# COMP4021 Internet Computing

# Getting Started With Node.js

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# Node.js

- The JavaScript code that you have made so far always runs inside a web page
- If you do not have a browser, you will not be able to run your code
- To run JavaScript outside of the browser environment, you can use Node.js



 Node.js is a JavaScript runtime that allows you to run JavaScript anywhere

# Why Do We Use Node.js?

- Here are the reasons:
  - Node.js is one of the most popular frameworks for web app development
  - You can continue to use JavaScript even if we don't work inside a browser
- As you will use it to build your server-side programs later we will give you an quick overview of the installation

# Installing Node.js

- To install it, you go to the Node.js website: https://nodejs.org/
- Download an appropriate package

Download the Node.js source code or a pre-built installer for your platform, and start developing today.



Install it and you are ready to go!

#### First Use of Node

 Node.js gives you a JavaScript interpreter called node, which works like the console inside Chrome

```
C:\Users\Gibson>node
Welcome to Node.js v16.13.1.
Type ".help" for more information.
> console.log("Welcome to Node.js!")
Welcome to Node.js!
undefined
>
```

# Running JavaScript Program

- You run JavaScript programs by giving the program to node
- Here is a JavaScript program:

You run the program by doing this:

```
C:\Users\Gibson>node 01_first_program.js
Wow, you can run me!
```

### Using NPM

- NPM is the package manager for Node.js
- You can install many additional libraries into your project with one command
- For example, if you want to use a module called express, you can install it in the current folder by:

```
C:\Users\Gibson>npm install express
added 50 packages, and audited 51 packages in 2s
found 0 vulnerabilities
```

# Using the Installed Module

 After installing a module, you can then use the module inside your JavaScript program using the require() function, e.g.:

02\_using\_express.js

You need to use a variable to store and then use the module

# Using the Installed Module

 If the express module is installed, you will see the output like this:

C:\Users\Gibson>node 02\_using\_express.js
You have installed express successfully.

 Now, you are ready to build server-side programs using Node.js and express, which we will do later