

SCHOOL OF COMPUTING

ST0523 Fundamentals of Programming

Practical 0: Node.js & VS Code

What you will learn / do in this lab

- Download and install node.js & Visual Studio Code (VS Code)
- Configure Visual Studio Code to work with node.js
- Write the first computer program using JavaScript
- Execute the program to display the output on the integrated console of VS Code

1) Download node.js & Visual Studio Code

- a) Search and view any node.js installation video in Youtube to see how installation can be easy done.

Sample Youtube videos:

[\(265\) What is Node.js || Node.js Installation || Coders Arcade - YouTube](#)

[\(265\) #02 Installing NODE JS | Fundamentals of NODE JS | A Complete NODE JS Course - YouTube](#)




- b) Access this URL to download **node.js** (choose the version that is compatible with your laptop):

<https://nodejs.org/en/download/>

Downloads

Latest LTS Version: 18.12.1 (includes npm 8.19.2)




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

LTS Recommended For Most Users	Current Latest Features
 Windows Installer <small>node-v18.12.1-x64.msi</small>	 macOS Installer <small>node-v18.12.1.pkg</small>
	 Source Code <small>node-v18.12.1.tar.gz</small>

Windows Installer (.msi)	32-bit	64-bit
Windows Binary (.zip)	32-bit	64-bit
macOS Installer (.pkg)	64-bit / ARM64	
macOS Binary (.tar.gz)	64-bit	ARM64
Linux Binaries (x64)	64-bit	
Linux Binaries (ARM)	ARMv7	ARMv8
Source Code	node-v18.12.1.tar.gz	

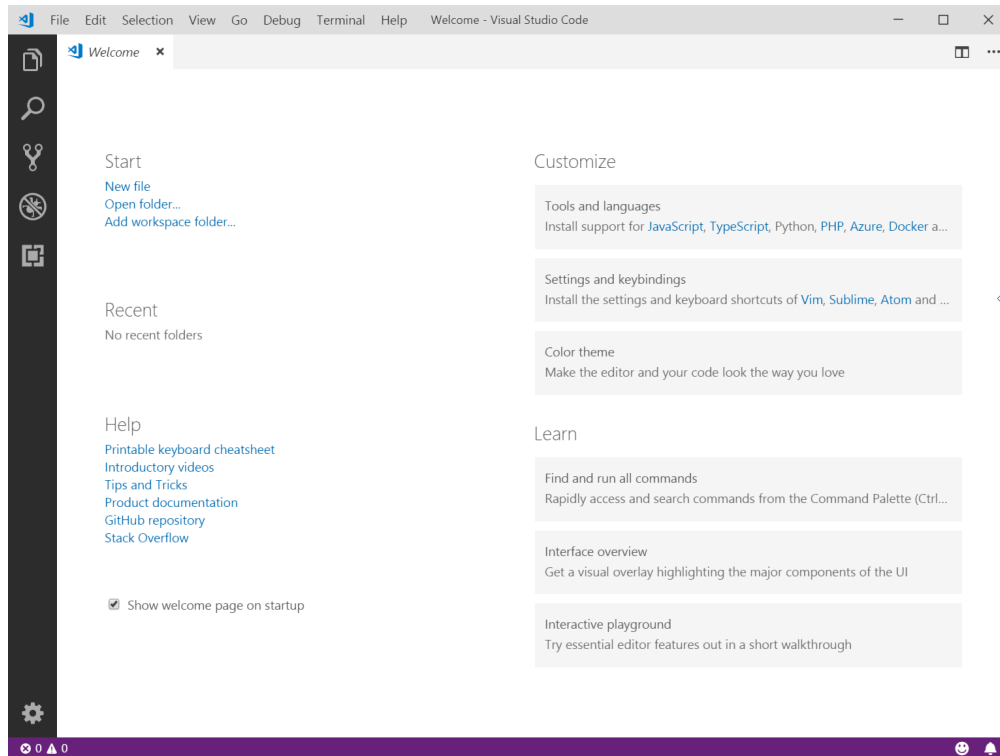
- c) Install node.js. You can accept all default options during the installation process.

