



Section : 1. Introduction to QGIS

Module : 1.2. QGIS User Interface Tour



A quick tour of the QGIS User Interface

"QGIS Desktop has a feature rich graphical user interface which is both customizable and extensible"

This module will focus on outlining the key elements available from the QGIS Desktop User Interface, but due to the breadth of functionality and configuration options available in QGIS Desktop, this should not be considered a comprehensive outline of the available capabilities of the interface.

Modern desktop applications typically have a number of elements or components that are common between applications in order to provide a consistent user experience and improve usability between applications. The QGIS Desktop application offers many of these features including some of the following items:

- Menus: High level and comprehensive nested menus which provide access to the majority of software functions via a set of categorized elements
- Toolbars: Configurable arrays of various utilities represented by symbols and icons in a linear fashion, designed for speed and ease of use for common tools
- Status bars: Interactive utilities which dynamically display information on the current application state, and may provide additional functionality by various means
- Panels: Often referred to as "Widgets" or "Windows", panels are interface components that expose a discrete set of application functionalities

QGIS Desktop supports multiple options for the arrangements of panels and toolbars. The visibility of panels and toolbars can be toggled from the *View* menu, and accessing the available toolbar visibility is also available through the toolbar context menu, which can be accessed by *right-clicking* on an empty area of any toolbar.

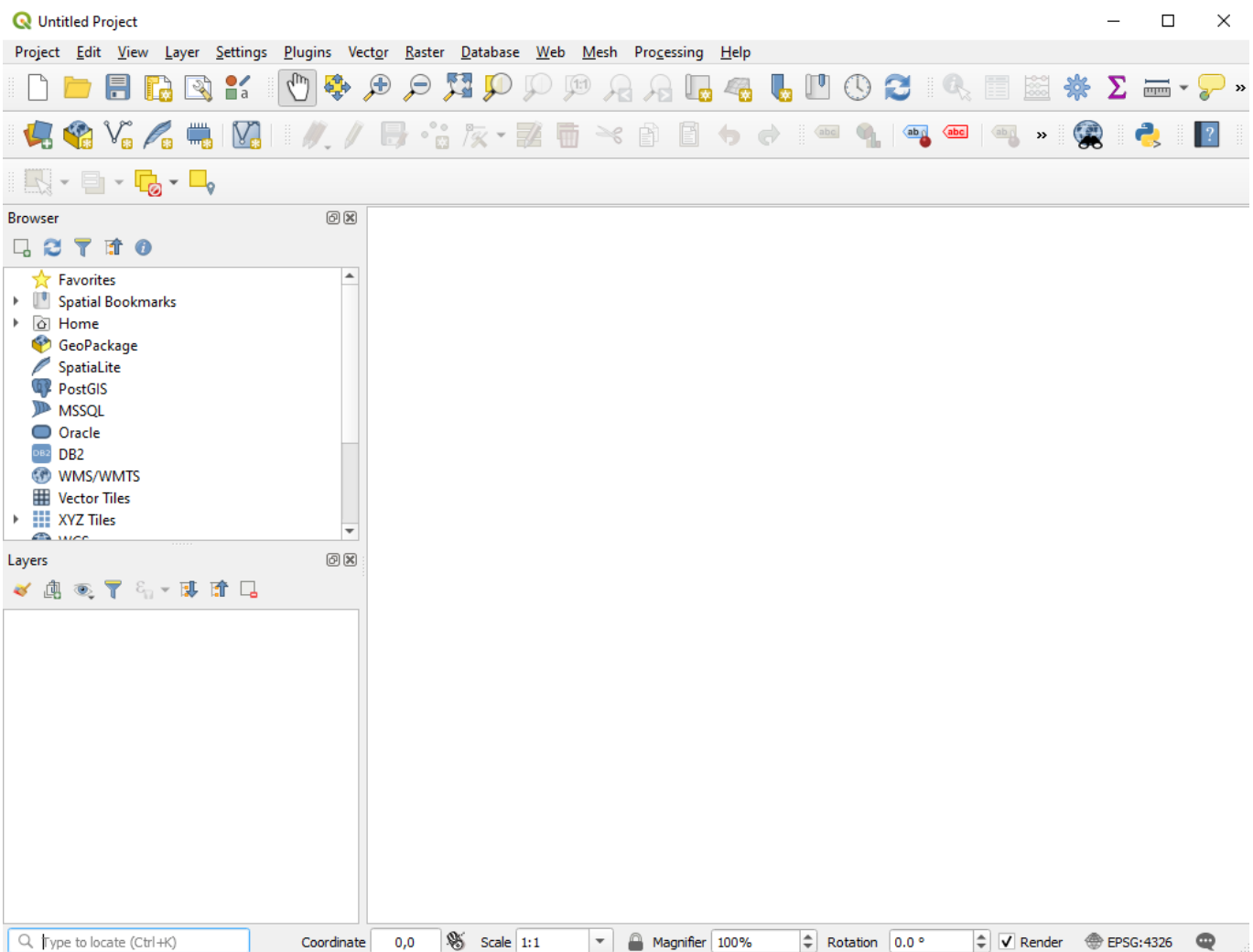
Toolbars can be dragged and moved around, stacked vertically or horizontally, and where toolbars share an area of the interface, a toolbar can be made to slide over elements within another, with any additional elements which are covered being moved into a nested view.

