

# Node.js Documentation

## Module 4: Node Package Manager

- **What is NPM**

npm (Node Package Manager) is a package manager for JavaScript, primarily used for managing dependencies of Node.js projects. It is the default package manager for the Node.js runtime environment and allows developers to share and reuse code. npm also provides a command-line interface (CLI) for interacting with the npm ecosystem.

- **Installing Packages Locally**

To install a package locally, use the `npm install` command followed by the package name. This installs the package into the `node_modules` directory and adds it to the `dependencies` section of your `package.json` file.

```
npm install <package-name>
```

- **Installing Package globally**

To install packages globally using npm, you use the `-g` flag with the `npm install` command. Global installation makes the package available system-wide, meaning it can be used from any directory on your system, which is particularly useful for command-line tools.

To install a package globally, use the `-g` flag:

```
npm install -g <package-name>
```

- **Adding dependencies in package.json**

When you install a package using `npm install`, it automatically adds the package to the `dependencies` or `devDependencies` section of your `package.json` file, depending on the flags you use.

**Adding a Dependency:**

```
npm install <package-name> --save
```

The `--save` flag is actually the default behavior and can be omitted. This command installs the package and adds it to the `dependencies` section.

- **Updating Packages**

Updating packages in a Node.js project can involve different approaches depending on the specific needs. Here's how you can update packages to the latest versions or to specific versions.

**Using npm Update Command**

The `npm update` command updates all the packages listed in the `package.json` file to their latest versions, respecting the version constraints specified.

```
npm update
```

**Updating Specific Packages**

To update a single package to the latest version:

```
npm install <package-name>@latest
```