- d) Access this URL to download **Visual Studio Code** (choose the one that is compatible with your notebook): <https://code.visualstudio.com/download>

 Windows <small>Windows 8, 10, 11</small> User Installer <small>x64 x86 Arm64</small> System Installer <small>x64 x86 Arm64</small> .zip <small>x64 x86 Arm64</small>	 .deb <small>Debian, Ubuntu</small> .rpm <small>Red Hat, Fedora, SUSE</small> .deb <small>x64 Arm32 Arm64</small> .rpm <small>x64 Arm32 Arm64</small> .tar.gz <small>x64 Arm32 Arm64</small> Snap <small>Snap Store</small>	 Mac <small>macOS 10.11+</small> .zip <small>Universal Intel chip Apple silicon</small>
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- e) Install VS Code. You can accept all default options during the installation process. For windows user, note that 'System Installer' is for the users who has full administrative right to their PC, whereas 'User Installer' is for those without.

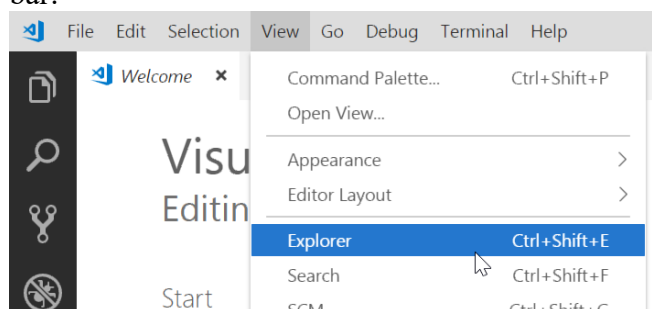
2) Launch Visual Studio Code:



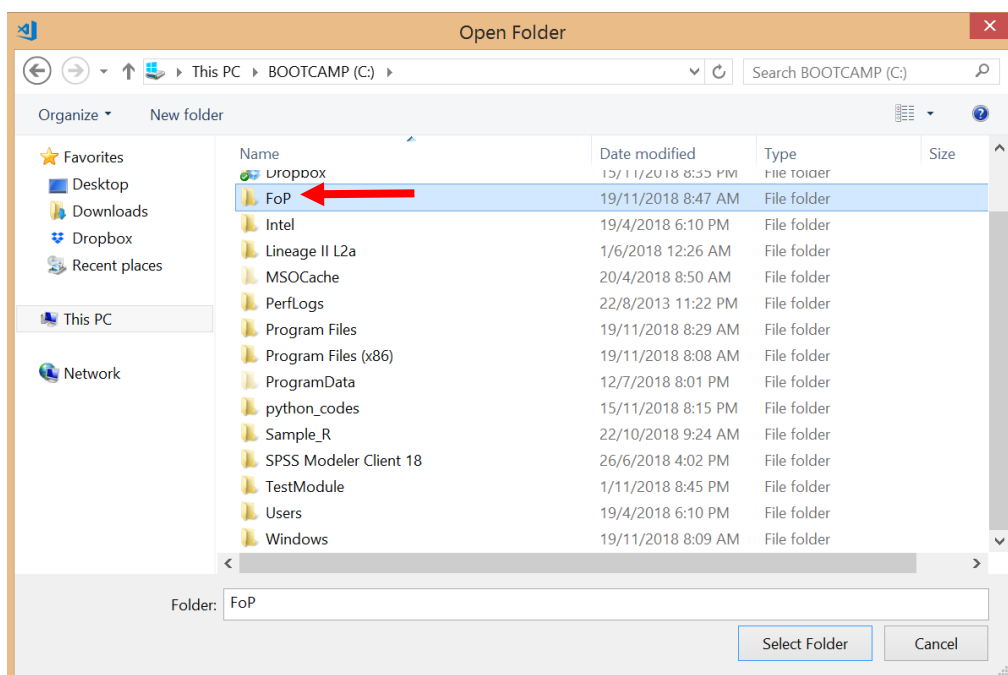
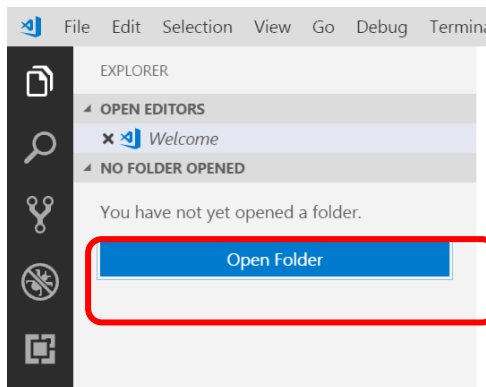
- a) Create a new folder in your hard drive, called "FoP" e.g. C:\FoP\

