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1 Introducing macOS Catalina

macOS Catalina is the latest operating system from Apple, for its range of desktop and laptop computers. This chapter introduces macOS Catalina, showing how to install it and get started using its array of features including the digital voice assistant, Siri, and Dark Mode for changing the color of items.

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About macOS Catalina

UNIX is an operating system that has traditionally been used for large commercial mainframe computers. It is renowned for its stability and ability to be used within different computing environments.

The Apple Pencil can now be used on Mac computers with macOS Catalina to perform tasks such as drawing and sketching, in compatible apps, and marking up screenshots and PDF documents.

The New icon pictured above indicates a new or enhanced feature introduced with the latest version of macOS – macOS Catalina.

macOS Catalina is the 15th version (10.15) of the operating system for Apple computers: the iMac, MacBook, Mac mini and Mac Pro. Although it is still a development of the OS X (pronounced "ten") operating system for Macs, the naming convention was changed to macOS in 2016, to more clearly identify it as belonging to the Mac, rather than a mobile device such as the iPad or iPhone. Like earlier versions, it is based on the UNIX programming language, which is a very stable and secure operating environment, and this ensures that macOS is one of the most stable consumer operating systems that has ever been designed. More importantly for the user, it is also one of the most stylish and user-friendly operating systems available.

macOS Catalina continues the functionality of several of its Mac operating system predecessors, including using some of the functionality that is available on Apple's mobile devices such as the iPad and the iPhone. The three main areas where the functionality of the mobile devices has been incorporated into the desktop and laptop operating system are:

- The way apps can be downloaded and installed. Instead of using a disc, macOS Catalina utilizes the App Store to provide apps, which can be installed in a couple of steps.
- Options for navigating around pages and applications on a trackpad or a Magic Mouse. Instead of having to use a mouse or a traditional laptop trackpad, macOS Catalina uses Multi-Touch Gestures for navigating apps and web pages.
- Siri, Apple's digital voice assistant, has now made the transition from being only available on mobile devices to being included with macOS Catalina too.

macOS Catalina continues the evolution of the operating system, by adding features and enhancing existing ones. These include:

- The replacement of the iTunes app with three dedicated apps: Music, TV and Podcasts.
- Updates to existing apps, including Photos, Reminders, Notes and Safari.
- The inclusion of Screen Time for monitoring screen usage and also controlling access to apps and specific content.

Installing macOS Catalina

When it comes to installing macOS Catalina you do not need to worry about an installation CD or DVD; it can be downloaded and installed directly from the online App Store. New Macs will have macOS Catalina installed. The following range is compatible with macOS Catalina, and can be upgraded with it, directly from the App Store:

- iMac (Mid 2012 or newer).
- iMac Pro (2017).
- MacBook (Early 2015 or newer).
- MacBook Pro (Mid 2012 or newer).
- MacBook Air (Mid 2012 or newer).
- Mac mini (Late 2012 or newer).
- Mac Pro (Late 2013 or newer).

If you want to install macOS Catalina on an existing Mac, you will need to have the minimum requirements of:

- OS X 8 or later.
- 2GB of memory.
- 12.5GB of available storage for installation.

If your Mac meets these requirements, you can download and install macOS Catalina, for free, as follows:

1. Click on this icon on the Dock to access the App Store (or select **Software Update...**; see tip)

2. Locate the **macOS Catalina** icon using the App Store Search box

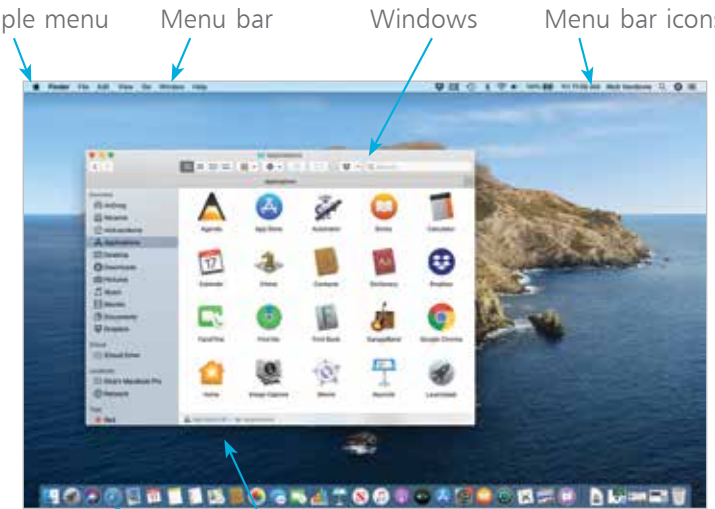
3. Click on the **Get** button and follow the installation instructions

macOS Catalina is a new version of the Mac operating system. It contains a number of enhancements to make the operating system faster and more reliable than ever.

