

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



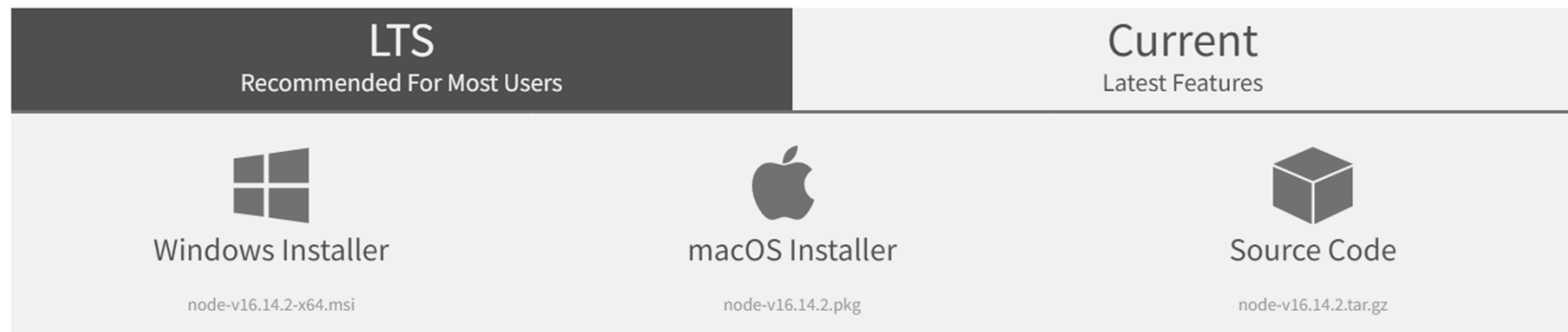
Why Do We Use Node.js?

- 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:

```
console.log("Wow, you can run me!");
```

01_first_program.js

- 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.:



```
const express = require("express");  
console.log("You have installed  
express successfully.");
```

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