# Worksheet 1b: Package Manager

A software development project may involves other libraries, we call them dependencies. Maintaining the validity of these dependencies is time consuming and however can be automated.

NPM – *NodeJS package manager. A popular package manager for JavaScript.*

Yeoman – *A web's scaffolding tool for modern webapps*

Bower – *A popular package manager for webapps.*

## Let’s Do It!

We will prepare a directory with all file set for a webapp project.

1. Install NodeJS and NPM  
   Download from nodejs.org  
   Install it: Just Yes Yes Next OK.
2. Test node and npm availability.  
   Open a CLI and type  
   node -v  
   npm -v
3. Install Yeoman, http://yeoman.io/generators/  
   npm install -g yo
4. Now we are ready to create a new webapp project.  
   Change to your working directory   
   cd d:\CS4404\hybrid-mobile-dev
5. We need to add webapp generator to Yeoman so it knows how to generate a webapp.  
   npm install generator-webapp
6. Now you can create a new project  
   yo webapp my-web

Yeoman starts to download all dependencies and create the structure of your project.

1. We assume that we use Visual Studio Code as our primary IDE for this course. If you don’t have it, download and install from Visual Studio Code website.
2. At CLI, type  
   code .

Visual Studio Code starts and uses the current directory as its working directory.

1. Run the web using Gulp task manager. I know there are so many jargons, get used to it.  
   gulp serve

Your default web browser is launched and renders the page. To exit, press CTRL+C.

1. Behold **LiveLoad**! In Code, try to change some text in index.html and observe that the page gets update immediately. At this point, if you are using Windows 10, you can organize the windows side-by-side. Press WIN+<ARROW KEY> to snap your windows to the place you like. In Code, you can hide the views you don’t need, such as Side Bar, press CTRL+B.
2. Build the webapp,  
   gulp  
   Gulp will build your project code which involves various process, including compilation, **wiredep**, and **uglify**. Yes, it makes your code looks ugly. The output is in dist/.

**Question 1:** Why do we uglify codes?

**Question 2:** Observe that there are several JavaScript plug-ins in bower\_components/ but after building it, they are combined into a single plugins.js file. What is the benefit?

1. Add a page which talks about yourself
   1. At index.html, set href of about to about.html  
      <a href="about.html">About</a>
   2. Copy index.html to about.html
   3. Modify the content in about.html to be about you. Only change it to your name is good enough. Remove unused contents. But do not remove other codes between <!-- build:js --> section.

## Summary

1. You do not need to commit and push this code. It is only for testing the tool set.
2. You have learned basic npm and yeoman. Bower will be in later classes.
3. You have learned Gulp task manager.