To check your computer's software version and upgrade options, click on **Apple menu** > **About This Mac** from the main Menu bar. Click on the **Overview** tab and click on the **Software Update...** button. See page 13 for details.

The macOS Environment

The first most noticeable element about macOS is its elegant user interface. This has been designed to create a user-friendly graphic overlay to the UNIX operating system at the heart of macOS, and it is a combination of rich colors and sharp, original graphics. The main elements that make up the initial macOS environment are:



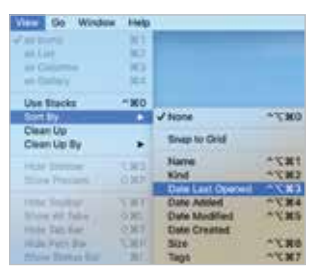
The Dock is designed to help make organizing and opening items as quick and easy as possible. For a detailed look at the Dock, see Chapter 2.

Many of the behind-the-scenes features of macOS Catalina are aimed at saving power on your Mac. These include timer-coalescing technologies for saving processing and battery power; features for saving energy when apps are not being used; power-saving features in Safari for ignoring additional content provided by web page plug-ins; and memory compression to make your Mac quicker and more responsive.

The **Apple menu** is standardized throughout macOS, regardless of the app in use.

Menus

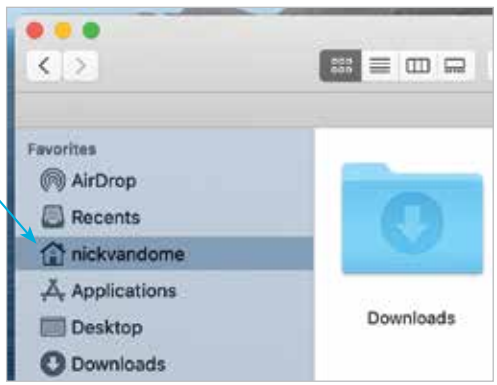
Menus in macOS contain commands for the operating system and any relevant apps. If there is an arrow next to a command it means there are subsequent options for the item. Some menus also incorporate the same transparency as the sidebar so that the background shows through.



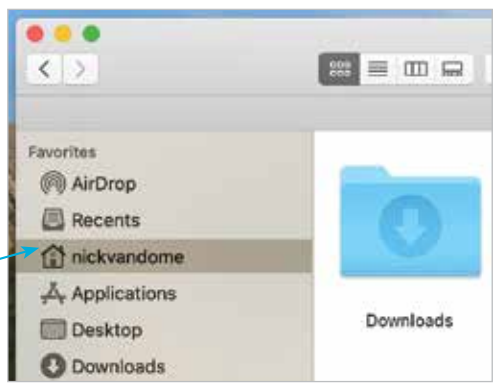
Transparency

One feature in macOS Catalina is that the sidebar and toolbars in certain apps are transparent so that you can see some of the Desktop behind it. This also helps the uppermost window blend in with the background:

1. In certain apps with a sidebar, such as the Finder or Safari, the background appears behind the sidebar



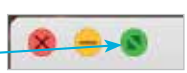
2. When you move the window, the background behind the sidebar changes accordingly



Window buttons

These appear in any open macOS window and can be used to manipulate the window. They include a full-screen option. Use the window buttons to, from left to right: close a window, minimize a window or maximize a window.

If an app has full-screen functionality, this green button is available:



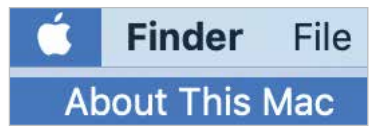
If an option is gray, it means it is not available; i.e. the screen cannot be maximized.

