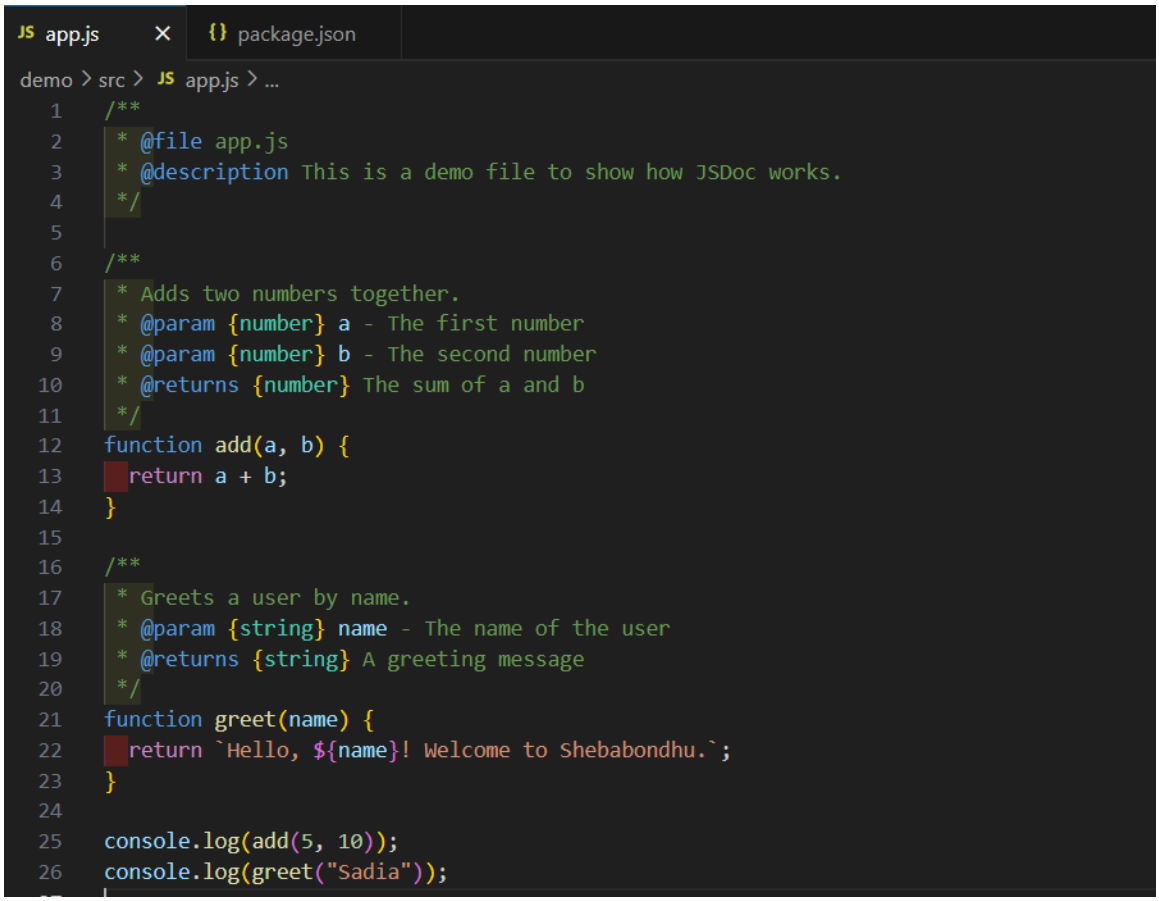
1. Ensure Node.js and npm are installed and run npm init -y .

```
PS D:\Academic\year 4 sem 1\STM lab\JSdocs\demo> npm init -y
Wrote to D:\Academic\year 4 sem 1\STM lab\JSdocs\demo\package.json:

{
  "name": "demo",
  "version": "1.0.0",
  "main": "index.js",
  "scripts": {
    "test": "echo \"Error: no test specified\" && exit 1"
  },
  "keywords": [],
  "author": "",
  "license": "ISC",
  "description": ""
}
```

