Introduction to the Lab environment

Welcome to the Lab activities

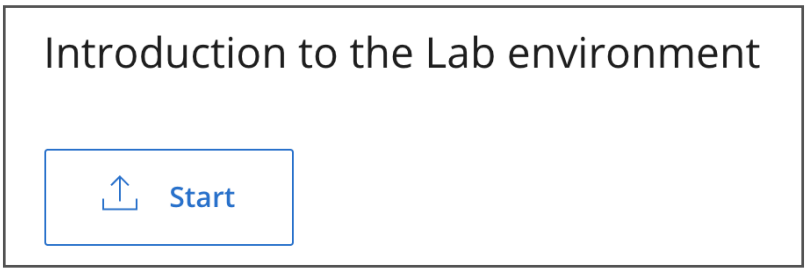
This course in exploring databases, networks and the web will require you to write, review and modify code. You will learn how to create your own virtual servers to display web pages and store data permanently for later retrieval. You will be asked to analyse and complete a variety of lab exercises which are carefully structured to help you better understand the web and its components. Excited enough? Let's begin this journey.

Visual Studio Code IDE

The labs are integrated with Visual Studio Code, an extremely popular code editor optimised for building and debugging modern web and cloud applications. Each environment also gives you access to MySQL language through the terminal interface; Node, a JavaScript runtime; and NPM, the Node package manager. Do not worry too much if you are not familiar with these names, we will be exploring them in details during the course. The takeaway now is that, when you open a lab, all these technologies are integrated with it and ready for you to use. What are we waiting for? Let's open and explore the lab environment!

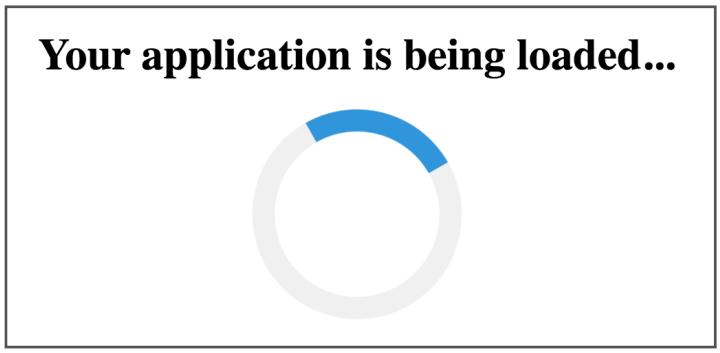
Start the Lab environment application

It is simple to launch a lab exercise. You only need to click on the button "Start" below the activity title to enter a lab environment. Let's explore this lab activity. Go ahead and click on the "Start" button!



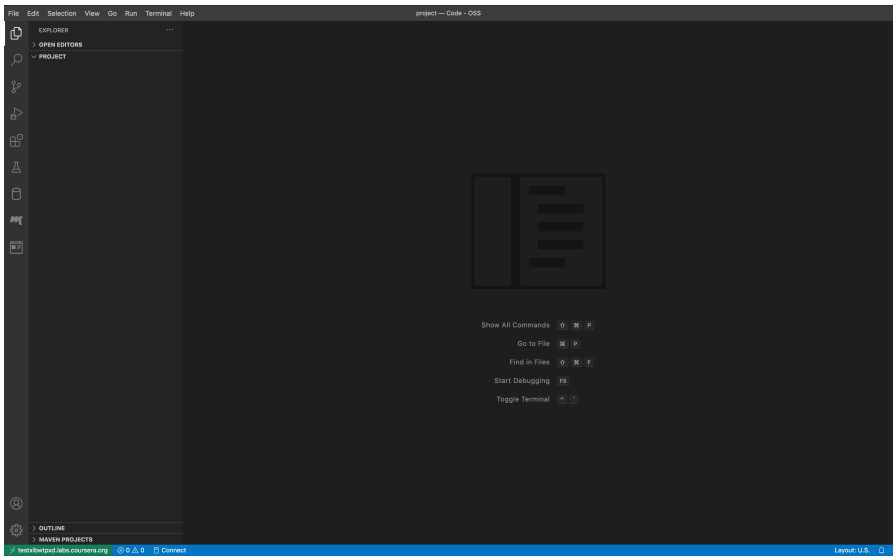
The Lab environment application

The lab environment application may take some time to load and you will be prompted with the following animation:



Just wait a few seconds for your lab activity to start. It should not take longer than thirty seconds. If you experience any issues please load the activity again.

Once the application loads, you will see an instance of Visual Studio Code IDE as shown below:



