

Exercise 0: Setting up a development environment

There is no lab this week, but it is a good idea to take the time to:

- familiarize yourself with the Linux command line
- set up a development environment for the unit
- set up several browsers and understand their advanced features
- create a GitHub account and setup CoPilot in your editor

Familiarisation with the Environment

If you haven't done so before, go through a Linux Tutorial like [this one](#) from Canonical. In this unit we will focus on web development in a Linux environment, but you don't need to use the full Linux operating system. However, we will be assuming that server-side environments are running Linux, so it is useful if you have a local emulator to help debug your code. OSX is based on Unix, so the terminal application will be suitable, and recent Windows versions include the [Windows Subsystem for Linux](#). Alternatively, you can use a virtual machine, via a program like [VMWare](#) or [VirtualBox](#), or even access [a virtual machine through your browser](#).

Editor

You may use the editor of your choice for this unit; however, you should use one that does automatic indentation and colour highlighting of text according to role. [Visual Studio Code](#), [Brackets](#), [Atom](#) and [Sublime Text](#) are popular choices. In the workshops we will use Visual Studio Code (VSCode), so it is worth setting up VSCode so you can follow along.

Setting up VSCode

Follow the [set up tutorial for VSCode](#) to install VSCode on your own machine (or open VSCode if you are using a lab machine and go through the exercises). Then, go through the [language support for HTML in VSCode](#). Note that there are also tutorials on language support for CSS, JavaScript and Python; so, it is worth revisiting these pages when we cover these topics.

Get to Know Your Browsers

The browser is the primary interface for the World Wide Web and have evolved together. Much of what we do in this unit will need to be tested and analysed in several browsers. Set up several browsers on your computer, such as:

- [Firefox](#) from Mozilla
- [Chrome](#) from Google
- [Edge](#) from Microsoft (if your OS is compatible)
- [Safari](#) from Apple (if your OS is compatible)
- [Opera](#) from Norway
- [Vivaldi](#) from the co-founder of Opera

The browsers are all quite similar but have different features to help developers. In addition to viewing course materials and browsing the web, we will use the browsers to inspect and prototype web applications. For your preferred browser, find the developer tools and find a basic tutorial for [Firefox](#), [Chrome](#), [Edge](#), [Safari](#), [Opera](#), or [Vivaldi](#). Try the following tasks:

1. View the cookies your browser has stored
2. View the source of the LMS Unit web page
3. View the LMS Unit web page as it would be displayed on a mobile phone by reducing the browser size.
4. Make a local change to the style LMS Unit web page (e.g. make the background purple)
5. Find the JavaScript console and perform some basic arithmetic functions (e.g. calculate 1+1)

Creating a GitHub account

This course will make extensive use of GitHub as a platform for hosting Git repositories, and you will be expected to use GitHub for the group project. If you don't have one already, you can create a free GitHub account here <https://github.com/>. Once you've created it, you can upgrade to a free student account at https://education.github.com/discount_requests/application. This will give you increased access to GitHub copilot below.

Setting up CoPilot in VSCode

You can setup CoPilot in VSCode by following the instructions at <https://code.visualstudio.com/docs/copilot/setup>. Try creating a new Python file and writing some basic Python functions and seeing if you can get CoPilot to help you!