2. Run: ‘npm install –save-dev jsdoc’ to install JSDocs inside the demo project

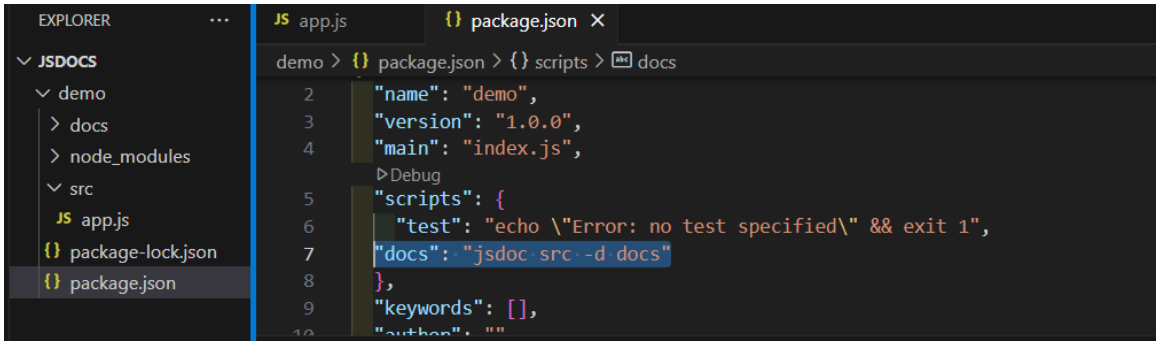
```
PS D:\Academic\year 4 sem 1\STM lab\JSdocs\demo> npm install --save-dev jsdoc
>>

added 30 packages, and audited 31 packages in 9s

2 packages are looking for funding
  run `npm fund` for details

found 0 vulnerabilities
PS D:\Academic\year 4 sem 1\STM lab\JSdocs\demo>
```

3. Add JSDoc comments in your JavaScript files using `/** ... */` format.



4. Generate documentation:

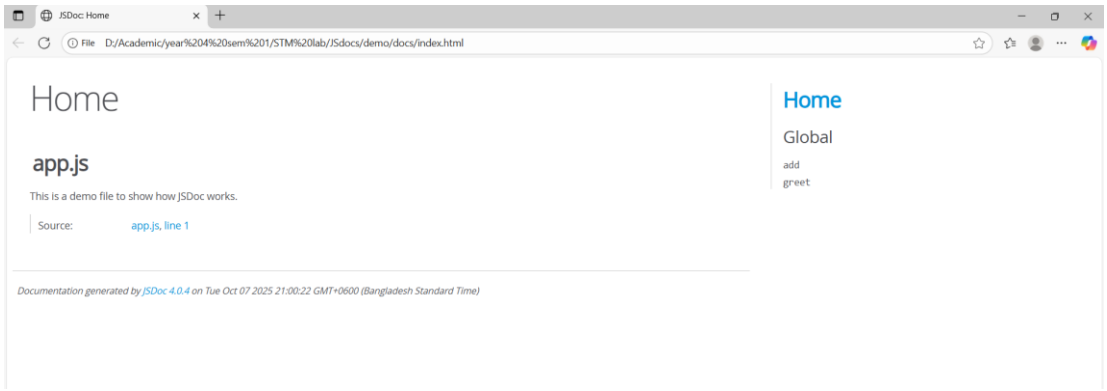
- add “docs:’jsdoc src -d docs’ ” in script inside the package.json



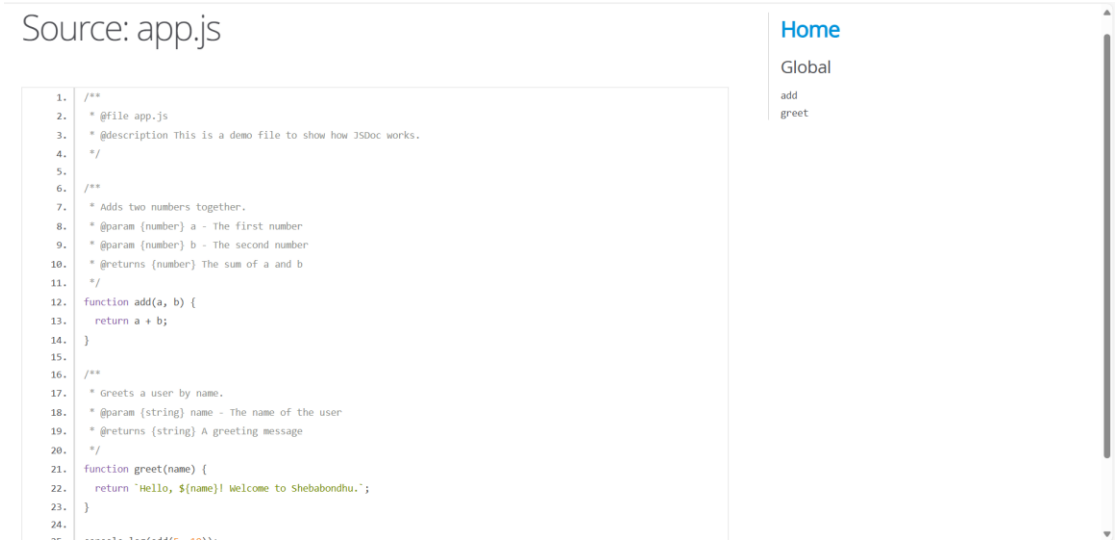
- Now we can just simply use “nmp run docs” to generate docs.