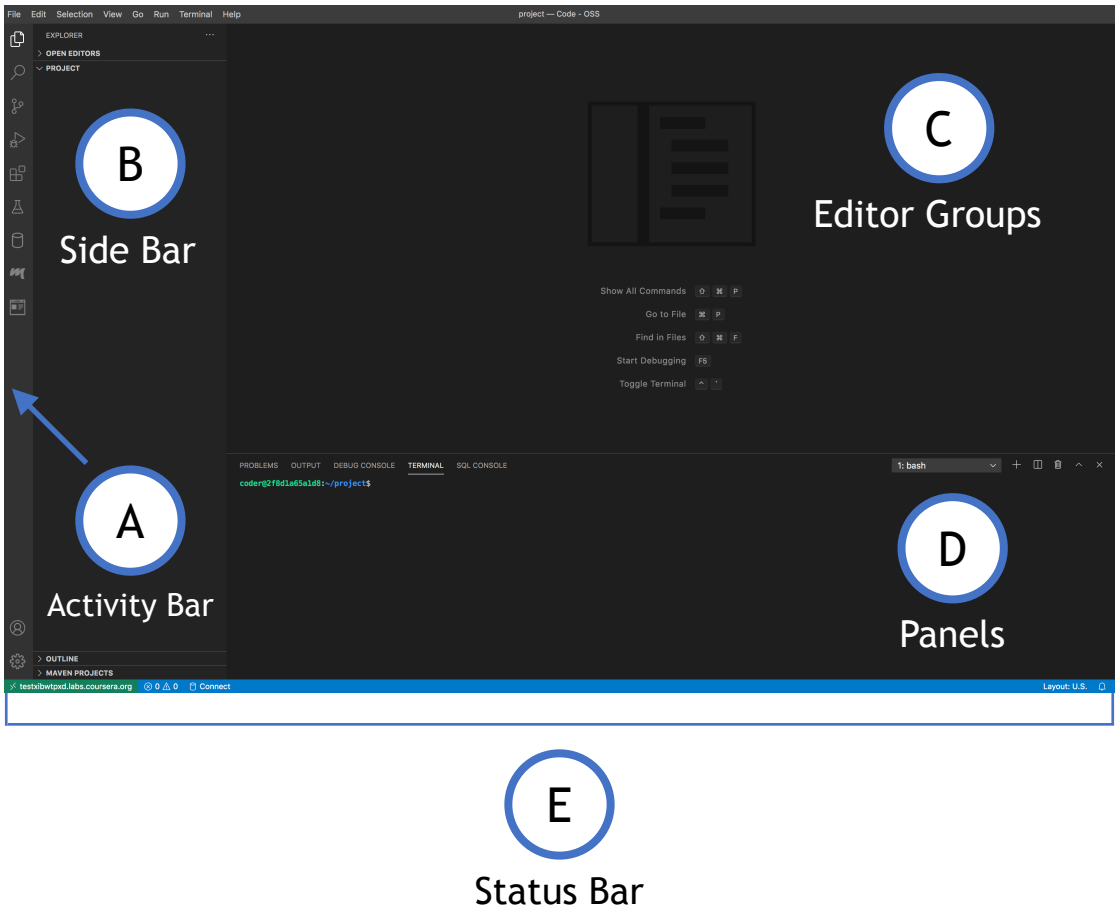
The “Welcome” page might pop up the first time you open the lab and it illustrates most of the features to get you started with the environment. You can close the “Welcome” tab by clicking on the X icon next to the tab name as we will explore the main sections together. The “Welcome” page does not always appear so do not worry as it will not make any difference in the way the IDE works.

The Visual Studio User Interface

The Visual Studio User Interface is very easy to learn and it comes with a great selection of features. We will not explore in details all of the functionalities as it is not in the purpose of this course. We will instead look at the main sections required for you to get started with the labs.

VS Code comes with a simple and intuitive layout that maximises the space provided for the editor while leaving ample room to browse and access the full context of your folder or project.

The UI is divided into five areas:



- **Activity Bar (A)** - Located on the far left-hand side, this lets you switch between views and gives you additional context-specific information.

- **Side Bar (B)** - Contains different views like the Explorer to assist you while working on your project. Mostly used to navigate your folders.

- **Editor (C)** - The main area to edit your files. You can open as many editors as you like side by side vertically and horizontally.

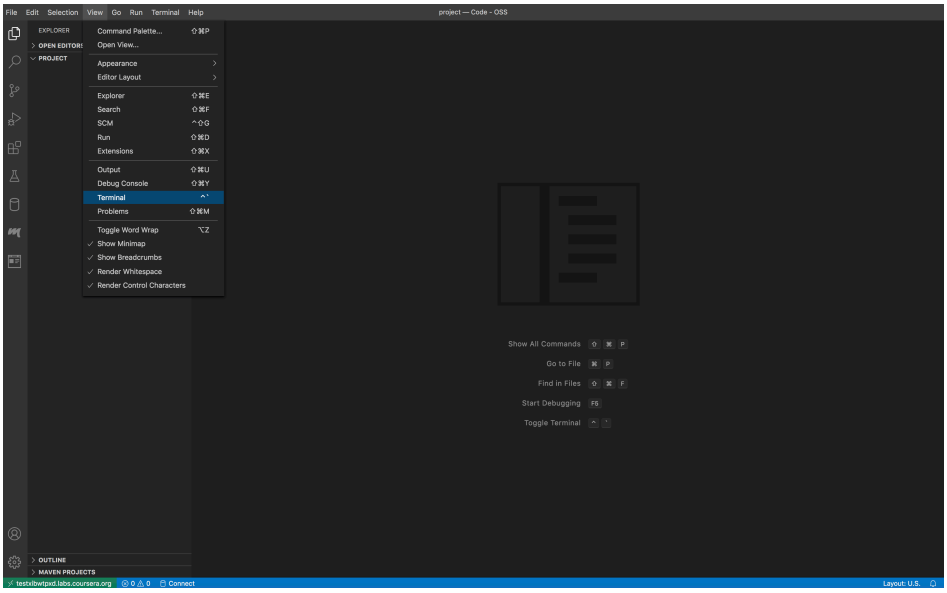
- **Panels (D)** - You can display different panels below the editor region for output or debug information, errors and warnings, or an integrated terminal. This might not be visible when you open the IDE. The next section shows you how to open it.

- **Status Bar (E)** - Information about the opened project and the files you edit.

Do not worry if your IDE configuration looks slightly different from the above picture. You can always drag the tabs around to adjust your layout configuration.

Note about the integrated terminal

The integrated terminal panel is normally hidden by default in Visual Studio Code and you need to manually enable it. Click the “View” tab on the top navigation bar and then click the “Terminal” tab to enable the panel window like shown below:



End of Section

Now that you are familiar with the Lab environment, we will soon explore how to create, organise, modify and run your scripts in Visual Studio Code. For now, there are no other requirements for this section and you can carry on with the course material.