



Understanding Package.Json

About Me



Vivek Garg
JavaScript Lover
Working on MEAN Stack
about.me/vivek-garg

Twitter : [@vivekdion](https://twitter.com/@vivekdion)

LinkedIn : in.linkedin.com/in/vivek-garg

Facebook : facebook.com/vivek.garg

AGENDA

- Creation of Package.json
- Adding Dependencies
- Semantic Versioning (semver)
- Adding DevDependencies
- Adding engines

Package.json

- Package.json holds various meta data relevant to the project. This file is used to give information to npm that allows it to identify project as well as handle the project's dependencies.
- Initialize package.json : *npm init*

Sample Package.json

```
{ "name" : "sample",  
  "version" : "1.0.0",  
  "description": "This is testing for creation of package.json",  
  "main" : "index.js",  
  "dependencies": { },  
  "devDependencies" :{ },  
  "scripts" : { },  
  "repository": { },  
  "keywords": [ ],  
  "author": "vivek",  
  "license": "ISC" }
```

Dependencies

*Modules your module needs to **run** go in dependencies*

```
{"dependencies":  
  
  {  
  
    "foo" : "version",  
  
    "bar" : "version range",  
  
    "til"  : "git://github.com/til/project.git#commit-ish",  
  
    "baz"  : "http://asdf.com/cm.tar.gz",  
  
    "dyl"  : " file : ../dyl "  
  
  }  
  
}
```

Semantic versioning

"foo" : * OR "" (empty String), **(Any version satisfies)**

"bar" : ">=1.0.2 <2.1.2" ,

"baz" : ">1.0.2 <=2.3.4" ,

"boo" : "2.0.1" ,

"qux" : "<1.0.0 || >=2.3.1 <2.4.5" ,

"asd" : "1.2 - 2.3.4" , **:= >=1.2.0 <=2.3.4**

"sda" : "1.2.3 - 2.3" , **:= >=1.2.3 <2.4.0**

"two" : "2.x" , **:= >=2.0.0 <3.0.0**

"thr" : "3.3.x" , **:= >=3.3.0 <3.4.0**

Symbol	Dependency	Versions
Caret (^)	$\wedge 3.2.3$ $\wedge 0.2.3$ $\wedge 0.0.3$	$\geq 3.2.3 < 4.0.0$ $\geq 0.2.3 < 0.3.0$ $\geq 0.0.3 < 0.0.4$
Tilde (~)	$\sim 3.2.3$ ~ 1.2 ~ 1	$\geq 3.2.3 < 3.3.0$ $\geq 1.2.0 < 1.3.0$ $\geq 1.0.0 < 2.0.0$

devDependencies

*Modules you need to **develop** your module go in devDependencies*

```
{
  "devDependencies":
  {
    "karma" : "version",
    "grunt-contrib-imagemin" : "version range",
    "grunt-contrib-sass" : "git://github.com/til/project.git#commit-ish",
    "grunt-contrib-cssmin" : "http://asdf.com/cm.tar.gz",
    "coffee-script" : " file : ../dyl "
  }
}
```

engines

*You can specify the version of **node** & **npm** that your stuff works on*

```
{  
  "engines": {  
    "node": "^6.2.2",  
    "npm": "^3.9.5"  
  }  
}
```

References

- <https://docs.npmjs.com/files/package.json>
- <https://docs.npmjs.com/misc/semver>
- <http://bytearcher.com/articles/semver-explained-why-theres-a-caret-in-my-package-json/>

THANK YOU !