**Introduction to Bower and Grunt**

**Prerequisites:** To understand Bower and Grunt we should have some knowledge about

1. Node.js
2. Node package or module
3. NPM (Node Package Manager)

**What is Node.js: Node**.**js** is a runtime environment for server-side and networking applications written in JavaScript (Something like .net environment for applications written in c#).

How node.js works, what are the advantages or should we use it, those are very important topic (if we want to know node.js) but not related with bower or grunt. So we will not discuss them here.

**What is node package or node module:** Node modules or node packages are one kind of reusable code group written in JavaScript (node.js) and which can be published to npm. From the npm other people can download, install and use the packages according to their need.

A node package is a directory with one or more files (JavaScript) on it. This directory also has “package.json” file that contains metadata of the package.

Bower and Grunt are kinds of npm packages.

**What is NPM:** NPM stands for Node Package Manager. When we are talking about npm, it may mean following three things

1. NPM web sites, that contains various documentation regarding npm and node modules or packages
2. NPM repository or database that contains node.js modules or nod.js packages various peoples are sharing
3. NPM clients, which are used to download, install and run node.js modules.

Visit following url for more information: https://docs.npmjs.com/getting-started/what-is-npm

**Installing Node.js:** For windows just go to the official website of node.js (<https://nodejs.org/en/>). Download the installer .msi and run it. At the command prompt if you run **“node -v”** command, the result will show you the installed node.js version.

**Installing NPM :** NPM will be automatically installed with node.js. You can see the version by following command **“npm -v”**. NPM gets updated more frequently than node.js. That’s why you may need to update npm version. You can update the npm version by following command **“npm install npm -g”**

**Installing npm packages:** There are two ways to install npm packages

1. Globally: If you are going to use the package as a command line tool so that you can run the commands related to the package from command line then you need to install it globally. Run following command from command line **“npm install –g <packagename>”** to install any packages globally.

Please keep in mind that not all the packages can be used as command line tool.

1. Locally: If you want the packages will be used by your own module or application then install it locally. To install locally you have to go to your application directory at the command line and run following command **“npm install <packagename>”.**

Another way to install nmp packages locally by using **“package.json”** file. Add a “package.json” file to your project directory; add all the required modules or packages as dependency and run **“npm install” command from command line.** All themodules or packages you have defined as dependency will be installed locally.