Panels can be used as floating windows, docked to a particular position in the interface, or overlaid on top of each other to form a "tabbed" arrangement. Panels may be adjusted or moved using drag and drop functionality.

Some examples of common panels may include:

- Map View: Sometimes called a map canvas or map frame, a map view is a panel where map data is rendered. QGIS Desktop supports the use of multiple 2D or 3D map views within a single project, and they can be configured to render content differently by the use of map themes.
- Browser panel: The browser panel is a powerful file browser that is integrated into QGIS and performs multiple functions related to data management, including adding data, creating data, deleting existing data, or even the execution of database queries
- Layers panel: Also known as a table of contents, this panel reveals all the layers added to the project and allows users to modify layer properties such as render order, layer visibility, or layer style and symbology settings

Note that this document assumes the use of QGIS Desktop version 3.16 or greater



You try:

Goal: Getting familiar with the QGIS Desktop User Interface

- Move your mouse slowly over the toolbars and read each tooltip
- Open each menu and read each option you see listed in the menus
- Move your mouse slowly over each status bar element and read the tooltip
- Try dragging and dropping toolbars to arrange them in a way that is optimized for your specific needs

- Try manipulating the panels to figure out how to resize and move them
- Try docking and undocking various panel windows, and closing and restoring them from the *View* menu

Hint: Type the word world into the coordinates box in the status bar located at the bottom of the QGIS Desktop interface to quickly add a world map to your project

