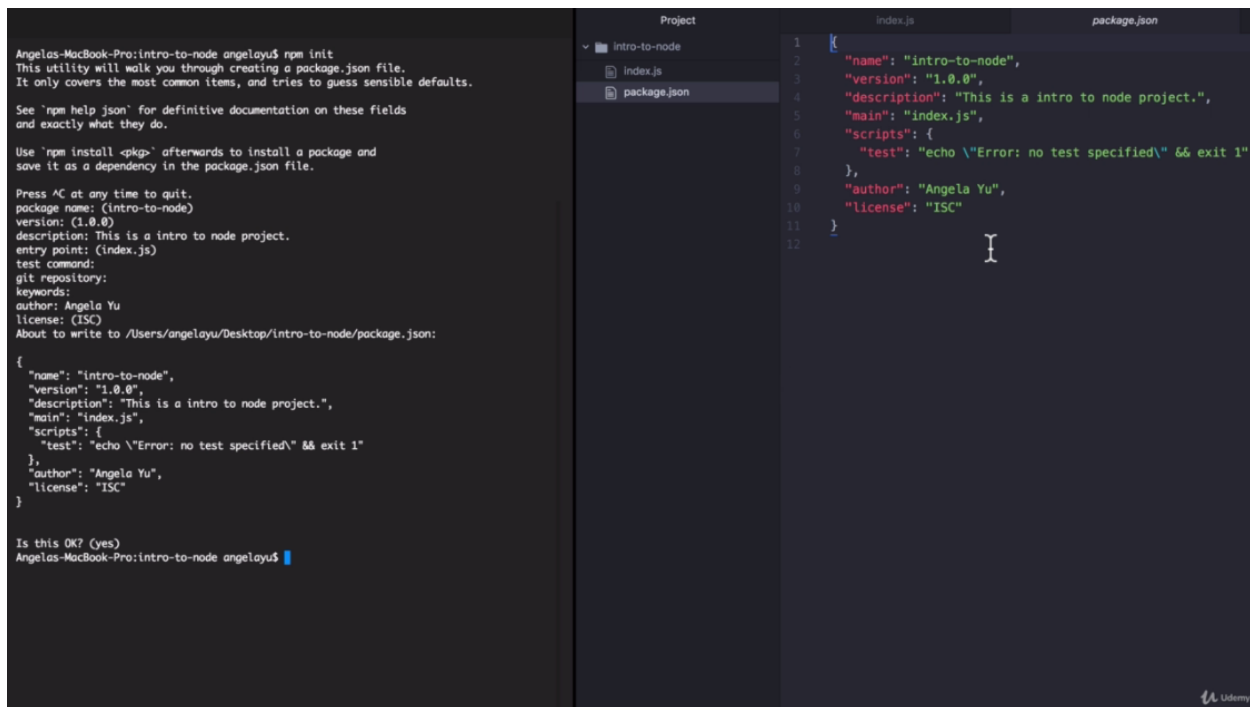# *The NPM Package Manager and Installing External Node Modules*

npm: A package manager for external models that anybody can build.

A package of npm is other modules written by other body. You can add these to uses these packages. Like you are building ledger house and you want trees around your house then you can add tree package.

Command **npm init**

Write description whatever you want.

Author : Your Name

```
About to write to C:\Users\M.A Computer\Desktop\intro-to-node\package.json:

{
  "name": "intro-to-node",
  "version": "1.0.0",
  "description": "This is a intro to node project.",
  "main": "index.js",
  "scripts": {
    "test": "echo \"Error: no test specified\" && exit 1"
  },
  "author": "Muhammad Ahmad",
  "license": "ISC"
}


Is this OK? (yes)

C:\Users\M.A Computer\Desktop\intro-to-node>
```

```json
{
  "name": "intro-to-node",
  "version": "1.0.0",
  "description": "This is a intro to node project.",
  "main": "index.js",
  "scripts": {
    "test": "echo \"Error: no test specified\" && exit 1"
  },
  "author": "Muhammad Ahmad",
  "license": "ISC"
}
```

```
C:\Users\ahmad\Desktop\intro-to-node>npm init
This utility will walk you through creating a package.json file.
It only covers the most common items, and tries to guess sensible defaults.

See `npm help init` for definitive documentation on these fields
and exactly what they do.

Use `npm install <pkg>` afterwards to install a package and
save it as a dependency in the package.json file.

Press ^C at any time to quit.
package name: (intro-to-node)
version: (1.0.0)
description: This is a intro to node project.
entry point: (index.js)
test command:
git repository:
keywords:
author: Muhammad Ahmad
license: (ISC)
About to write to C:\Users\ahmad\Desktop\intro-to-node\package.json:

{
  "name": "intro-to-node",
  "version": "1.0.0",
  "description": "This is a intro to node project.",
  "main": "index.js",
  "scripts": {
    "test": "echo \"Error: no test specified\" && exit 1"
  },
  "author": "Muhammad Ahmad",
  "license": "ISC"
}


Is this OK? (yes) yes
npm notice
npm notice New major version of npm available! 8.15.0 -> 10.1.0
npm notice Changelog: https://github.com/npm/cli/releases/tag/v10.1.0
npm notice Run npm install -g npm@10.1.0 to update!
npm notice

C:\Users\ahmad\Desktop\intro-to-node>
```