SPSS Modeler Client 18	26/6/2018 4:02 PM	File folder
TestModule	1/11/2018 8:45 PM	File folder
Users	19/4/2018 6:10 PM	File folder
Windows	19/11/2018 8:09 AM	File folder
AppleBcInstaller.log	8/5/2018 10:26 PM	Text Document
notes.txt	1/11/2018 8:08 PM	Text Document
FoP	19/11/2018 8:47 AM	File folder

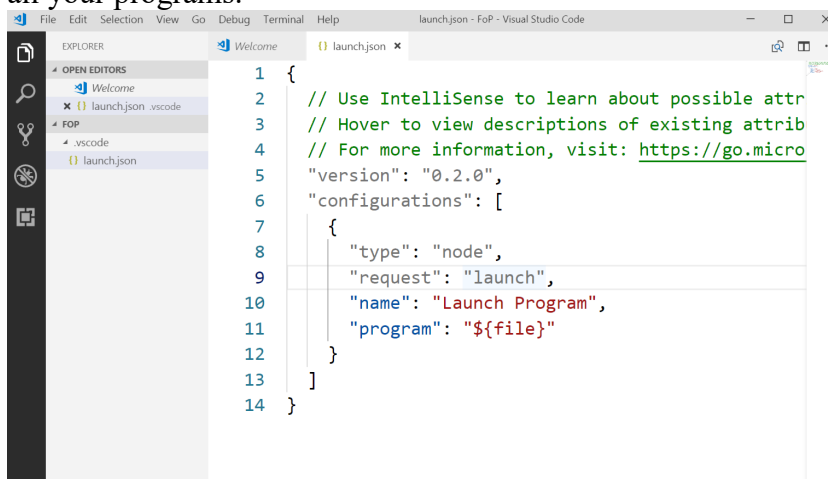
- b) In VS Code, From the menu, choose View → Explorer to show the Explore side bar:



- c) Click "Open Folder " button on the left pane of the screen. Choose FoP folder that you have just created in the previous step.



- d) From the menu, choose **Debug** → **Open Configuration**, then select "node.js". Visual Studio Code will then open launch.json, which is the configuration file for all your programs.



- e) Add in the following configuration command:

```
"console": "integratedTerminal"
```

Your launch.json should look like this:

```
{  
  // Use IntelliSense to learn about po:  
  // Hover to view descriptions of existi  
  // For more information, visit: https  
  "version": "0.2.0",  
  "configurations": [  
    {  
      "type": "node",  
      "request": "launch",  
      "name": "Launch Program",  
      "program": "${file}",  
      "console": "integratedTerminal"  
    }  
  ]  
}
```

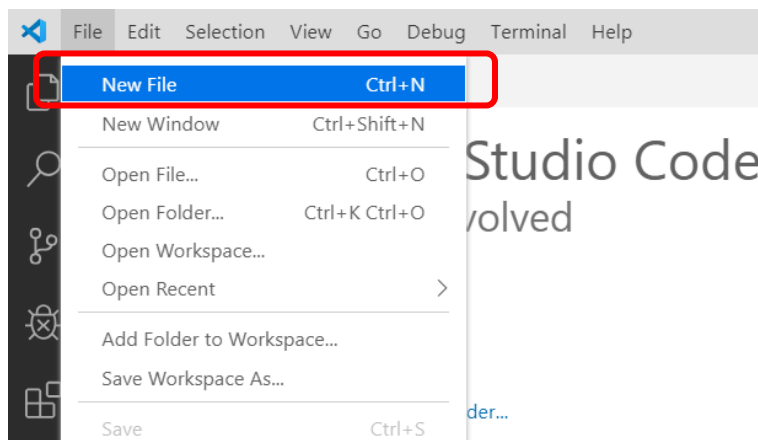
Remember to put in a 'comma' here

This is the line you type in

Save the file (File → Save or CTRL + S). This will enable your VS Code to use its integrated terminal to run the programs.

