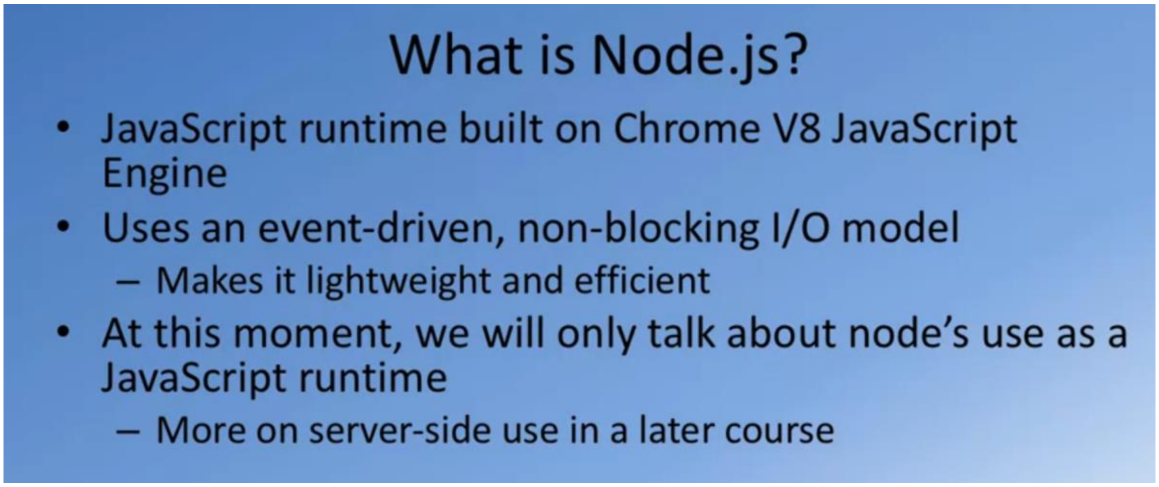
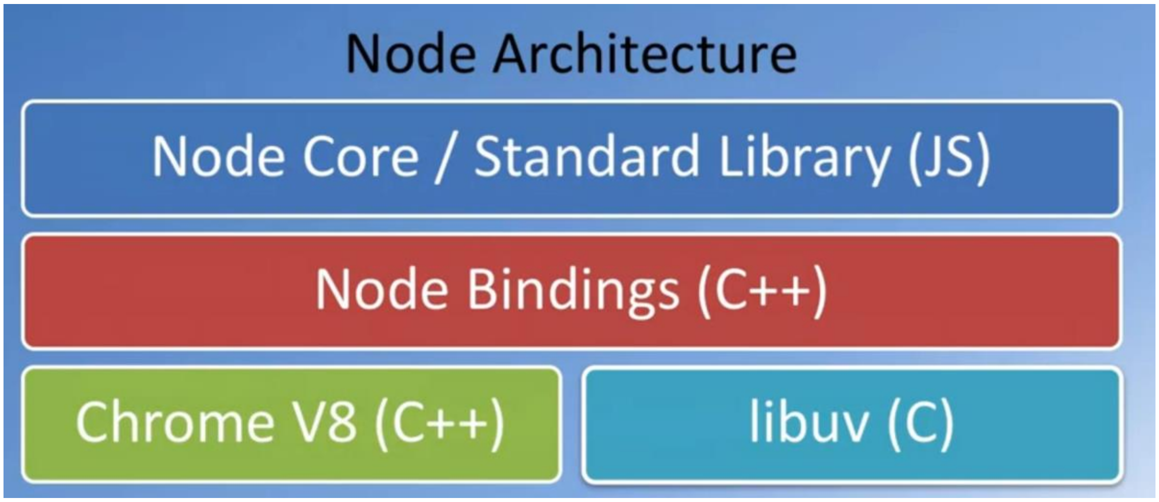
Node JS



What is Node.js?

