**npm**

1. **Introduction**

<https://www.npmjs.com/> / <https://docs.npmjs.com/>

npm is package manager for JavaScript.  
Package contains 1 or more modules (reusable code) with special file package.json.  
With npm you can share the code with other and manage.

1. **Getting npm**

Go to nodejs.org and download and install latest stable release of node.json. The node.js downloaded for this practice is 8.12.0

The commands to verify nodeJs install successfully

*C:\NPMStudy>node -v*  
v8.12.0

*C:\NPMStudy>npm –v*  
6.4.1

1. **npm Help**

*C:\NPMStudy>npm help*

Usage: npm <command>  
where <command> is one of:  
 access, adduser, audit, bin, bugs, c, cache, ci, cit,  
 completion, config, create, ddp, dedupe, deprecate,  
 dist-tag, docs, doctor, edit, explore, get, help,  
 help-search, hook, i, init, install, install-test, it, link,  
 list, ln, login, logout, ls, outdated, owner, pack, ping,  
 prefix, profile, prune, publish, rb, rebuild, repo, restart,  
 root, run, run-script, s, se, search, set, shrinkwrap, star,  
 stars, start, stop, t, team, test, token, tst, un,  
 uninstall, unpublish, unstar, up, update, v, version, view,  
 whoami

npm <command> -h quick help on <command>  
npm -l display full usage info  
npm help <term> search for help on <term>  
npm help npm involved overview

Specify configs in the ini-formatted file:  
 C:\Users\GSAY\.npmrc

or on the command line via: npm <command> --key value  
Config info can be viewed via: npm help config

npm@6.4.1 C:\Users\GSAY\AppData\Roaming\npm\node\_modules\npm  
Did you mean this?  
 help

*C:\NPMStudy>npm help-search update*

Top hits for "update"  
——————————————————————————  
npm help update update:16  
npm help config update:8  
npm help package-locks update:7  
npm help outdated update:5  
npm help install update:4  
npm help hook update:4  
npm help semver update:4  
npm help disputes update:3  
npm help npmrc update:2  
npm help audit update:2  
npm help uninstall update:2  
npm help file-specifiers update:2  
npm help index update:2  
npm help developers update:1  
npm help publish update:1  
npm help shrinkwrap.json update:1  
npm help package-lock.json update:1  
npm help profile update:1  
npm help shrinkwrap update:1  
npm help ls update:1  
npm help config update:1  
npm help deprecate update:1  
npm help dedupe update:1  
npm help package-lock update:1  
————————————————————————————————  
(run with -l or --long to see more context)

*C:\NPMStudy>npm help update*

The above command will open up update command in browser (C:/Program Files/nodejs/node\_modules/npm/html/doc/cli/npm-update.html)

1. **package.json**

a. Help you Manage Dependencies of your project and  
b. Let you add Scripts that help you for initial build

Open com prompt and type npm init

package name: (windows)  
version: (1.0.0)  
description:  
entry point: (index.js)  
test command:  
git repository:  
keywords:  
author:  
license: (ISC)

About to write to C:\Windows\package.json:  
{  
 "name": "windows",  
 "version": "1.0.0",  
 "description": "",  
 "main": "index.js",  
 "scripts": {  
 "test": "echo \"Error: no test specified\" && exit 1"  
 },  
 "author": "",  
 "license": "ISC"  
}

Creating the same file without specifying any parameter use below command

*C:\NPMStudy>npm init –yes*Wrote to C:\NPMStudy\package.json:  
{  
 "name": "NPMStudy",  
 "version": "1.0.0",  
 "description": "",  
 "main": "index.js",  
 "scripts": {  
 "test": "echo \"Error: no test specified\" && exit 1"  
 },  
 "keywords": [],  
 "author": "",  
 "license": "ISC"  
}

Note:  
1. npm init command do not work if your folder in inside c:\program Files  
2. The folder name should not have any spaces between

1. **package.json defaults**

**How to send some default parameters to package.json file**

*C:\NPMStudy>npm config set init-author-name "Sanjay Adav"  
C:\NPMStudy>npm set init-license "MIT"*

Delete package.json if already exists and type below command

*C:\NPMStudy>npm init –yes*  
Wrote to C:\NPMStudy\package.json:  
{  
 "name": "NPMStudy",  
 "version": "1.0.0",  
 "main": "index.js",  
 "scripts": {  
 "test": "echo \"Error: no test specified\" && exit 1"  
 },  
 "keywords": [],  
 "author": "Sanjay Adav",  
 "license": "ISC",  
 "description": ""  
}

**To check the default values set:**

*C:\NPMStudy>npm config get init-author-name*Sanjay Adav

*C:\NPMStudy>npm get init-license*MIT

**To delete default set values:**

*C:\NPMStudy>npm config delete init-license  
C:\NPMStudy>npm config delete init-authour-name*