Now package.json is created inside intro-to-node folder.

https://www.npmjs.com

https://www.npmjs.com/package/package

https://www.npmjs.com/package/superheroes

Install just writing the command **npm install superheroes (npm i superheroes)**
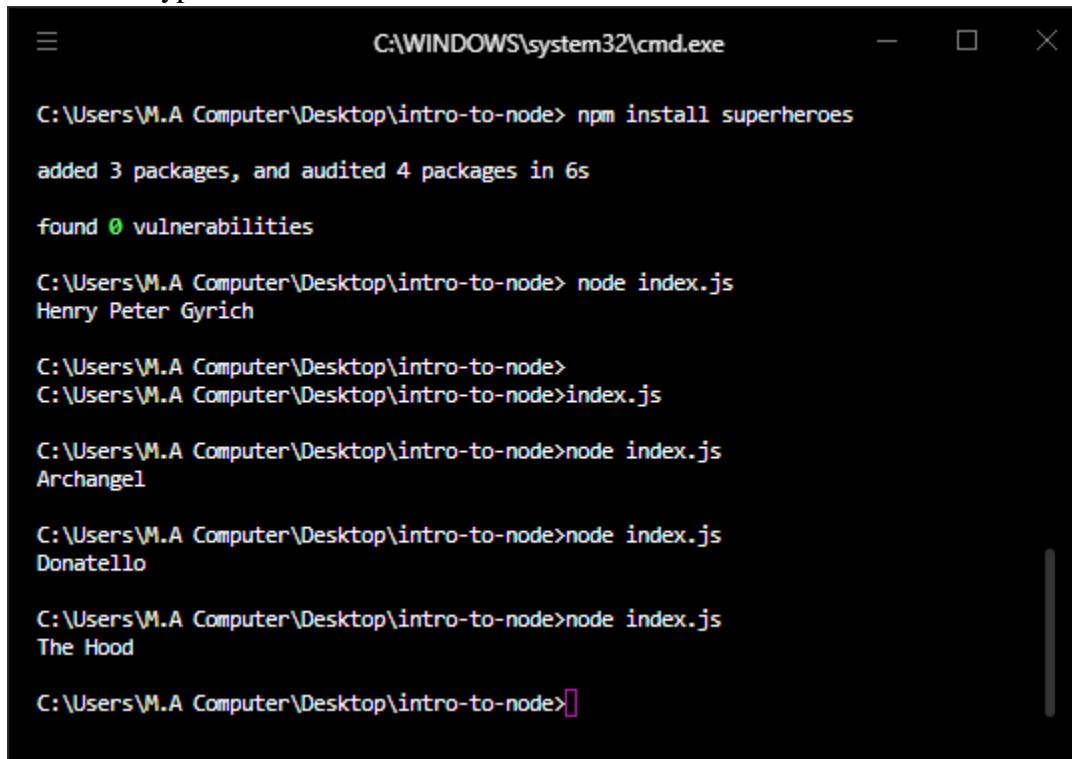
Then add usage inside index.js

var superheroes = require('superheroes');

var mySuperheroes = superheroes.random();

console.log(mySuperheroes);

and run in hyper terminal.

```
C:\Users\M.A Computer\Desktop\intro-to-node> npm install superheroes

added 3 packages, and audited 4 packages in 6s

found 0 vulnerabilities

C:\Users\M.A Computer\Desktop\intro-to-node> node index.js
Henry Peter Gyrich

C:\Users\M.A Computer\Desktop\intro-to-node>
C:\Users\M.A Computer\Desktop\intro-to-node>index.js

C:\Users\M.A Computer\Desktop\intro-to-node>node index.js
Archangel

C:\Users\M.A Computer\Desktop\intro-to-node>node index.js
Donatello

C:\Users\M.A Computer\Desktop\intro-to-node>node index.js
The Hood

C:\Users\M.A Computer\Desktop\intro-to-node>
```

this package is added to generate random super heroes.

package.json:

{

  "name": "intro-to-node",

  "version": "1.0.0",

  "description": "This is a intro to node project.",

  "main": "index.js",

  "scripts": {

   "test": "echo \"Error: no test specified\" && exit 1"