The red window button is used to close a window, and in some cases – such as Notes, Reminders and Calendar – it also closes the app. The amber button is used to minimize a window, so that it appears at the right-hand side of the Dock.

About Your Mac

When you buy a new Mac, you will almost certainly check the technical specifications before you make a purchase. Once you have your Mac, there will be times when you will want to view these specifications again, such as the version of macOS in use, the amount of memory and the amount of storage. This can be done through the About This Mac option, which can be accessed from the Apple menu. To do this:

1. Click on the **Apple menu** and click on the **About This Mac** link



2. Click on the **Overview** tab

3. This window contains information about the version of macOS being used; the processor; amount of memory; type of graphics card; and serial number

4. Click on the **System Report...** button to view full details about the hardware and software on your Mac

The System Report section is also where you can check whether your Mac is compatible with the Handoff functionality (covered on page 45), which does not work with most pre-2012 Macs. Click on the **Bluetooth** section in the **System Report** to see if Handoff is supported.

5 Click on the **Software Update...** button to see available software updates for your Mac

For more information about software updates, see page 181.

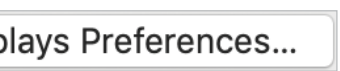
Display information

This gives information about your Mac's display:

1 Click on the **Displays** tab

2 This window contains information about your Mac's display, including the type, size, resolution, and graphics card

3 Click on the **Displays Preferences...** button to view options for changing the display's resolution, brightness and color



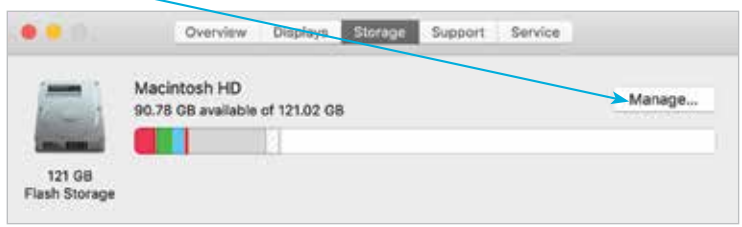
...cont'd

Storage information

This contains information about your Mac's physical and removable storage:

1. Click on the **Storage** tab

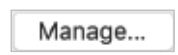
2. This window contains information about the used and available storage on your hard disk, and also options for writing various types of CDs and DVDs (if applicable)



Click on the **Manage...** button in the Storage window to view how much space specific apps are taking up, and also options for optimizing storage on your Mac. With macOS Catalina, this is known as **Optimized Storage**. Optimized Storage includes a **Store in iCloud** option, which can be used to enable your Mac to identify files that have not been opened or used in a long time, and then automatically store them in iCloud (if you have enough storage space there). Their location remains the same on your Mac, but they are physically kept in iCloud, thus freeing up more space on your Mac. Optimized Storage also has options for removing movies and TV shows that have been watched, emptying the Trash automatically and reducing overall clutter on your Mac.

Managing memory

This contains information about your Mac's memory, which is used to run macOS and also the applications on your computer:

1. Click on the **Manage...** tab 

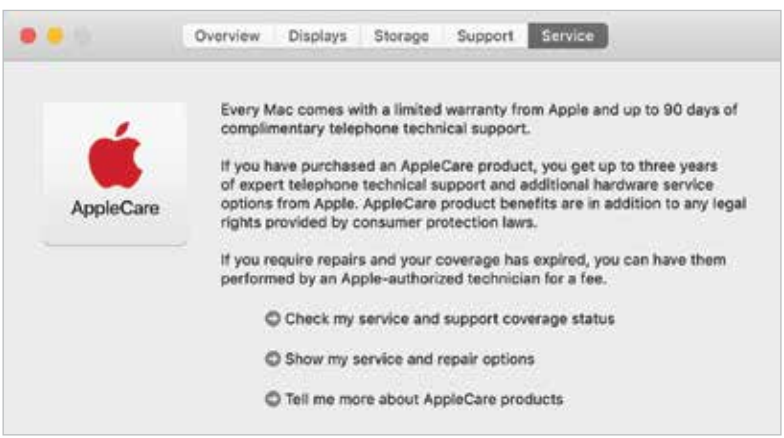
2. This window contains information about how memory can be managed in macOS Catalina (see tip)

Support

The **Support** tab provides links to a range of help options for your Mac and macOS.

