

# Node Package Manager

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Source: <https://waverleysoftware.com/blog/yarn-vs-npm/>

## AGENDA

1. Overview
2. npm and yarn

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## 1. Overview

Package manager helps to manage project's dependencies.

- Add new package
- Update a package
- Remove a package
- ...

It's a painful task, that's why need a manager for it (**npm** or **yarn**)

**package.json** file is a kind of manifest for your project.

```
{
  "name": "learn-rtx-saga",
  "version": "0.1.0",
  "private": true,
  "dependencies": {
    "react-toastify": "^7.0.4",
    "redux-saga": "^1.1.3",
    "typescript": "~4.1.5",
    "yup": "^0.32.9"
  },
  "devDependencies": {
    "vite": "^2.6.0"
  },
  "scripts": {
    "start": "react-scripts start",
    "build": "react-scripts build",
    "test": "react-scripts test",
    "eject": "react-scripts eject"
  },
  "eslintConfig": {
    "extends": "react-app"
  },
  "browserslist": {
    "production": [
      ">0.2%",
      "not dead",
      "not op_mini all"
    ],
    "development": [
      "last 1 chrome version",
      "last 1 firefox version",
      "last 1 safari version"
    ]
  }
}
```

This is not a complete package.json, I remove some of them to keep it short.

There are two type of dependencies:

- **devDependencies**: only use in local development (built tools, dev server, ...)
- **dependencies**: it should be included in production build.

## Semantic Versioning (semver)

```
major.minor.patch  
1.2.3
```

```
major version = 1  
minor version = 2  
patch version = 3
```

### Type of version

#	Name	Desc
1	Major	Have breaking changes
2	Minor	Backward compatible new features
3	Patch	Backward compatible bug fixes

Version prefix in package.json

```
{  
  "dependencies": {  
    "react": "~17.0.0", // accept all patch versions 17.0.x  
    "react-hook-form": "^7.0.1" // accept all minor version  
  }  
}
```

Check it out: [npm semver calculator](#)

Tham khảo: <https://docs.npmjs.com/about-semantic-versioning>

## 2. npm and yarn

Both npm and yarn are package manager for javascript programming language.

	npm	yarn
abbr	Node Package Manager	Yet Another Resource Negotiator
install	Auto install with NodeJS	<code>npm i -g yarn</code>
lock file	package-lock.json	yarn.lock
install package	in order	parallel (faster than npm)
recommended	--	<b>YES</b>

```
# install starter kit: create-react-app
# Option 1: using npm
npm i -g create-react-app
create-react-app my-app

# Option 2: using npx (alias of npm exec, npm v5.2+)
npx create-react-app my-app

# Option 3: using npm init (npm v6+)
npm init react-app my-app
```

```
# install starter kit: create-react-app
# Option 1: using yarn
yarn global add create-react-app
create-react-app my-app

# Option 2: using yarn create
yarn create react-app my-app
```

## Common commands

Replace **package** by your **package\_name** accordingly.

Eg: **npm i -g yarn**

	npm	yarn
Install global (can use anywhere)	npm i -g package	yarn global add package
Install packages (package.json)	npm i	yarn
Add new package for prod	npm i package	yarn add package
Add new package for dev	npm i --save-dev package	yarn add --dev package
Remove package	npm uninstall package	yarn remove package
Update package	npm update package	yarn update package
Audit	npm audit	yarn audit
Fix Audit Issues	npm audit fix	N/A

## Common scripts

```
{
  "name": "learn-rtx-saga",
  "version": "0.1.0",
  "private": true,
  "scripts": {
    "start": "react-scripts start",
    "build": "react-scripts build",
    "test": "react-scripts test",
    "eject": "react-scripts eject"
  },
}
```

	npm	yarn
dev	npm run dev	yarn dev
build	npm run build	yarn build
start	npm start	yarn start
test	npm test	yarn test
list all scripts	npm run	yarn run

## Tham khảo

- <https://www.geeksforgeeks.org/difference-between-npm-and-yarn/>
  - <https://www.sitepoint.com/yarn-vs-npm/>
  - <https://classic.yarnpkg.com/en/docs/cli/>
  - <https://docs.npmjs.com/cli/v7/commands>
- 

## Khoá học Javascript cho người mới bắt đầu 2021 🎉

- Tác giả: **Hậu Nguyễn** - Founder Easy Frontend
- Khoá học chỉ được published trên Udemy, không thông qua trung gian.
- Khoá học không bán dạng videos upload trên Google Drive hay bất cứ hình thức nào tương tự.
- Khoá học có nhóm discord để hỗ trợ trong quá trình học tập.

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