1. **Installing Local Packages**

Install package locally without adding an entry into package.json

*C:\NPMStudy>npm install moment*

npm notice created a lockfile as package-lock.json. You should commit this file.  
npm WARN NPMStudy@1.0.0 No description  
npm WARN NPMStudy@1.0.0 No repository field.  
+ [moment@2.22.2](mailto:moment@2.22.2)  
added 1 package from 6 contributors and audited 1 package in 4.846s  
found 0 vulnerabilities

Install package with entry into package.json as production dependencies

*C:\NPMStudy>npm install moment –save*  
npm notice created a lockfile as package-lock.json. You should commit this file.  
npm WARN NPMStudy@1.0.0 No description  
npm WARN NPMStudy@1.0.0 No repository field.  
+ [moment@2.22.2](mailto:moment@2.22.2)  
added 1 package from 6 contributors and audited 1 package in 2.698s  
found 0 vulnerabilities

package.json now contains:  
{  
 "name": "NPMStudy",  
 "version": "1.0.0",  
 "description": "",  
 "main": "index.js",  
 "scripts": {  
 "test": "echo \"Error: no test specified\" && exit 1"  
 },  
 "keywords": [],  
 "author": "Sanjay Adav",  
 "license": "ISC",  
 "dependencies": {  
 "moment": "^2.22.2"  
 }  
}

Install package with entry into package.json as development dependencies

*C:\NPMStudy>npm install lodash --save-dev*npm WARN NPMStudy@1.0.0 No description  
npm WARN NPMStudy@1.0.0 No repository field.

+ [lodash@4.17.11](mailto:lodash@4.17.11)  
added 1 package from 2 contributors and audited 2 packages in 9.284s  
found 0 vulnerabilities  
package.json will have now:  
{  
 "name": "NPMStudy",  
 "version": "1.0.0",  
 "description": "",  
 "main": "index.js",  
 "scripts": {  
 "test": "echo \"Error: no test specified\" && exit 1"  
 },  
 "keywords": [],  
 "author": "Sanjay Adav",  
 "license": "ISC",  
 "dependencies": {  
 "moment": "^2.22.2"  
 },  
 "devDependencies": {  
 "lodash": "^4.17.11"  
 }  
}

**Note:** When you run all above command a folder name "node\_modules" will get created inside your working folder and packages get copied inside

1. **Uninstalling Local Packages**

*C:\NPMStudy>npm uninstall moment – save*  
npm WARN NPMStudy@1.0.0 No description  
npm WARN NPMStudy@1.0.0 No repository field.  
removed 1 package and audited 1 package in 1.203s  
found 0 vulnerabilities

*C:\NPMStudy>npm uninstall lodash --save-dev*  
npm WARN NPMStudy@1.0.0 No description  
npm WARN NPMStudy@1.0.0 No repository field.  
removed 1 package in 1.204s  
found 0 vulnerabilities

1. **Installing Global Packages**

*C:\NPMStudy>npm install moment –g*+ [moment@2.22.2](mailto:moment@2.22.2)  
added 1 package from 6 contributors in 2.911s

1. **Uninstalling Global Packages**

*C:\NPMStudy>npm uninstall moment –g*  
removed 1 package in 0.516s

1. **Listing Packages**

*C:\NPMStudy>npm list*NPMStudy@1.0.0 C:\NPMStudy  
`-- moment@2.22.2

*C:\NPMStudy>npm list --depth 1*NPMStudy@1.0.0 C:\NPMStudy  
`-- moment@2.22.2

*C:\NPMStudy>npm list --depth 0*NPMStudy@1.0.0 C:\NPMStudy  
`-- moment@2.22.2

*C:\NPMStudy>npm list --global true --depth 0*C:\Users\GSAY\AppData\Roaming\npm  
`-- (empty)

1. **npm Versioning**

To install any particular version of any package

*C:\NPMStudy>npm install lodash@3.3.0 –save*npm WARN NPMStudy@1.0.0 No description  
npm WARN NPMStudy@1.0.0 No repository field.  
+ [lodash@3.3.0](mailto:lodash@3.3.0)  
updated 1 package and audited 2 packages in 4.857s  
found 1 low severity vulnerability  
 run `npm audit fix` to fix them, or `npm audit` for details

**Note:** The package.json file will display the version as 3.3.0 for lodash package

*C:\NPMStudy>npm install lodash@4.14 –save*  
npm WARN NPMStudy@1.0.0 No description  
npm WARN NPMStudy@1.0.0 No repository field.  
+ [lodash@4.14.2](mailto:lodash@4.14.2)  
updated 1 package and audited 2 packages in 8.854s  
found 1 low severity vulnerability  
 run `npm audit fix` to fix them, or `npm audit` for details

*C:\NPMStudy>npm install lodash@4 –save*npm WARN NPMStudy@1.0.0 No description  
npm WARN NPMStudy@1.0.0 No repository field.  
+ [lodash@4.17.11](mailto:lodash@4.17.11)  
updated 1 package and audited 2 packages in 7.202s  
found 0 vulnerabilities