Service

The **Service** tab provides links to service and repair options and also the AppleCare Protection Plan, for extending the initial one-year warranty of your Mac.



About System Preferences

macOS Catalina has a wide range of options for customizing and configuring the way that your Mac operates. These are located within the System Preferences section. To access this:

1. Click on this button on the Dock (the bar of icons that appears along the bottom of the screen), or access it from the Applications folder

2. All of the options are shown in the **System Preferences** window

3. Click once on an item to open it in the main System Preferences window. Each item will have a number of options for customization

4. Click on the **Show All** button to return to the main System Preferences window

Don't forget

For more detailed information about the Dock, see Chapter 2.

Don't forget

For a detailed look at System Preferences, see pages 38-39.

Hot tip

The **General** option in System Preferences can be used to change the overall appearance of macOS Catalina, including colors for buttons, menus, scroll bars and windows. Another option in System Preferences is for **Desktop & Screen Saver**. This has tabs for these items, from which you can select a background wallpaper for your Mac, including the Dynamic Desktop, and also a screen saver for when it is inactive.

Search Options

Finding items on a Mac or on the web is an important part of everyday computing, and with macOS Catalina there are a number of options for doing this:

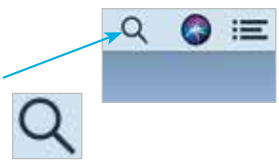
Siri

Siri is Apple's digital voice assistant that can search for items using speech. It has been available on Apple's mobile devices using iOS for a number of years, and with macOS Catalina it is available on Mac desktops and laptops. See pages 18-21 for more details about setting up and using Siri.

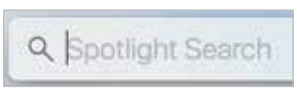
Spotlight search

Spotlight is the dedicated search app for macOS. It can be used over all the files on your Mac and the internet. To use Spotlight:

1. Click on this icon at the right of the Apple Menu bar



2. Click in the Spotlight Search box



3. Enter a keyword, or phrase, for which you want to search

4. The top hits from within your apps are shown in the left-hand panel. Click on one to view its details

5. Scroll down the left-hand panel to view different search result options, such as entries from Wikipedia or the web; or a dictionary definition of a word

Finder search

This is the Search box in the top right-hand corner of the Finder and can be used to search for items within it. See page 69 for details about using Finder search.

Spotlight starts searching for items as soon as you start typing a word. So don't worry if some of the first results look inappropriate, as these will disappear once you have finished typing the full word.

Spotlight search can show results from your Mac, the internet, the Music app, the App Store, and also items such as movies nearby and local restaurants. These are displayed on a map within the Spotlight search results.

Using Siri

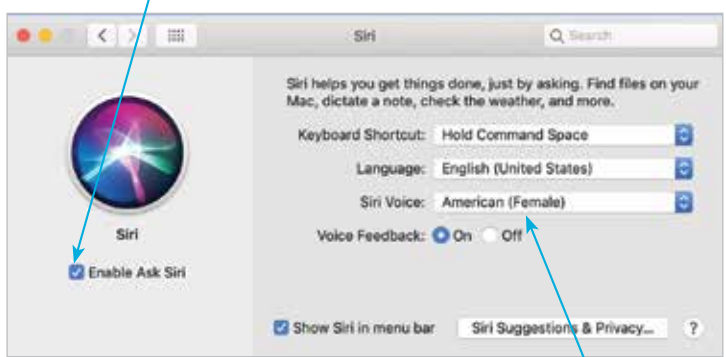
Siri is the digital voice assistant that can be used to vocally search for a wide range of items from your Mac and the web. Also, the results can be managed in innovative ways so that keeping up-to-date is easier than ever.

Setting up Siri

To set up and start using Siri:

1. Open **System Preferences** and click on the **Siri** button

2. Check **On** the **Enable Ask Siri** box



3. Make selections here for how Siri operates, including language and the voice used by Siri

4. Click on the **Siri** icon on the Dock or in the Menu bar to open Siri

5. The Siri window opens, ready for use

Check **On** the **Show Siri in menu bar** box to show the Siri icon in the top right-hand corner of the main Apple Menu bar.