  },

```
  "author": "Muhammad Ahmad",

  "license": "ISC",

  "dependencies": {

    "superheroes": "^3.0.0"

  }

}
```

Index.js:

```
var superheroes = require('superheroes');

var mySuperheroes = superheroes.random();

console.log(mySuperheroes);
```

package-lock.json:

```
{

  "name": "intro-to-node",

  "version": "1.0.0",

  "lockfileVersion": 2,

  "requires": true,

  "packages": {

    "": {

      "name": "intro-to-node",

      "version": "1.0.0",

      "license": "ISC",

      "dependencies": {

        "superheroes": "^3.0.0"

      }

    },

    "node_modules/superheroes": {

      "version": "3.0.0",

      "resolved": "https://registry.npmjs.org/superheroes/-/superheroes-3.0.0.tgz",
```

```
    "integrity": "sha512-
XXXzeKHMnf0rmZItYkGU803JlqYpoxvxzKFoe6k8C4bolcKfLZH716Rm4DyNJhxPTurbzDE
B/QC7TXGsoei+ew==",
    "dependencies": {
      "unique-random-array": "^2.0.0"
    },
    "engines": {
      "node": ">=8"
    }
  },
  "node_modules/unique-random": {
    "version": "2.1.0",
    "resolved": "https://registry.npmjs.org/unique-random/-/unique-random-2.1.0.tgz",
    "integrity": "sha512-
iQ1ZgWac3b8YxGThecQFRQiqgk6xFERRwHZIWeVVsqlbmgCRl0PY13R4mUkodNgctmg5b
5odG1nyW/IbOxQTqg==",
    "engines": {
      "node": ">=6"
    }
  },
  "node_modules/unique-random-array": {
    "version": "2.0.0",
    "resolved": "https://registry.npmjs.org/unique-random-array/-/unique-random-array-
2.0.0.tgz",
    "integrity": "sha512-
xR87O95fZ7hljw84J8r1YDXrvffPLWN513BNOP4Bv0KcgG5dyEUrHwsvP7mVAOKg4Y80uq
RbpUk0GKr8il70qg==",
    "dependencies": {
      "unique-random": "^2.1.0"
    },
    "engines": {
```

```json
      "node": ">=8"

    }

  }
},

"dependencies": {

  "superheroes": {

    "version": "3.0.0",

    "resolved": "https://registry.npmjs.org/superheroes/-/superheroes-3.0.0.tgz",

    "integrity": "sha512-XXXzeKHMnf0rmZItYkGU803JlqYpoxvxzKFoe6k8C4bolcKfLZH716Rm4DyNJhxPTurbzDEB/QC7TXGsoei+ew==",

    "requires": {

      "unique-random-array": "^2.0.0"

    }

  },

  "unique-random": {

    "version": "2.1.0",

    "resolved": "https://registry.npmjs.org/unique-random/-/unique-random-2.1.0.tgz",

    "integrity": "sha512-iQ1ZgWac3b8YxGThecQFRQiqgk6xFERRwHZIWeVVsqlbmgCRl0PY13R4mUkodNgctmg5b5odG1nyW/IbOxQTqg=="

  },

  "unique-random-array": {

    "version": "2.0.0",

    "resolved": "https://registry.npmjs.org/unique-random-array/-/unique-random-array-2.0.0.tgz",

    "integrity": "sha512-xR87O95fZ7hljw84J8r1YDXrvffPLWN513BNOP4Bv0KcgG5dyEUrHwsvP7mVAOKg4Y80uqRbpUk0GKr8il70qg==",

    "requires": {

      "unique-random": "^2.1.0"
```

```
    }

  }

 }

}
```

Challenge Super Villains (supervillains)

```
Node.js v18.7.0

C:\Users\M.A Computer\Desktop\intro-to-node> node index.js
Super Hero: Carol Hines
Super Villain: Venom

C:\Users\M.A Computer\Desktop\intro-to-node>node index.js
Super Hero: Wraith
Super Villain: Bloody Mary

C:\Users\M.A Computer\Desktop\intro-to-node>node index.js
Super Hero: Ultimates
Super Villain: Doctor Alchemy

C:\Users\M.A Computer\Desktop\intro-to-node>node index.js
Super Hero: Morph
Super Villain: Morlun

C:\Users\M.A Computer\Desktop\intro-to-node>
```

```
//Super Heroes

var superheroes = require('superheroes');

//Super Villains

var supervillains = require('supervillains');


var mySuperheroes = superheroes.random();

var mySupervillains = supervillains.random();


console.log("Super Hero: "+mySuperheroes);

console.log("Super Villain: "+mySupervillains);
```

https://www.npmjs.com/package/supervillains

install different packages and do practice more and more.