1. **Installing from package.json**

*C:\NPMStudy>npm install*npm notice created a lockfile as package-lock.json. You should commit this file.  
npm WARN NPMStudy@1.0.0 No description  
npm WARN NPMStudy@1.0.0 No repository field.  
added 2 packages from 8 contributors and audited 2 packages in 6.99s  
found 0 vulnerabilities

**Note:** The above command will install lodash and moment pacakges inside "node\_modules" folder.

**^4.17.11** - When run install command retrieve latest minor and patch version and keep the major version number same

*C:\NPMStudy>npm install*npm WARN NPMStudy@1.0.0 No description  
npm WARN NPMStudy@1.0.0 No repository field.  
audited 2 packages in 0.825s  
found 0 vulnerabilities

**~4.17.11** - Leave major and minor version and retrieve latest patch version

*C:\NPMStudy>npm install*npm WARN NPMStudy@1.0.0 No description  
npm WARN NPMStudy@1.0.0 No repository field.  
updated 1 package and audited 2 packages in 5.482s  
found 1 low severity vulnerability  
 run `npm audit fix` to fix them, or `npm audit` for details

**4.14.1 -** Install given version only

*C:\NPMStudy>npm install*npm WARN NPMStudy@1.0.0 No description  
npm WARN NPMStudy@1.0.0 No repository field.  
updated 1 package and audited 2 packages in 8.807s  
found 1 low severity vulnerability  
 run `npm audit fix` to fix them, or `npm audit` for details

**\* -** Retrieve the latest version

*C:\NPMStudy>npm install*

npm WARN NPMStudy@1.0.0 No description  
npm WARN NPMStudy@1.0.0 No repository field.  
audited 2 packages in 1.793s  
found 1 low severity vulnerability  
 run `npm audit fix` to fix them, or `npm audit` for details

1. **Updating Packages**

*C:\NPMStudy>npm update lodash –save*  
npm WARN NPMStudy@1.0.0 No description  
npm WARN NPMStudy@1.0.0 No repository field.  
+ [lodash@4.17.11](mailto:lodash@4.17.11)  
updated 1 package and audited 2 packages in 9.946s  
found 0 vulnerabilities

*C:\NPMStudy>npm update --dev --save-dev*

The above command will update all dev dependent packages

*C:\NPMStudy>npm update*

The above command will update all dependencies (dev and production packages)

*C:\NPMStudy>npm update -g*

*C:\NPMStudy>npm update -g gulp*

To update npm with latest version of npm, open command prompt with Administrative Privileges and type the below command:

*C:\NPMStudy>npm install npm@latest -g*

C:\Users\GSAY\AppData\Roaming\npm\npx -> C:\Users\GSAY\AppData\Roaming\npm\node\_modules\npm\bin\npx-cli.js

C:\Users\GSAY\AppData\Roaming\npm\npm -> C:\Users\GSAY\AppData\Roaming\npm\node\_modules\npm\bin\npm-cli.js

+ [npm@6.4.1](mailto:npm@6.4.1)  
added 387 packages from 770 contributors in 67.078s

1. **npm Prune**

To remove unwanted pacakge npm Prune command is used.

a. Install lodash, moment and underscore packages but in package.json keep entry of underscore package only. So we now want to remove other unwanted packages.

*C:\NPMStudy>npm list --depth 0*NPMStudy@1.0.0 C:\NPMStudy  
`-- underscore@1.9.1

*C:\NPMStudy>npm prune*  
npm WARN NPMStudy@1.0.0 No description  
npm WARN NPMStudy@1.0.0 No repository field.  
audited 1 package in 1.341s

found 0 vulnerabilities

1. **Shortcuts**

**a. To create package.json with default value:**

*C:\NPMStudy>npm init –y*Wrote to C:\NPMStudy\package.json:  
{  
 "name": "NPMStudy",  
 "version": "1.0.0",  
 "description": "",  
 "main": "index.js",  
 "scripts": {  
 "test": "echo \"Error: no test specified\" && exit 1"  
 },

"keywords": [],  
 "author": "Sanjay Adav",  
 "license": "ISC"  
}

**b. To install package locally:***C:\NPMStudy>npm i lodash*

**c. Install locally and save as dependency in pacakge.json:**C:\NPMStudy>npm i lodash -S

**d. Install package as dev dependencies:**  *C:\NPMStudy>npm i moment -D*

1. **npm Scripts**

**a. Create app.js with the below contents**console.log("First npm script testing!")

**b. run the below command***C:\NPMStudy>node app.js*First npm script testing!

**c. Update package.json as**{  
 "name": "NPMStudy",  
 "version": "1.0.0",  
 "description": "",  
 "main": "index.js",  
 "scripts": {  
 ***"start": "node app.js"***  
 },  
 "keywords": [],  
 "author": "Sanjay Adav",  
 "license": "ISC",  
 "dependencies": {  
 "lodash": "^4.17.11"  
 },  
 "devDependencies": {  
 "moment": "^2.22.2"  
 }  
}

**d. Now run the below command***C:\NPMStudy>npm start*  
> NPMStudy@1.0.0 start C:\NPMStudy  
> node app.js

First npm script testing!