An internal or external microphone is required in order to ask Siri questions.

Searching with Siri

Siri can respond to most requests, including playing a music track, checking the weather, opening photos, and adding calendar events. If you open Siri but do not ask a question, it will prompt you with a list of possible queries. Click on the microphone icon at the bottom of the panel to ask a question. It is also possible to ask questions of Siri while you are working on another document.

Siri can search for a vast range of items, from your Mac or the web. Some useful Siri functions include:

Searching for documents

This can be refined by specifying documents covering a specific date or subject:

1. Ask Siri to find and display documents with certain criteria; e.g. created by a specific person

2. Ask Siri to refine the criteria; e.g. only include documents created in a specific app. Click on an item to open it in its related app

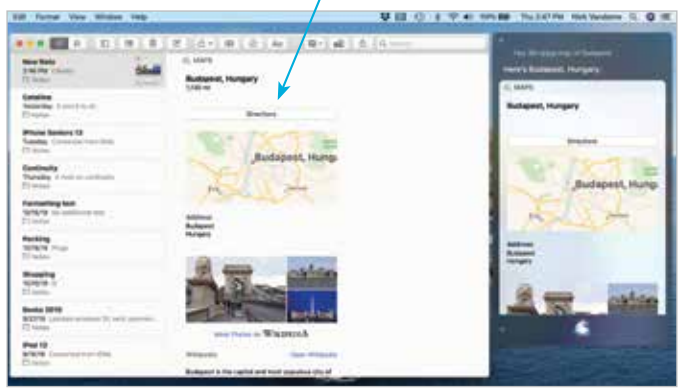
It is possible to ask Siri to search for specific types of documents; e.g. those created in Pages, or PDF files.

Drag and drop results

Once search results have been displayed by Siri they can be managed in a variety of ways. One of these is to copy an item in the search results into another app, by dragging and dropping:

1. Ask Siri to display a certain type of item, such as a map location or an image

2. Drag the resulting item into another app, such as a word processing app or the Notes app



Click on the cross in the top left-hand corner of the Siri window to close it. Otherwise, it can be left open for more queries and searches.

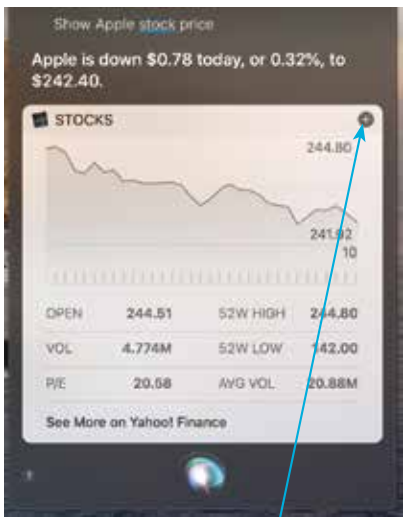
Multitasking

The Siri search window can be left open on the Desktop so that you can ask Siri a question while you are working on something else; e.g. while you are working on a document, ask Siri to display a relevant web page.

Pinning results

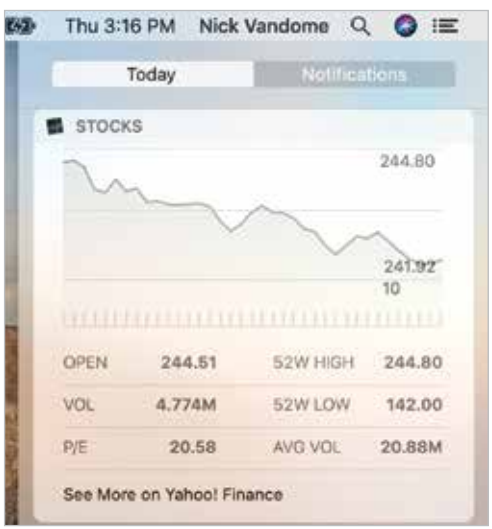
Some search results are dynamic; i.e. they change on a regular basis. This includes items such as sports results and weather forecasts. With Siri, these can be pinned to the Notification Center and they will then be updated when they change. To pin Siri search results:

1. Search for a certain item, such as the prices for specific shares on the stock market



2. When Siri returns the result, click on this button to pin the search to the Notification Center

3. The item will be pinned to the Notification Center, which will always display the most recent information, and it will be updated when new details are available



For more information about using the Notification Center, see pages 118-119.

