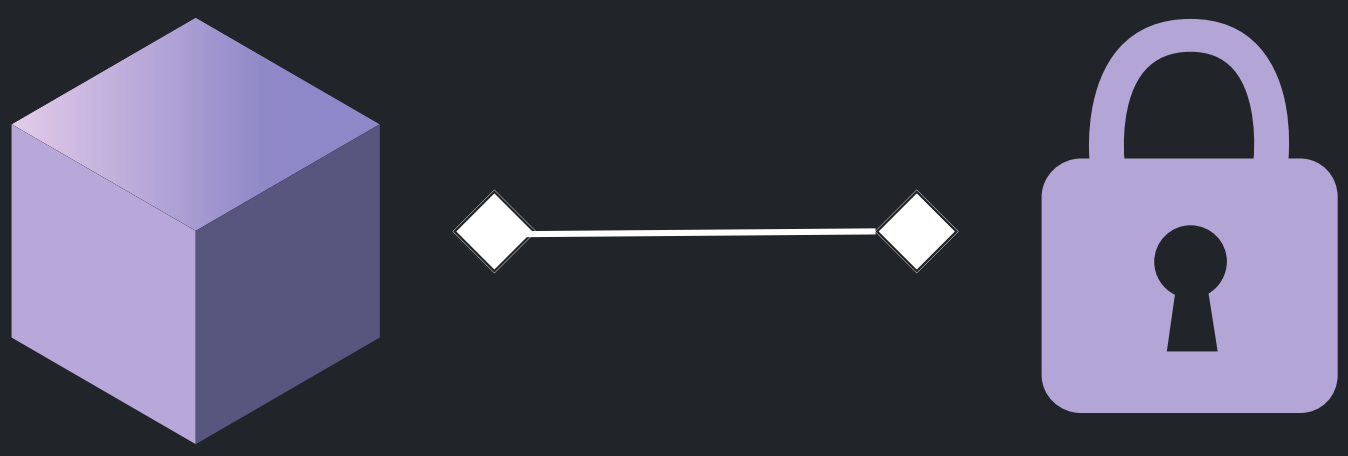
Save it

Like it



npm

package.json & package-lock.json

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You can initialize the node project by running the below command

```
npm init
```

As you initialize your node application, you will see three files installed in your app that is node_modules, package.json, and package.lock.json.

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package.json

- package.json is a versioning file used to install multiple packages in your project.
- It contains metadata about the project and also the functional dependencies that is required by the application.

```
{
    "name": "Your project name",
    "version": "1.0.0",
    "description": "Your project description",
    "main": "app.js",
    "scripts": {
        "test": "echo \"Error: no test specified\" && exit 1",
    },
    "author": "Author name",
    "license": "ISC",
    "dependencies": {
        "dependency1": "^1.4.0",
        "dependency2": "^1.5.2"
    }
```

- package.json is mandatory for every project
- Application name/version/scripts(ng scripts)

main packages sections

dependencies

- packages mandatory for production
- rxjs/core/http/bootstrap/jquery
- minified application size

dev dependencies

- packages mandatory for development
- cli/testing (karma/jasmine)
- package-version number

These packages may not be installed in our project but may be needed .

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we can see installed packages in package.lock.json

package.lock.json

- This file is automatically generated for those operations where npm modifies either the node_module tree or package.json
- It is generated after npm install
- It allows future devs & automated systems to download the same dependencies as the project
- It also allows you to go back to the past version of depedencies without actual committing the node_modules folder

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package.lock.json

```
{
    "name": "Your project name",
    "version": "1.0.0",
    "lockfileVersion": 1,
    "requires": true,
    "dependencies": {
        "dependency1": {
            "version": "1.4.0",
            "resolved":
"https://registry.npmjs.org/dependency1/-/dependency1-
1.4.0.tgz",
            "integrity": "sha512-
a+UqTh4kgZg/SlGvfbzDHpgRu7AAQOmmqRHJnxhRZICKFUT91brVhNNt58CM
WU9PsBbv3PDCZUHbVxuDiH2mtA=="
        },
        "dependency2": {
            "version": "1.5.2",
            "resolved":
"https://registry.npmjs.org/dependency2/-/dependency2-
1.5.2.tgz",
            "integrity": "sha512-
WOn21V8AhyE1QqVfPIVxe3tupJacq1xGkPTB4iagT6o+P2cAgEOOwIxMftr4
+ZCTI6d551ij9j61DFr0nsP2uQ=="
        }
    }
}
```

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Why is package-lock.json created?

```
npm i <package-name> – save
```

it will install the exact latest version of that package in your project and save the dependency in package.json with a carat (^) sign.

Example

if the current version of a package is 5.2.3 then the installed version will be 5.2.3 and the saved dependency will be ^5.2.3. Carat (^) means it will support any higher version with major version 5 like 5.3.1 and so on.

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What is the purpose or use of package-lock.json?

To avoid differences in installed dependencies on different environments and to generate the same results on every environment we should use the package-lock.json file to install dependencies.

Why should we commit package-lock.json with our project source code?

if you wanted to have that particular version for your dependency during deployment which you used at the time of development. This is the need of creating a **package-lock.json** file and keeping it with the source code.

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