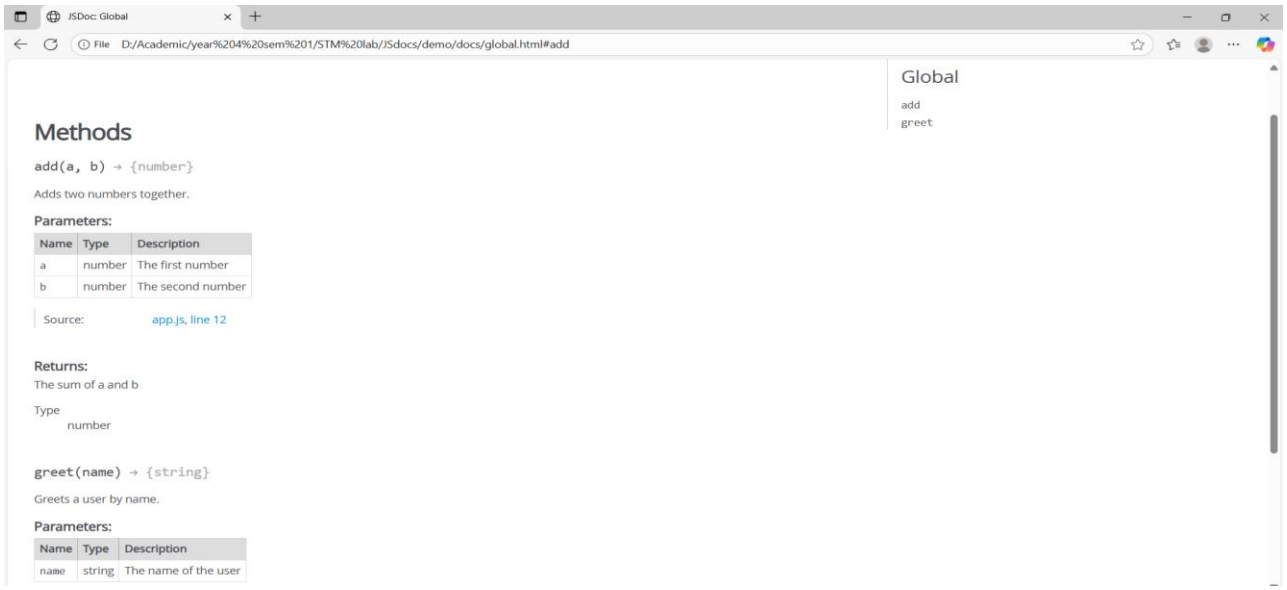
```
PS D:\Academic\year 4 sem 1\STM lab\JSdocs\demo> npm run docs

> demo@1.0.0 docs
> jsdoc src -d docs
```

5. Open the generated `docs/index.html` file in a browser.



It automatically generated documentation from the comments in the source code.





6. We can host it on GitHub Pages or any static site host.

I recommend JSDoc, JSDoc is ideal for ShebaBondhu's JavaScript-based backend and front-end modules. It provides auto-generated API documentation that is easy to maintain and share across the development team. JSDoc automatically creates a **clean HTML documentation website** from code comments.It supports **modules, functions, classes, and APIs**, which fits your Shebabondhu structure (modules like *Booking*, *Notifications*, *User Management*, etc.). The generated site can even be hosted on GitHub Pages easily.