- JavaScript runtime built on Chrome V8 JavaScript Engine
- Uses an event-driven, non-blocking I/O model
  - Makes it lightweight and efficient
- At this moment, we will only talk about node's use as a JavaScript runtime
  - More on server-side use in a later course



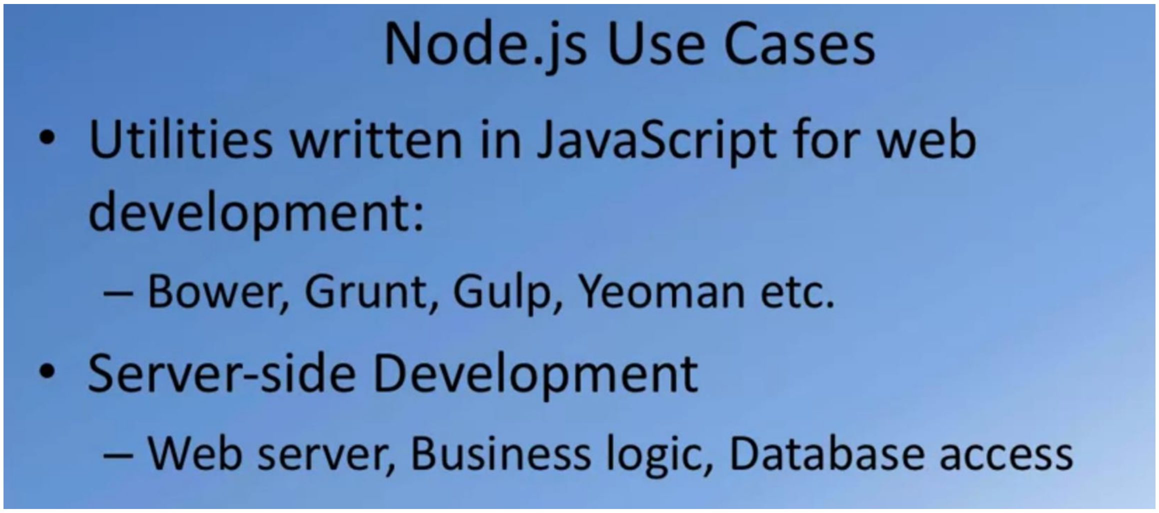
Node Architecture

Node Core / Standard Library (JS)

Node Bindings (C++)

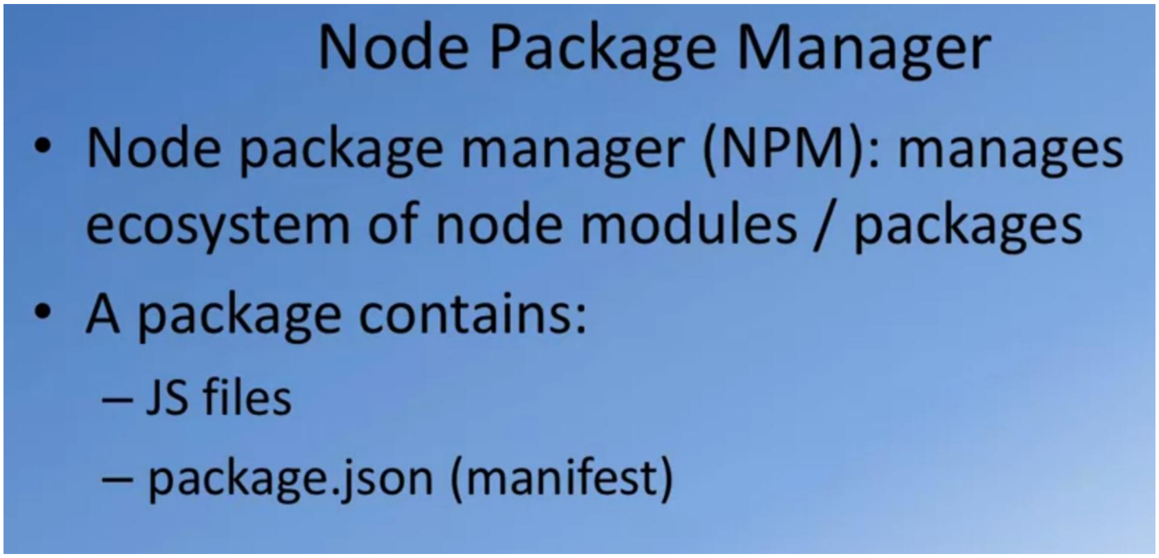
Chrome V8 (C++)

libuv (C)