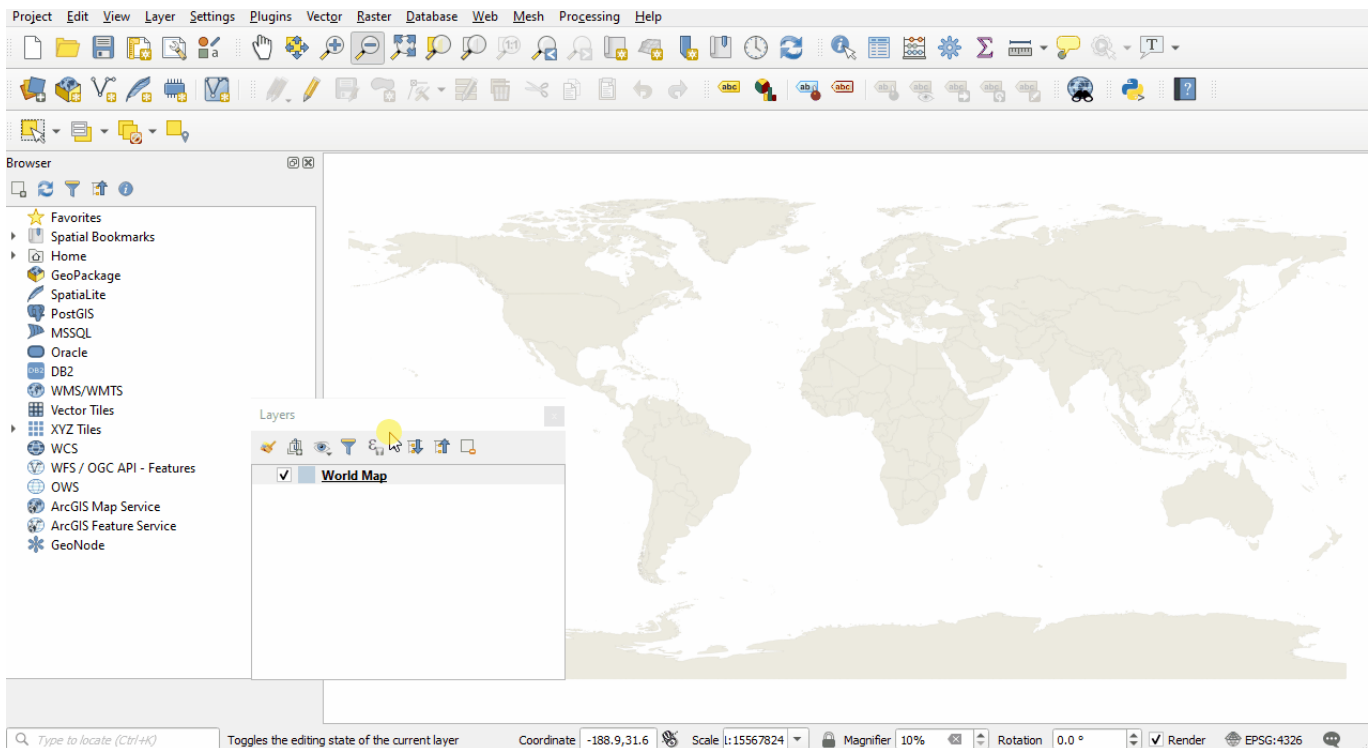
Check your results:

Were you able to figure out how to show and hide toolbars?

Are you able to move a toolbar and dock it vertically to the side of the interface?

What happens when you drag and drop one dock window on top of another?

Were you able to figure out how to show and hide dock windows?



More about the QGIS Desktop Interface

One of QGIS Desktop's most common use cases is to be used for browsing data in a spatial context. As such, the map navigation toolbar is of significant importance as it provides the controls for manipulating the visible extent of the current map frame. It includes standard navigation controls including pan and zoom, as well as more advanced options such as bookmark management.

In addition to these tools, various additional controls are available to assist users with the optimization of their workflows. These include standard controls mapped to common functions, such as zooming in and out with the mouse wheel or panning by holding the middle mouse button, and the use of keyboard shortcuts. Whilst some keys, such as the arrow keys, might be mapped to common functions, like panning the map frame, key combinations may also be used to perform specific actions, such as using **Ctrl + J** to Zoom to the currently selected feature's extent. The attached materials and external references provide more comprehensive overviews of the available shortcuts.