- 3) Create a simple program and execute the code to display an output into the terminal.

- a) From main menu, select File → New File.

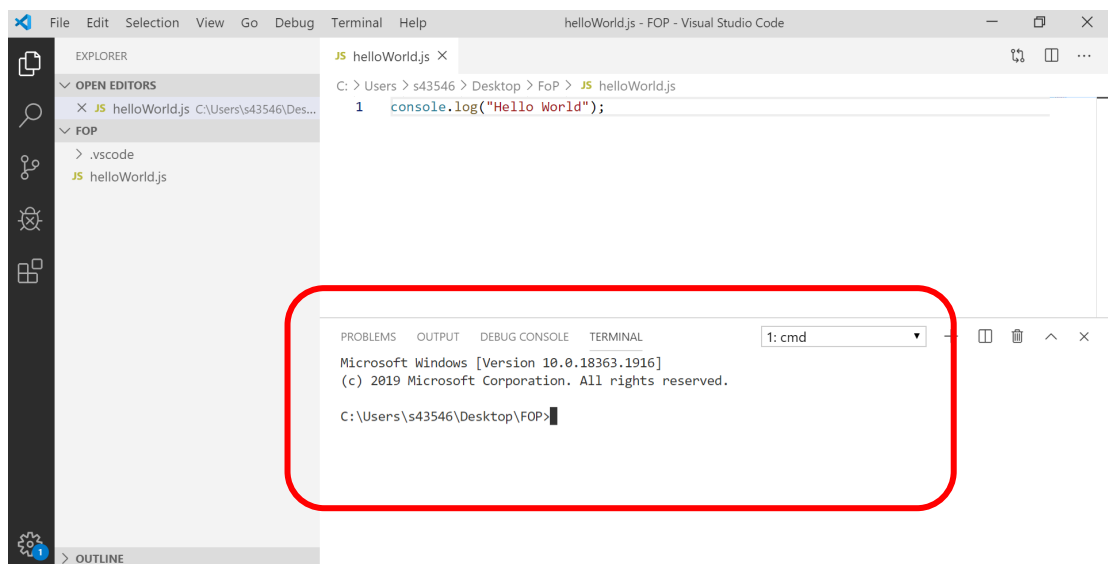


- b) Type the following console.log statement and save the file as “helloWorld.js”.

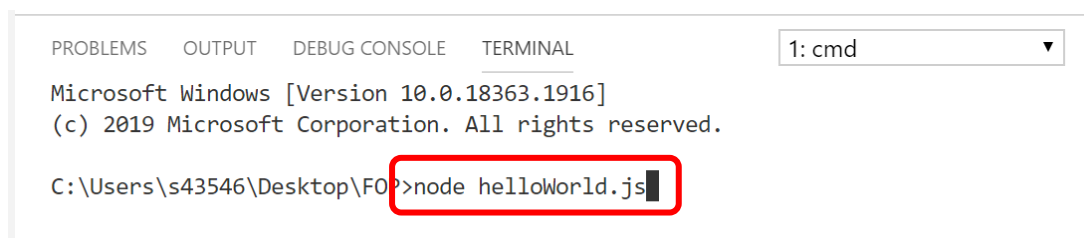


Node hell

- c) From main menu, choose View → Terminal. A terminal window will be displayed at the bottom area of the screen as shown here:



- d) In order to execute the program, we will type the command “node”, followed by the file name. So enter the following command into the terminal and press the “Enter” button.



- e) You should be able to see the output “Hello World” printed out in the terminal.



The screenshot shows a VS Code interface with a terminal window. At the top, there are tabs for 'PROBLEMS', 'OUTPUT', 'DEBUG CONSOLE', and 'TERMINAL'. The 'TERMINAL' tab is active, and a dropdown menu shows '1: cmd'. The terminal content is as follows:

```
Microsoft Windows [Version 10.0.18363.1916]
(c) 2019 Microsoft Corporation. All rights reserved.

C:\Users\s43546\Desktop\FOP>node helloWorld.js
Hello World

C:\Users\s43546\Desktop\FOP>
```

The output 'Hello World' is highlighted with a red rectangular box.

- f) Now that you are able to execute the program, open up next Practical and continue the exercises over there!

-- End --