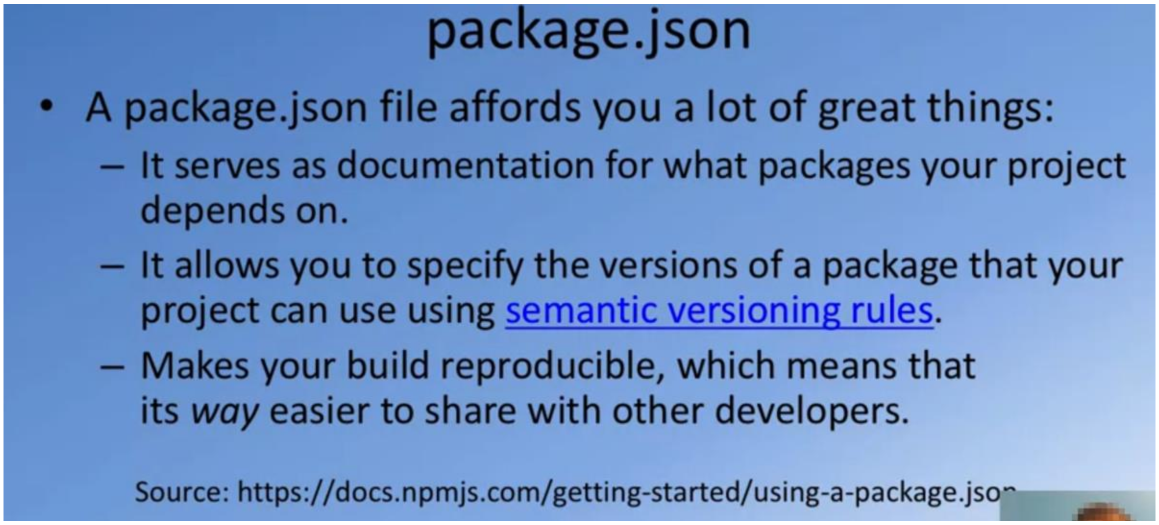
Node.js Use Cases

- Utilities written in JavaScript for web development:
  - Bower, Grunt, Gulp, Yeoman etc.
- Server-side Development
  - Web server, Business logic, Database access



Node Package Manager

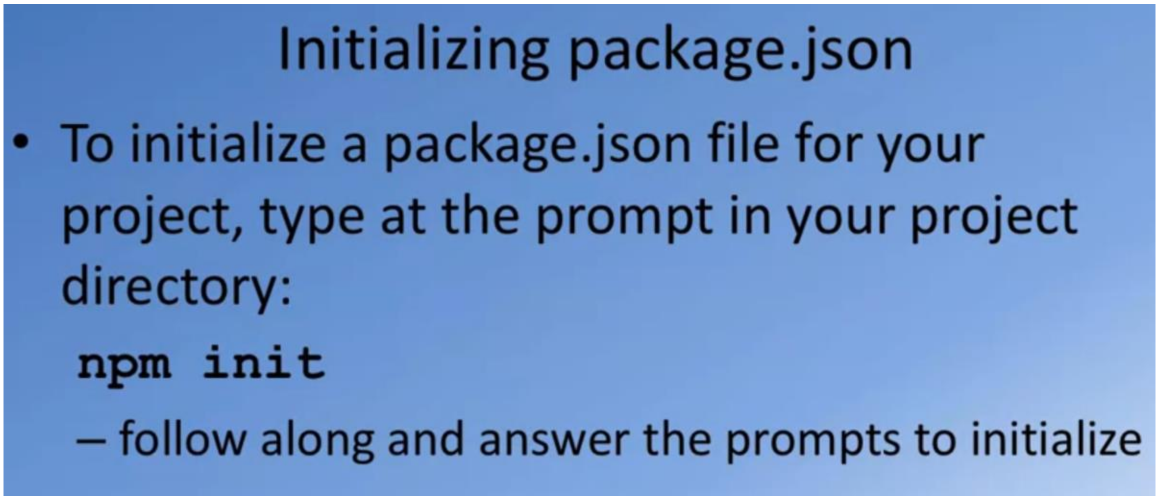
- Node package manager (NPM): manages ecosystem of node modules / packages
- A package contains:
  - JS files
  - package.json (manifest)



package.json

- A package.json file affords you a lot of great things:
  - It serves as documentation for what packages your project depends on.
  - It allows you to specify the versions of a package that your project can use using semantic versioning rules.
  - Makes your build reproducible, which means that its *way* easier to share with other developers.

Source: https://docs.npmjs.com/getting-started/using-a-package.jso



Initializing package.json

- To initialize a package.json file for your project, type at the prompt in your project directory:

```
npm init
```

  - follow along and answer the prompts to initialize