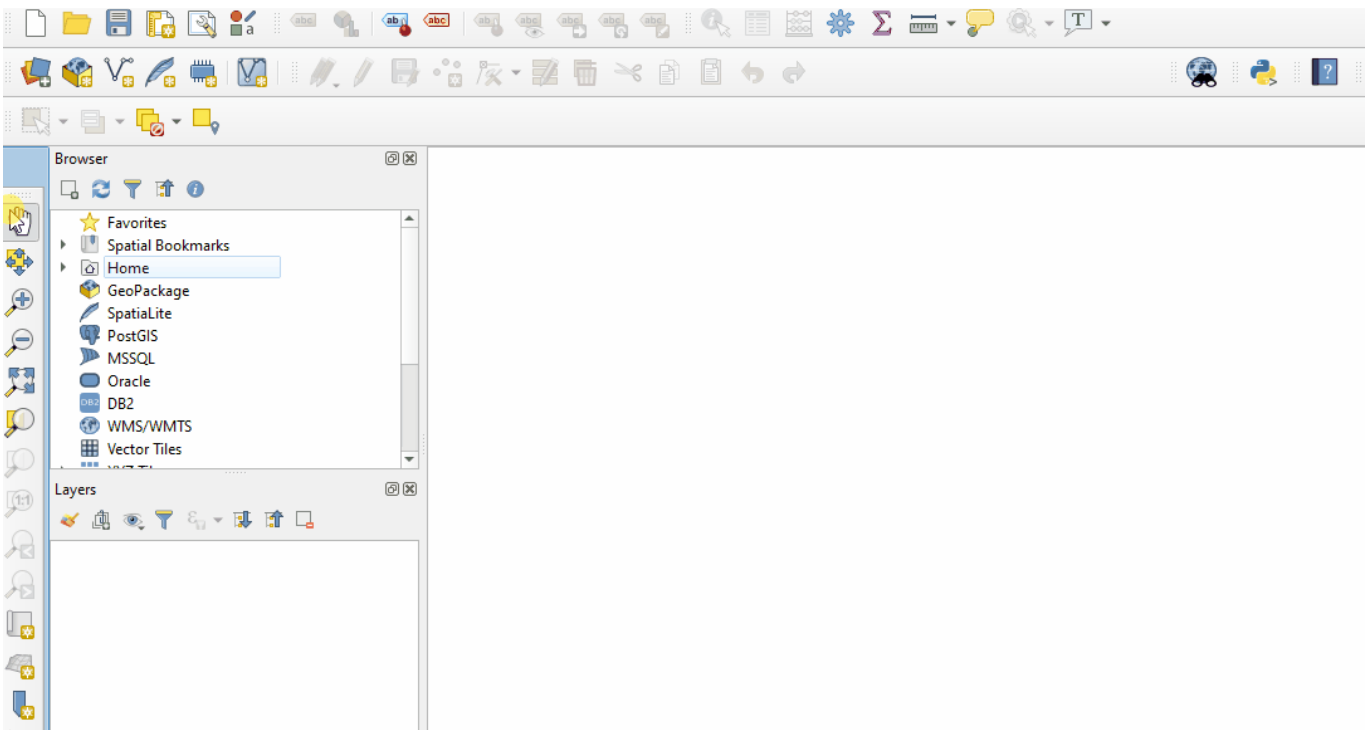
Note that the functions of some of these more advanced controls may vary based on the currently active panel.

Nearly every graphical element in QGIS has a tooltip, which is a small pop-up message which briefly describes the element's function when you hover over the element for a short amount of time. QGIS Desktop is designed to be optimized for particular workflows and supports storing interface configurations in User Profiles, which may be switched from the settings menu. This allows users to customize the interface for a particular task, such as digitizing, whereby a user might hide toolbars not commonly used, such as the label toolbar, and free up real estate on the interface for more suitable elements such as the advanced digitizing toolbar.

QGIS Desktop will automatically store the current configuration settings with the active user profile, and any hidden elements can easily be restored using the *View >> Toolbars* menu item. Additional settings like icon and font sizes are also configurable for each user profile and may be modified from the *Settings >> Options >> General* menu item.

By simply browsing the options available in the interface, users should be able to get a clear understanding of the functionality provided by the application, including its capabilities for handling different data formats, data types, and data sources, the ability to connect to remote services and perform various analysis and processing functions.

As a cross-platform application, QGIS Desktop attempts to adapt and utilize the native operating system or active desktop environment design, so the interface appearance may vary slightly between systems.



Check your knowledge:

1. QGIS Desktop requires access to a license server once installed:
 - a. True
 - b. False
2. QGIS Desktop user interface customizations are:
 - a. Stored automatically within the current user profile settings
 - b. Stored by manually exporting a configuration file
 - c. Not able to be stored without an online account



Further reading:

- QGIS 3 Keyboard Shortcuts <https://defkey.com/qgis-3-shortcuts>
- Read the interface overview in the QGIS training manual https://docs.qgis.org/latest/en/docs/training_manual/basic_map/overview.html

Download the sample data for the lesson from http://changelog.qgis.org/media/images/lesson/worksheet/external_data/1e6a8307919aea35414b1463e55db30a40d5b670.zip.