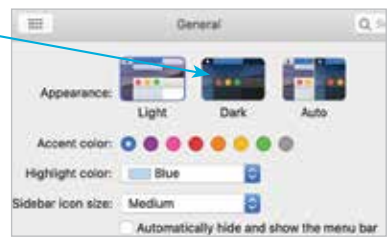
Dark Mode

With macOS Catalina, the background of compatible apps can be turned black in order to make them stand out more. This style may not be for everyone, but it is a useful option if you want to change the appearance of your apps. This is known as Dark Mode:

1. Open **System Preferences**

2. Click on the **General** button

3. Click on the **Dark** button to activate **Dark Mode**



4. The background is turned black, with the text inverted as white. This will apply to all compatible apps, once Dark Mode is activated

5. The dark background can make windows stand out more against items such as the Desktop

The options below the Dark button in Step 3 can be used to specify accent colors, highlight colors and sidebar icon sizes, to customize the other elements of an app's window.

Click on the **Auto** button in Step 3 to enable Dark and Light mode to be selected automatically, according to the time of day.

Most of the pre-installed macOS apps, including the Finder, support Dark Mode. However, some third-party apps may not support it.

Dynamic Desktop

The Desktop background with macOS Catalina can be customized so that it changes appearance depending on the time of day. This is known as the Dynamic Desktop. To use it:

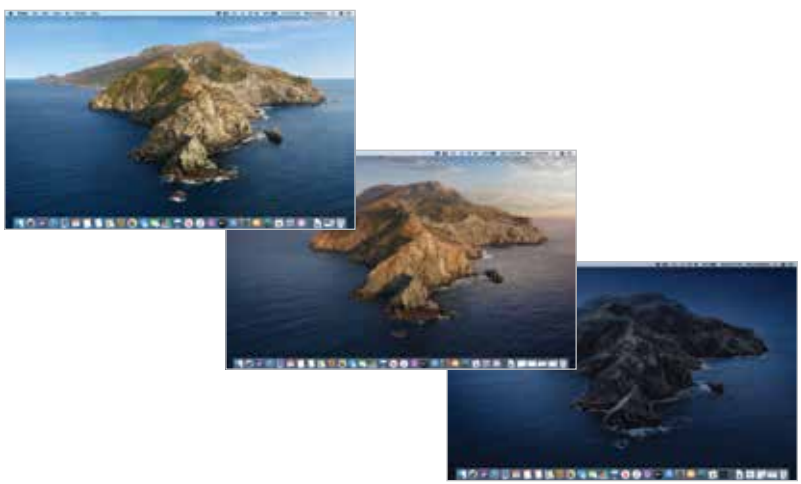
1. Open **System Preferences**

2. Click on the **Desktop & Screen Saver** button

3. Click in the **Catalina** box and select **Dynamic**

4. Click here to select the type of Dynamic Desktop required

5. The appearance of the Dynamic Desktop changes during the day



Click on this icon to set the Dynamic Desktop to an image of the sky, which changes during the day.

Accessibility

In all areas of computing it is important to give as many people access to the system as possible. This includes users with visual impairments and also people who have problems using the mouse and keyboard. In macOS this is achieved through the functions of the Accessibility section of System Preferences. To use these:

Another option in the Accessibility window is for **Switch Control**, which enables a Mac to be controlled by a variety of devices including the mouse, keypad and gamepad devices.

Experiment with the VoiceOver function, if only to see how it operates. This will give you a better idea of how visually-impaired users access information on a computer.

The Audio, Keyboard, and Mouse & Trackpad accessibility options have links to additional options within their own System Preferences.

1. Click on the **Accessibility** button in the **System Preferences** folder to display the accessibility options in the left-hand panel

2. Click on the **Display** option to change the settings for display colors and contrast, and to increase the cursor size

3. Click on the **Zoom** option to change the settings for zooming in on the screen

4. Click on the **VoiceOver** option to enable VoiceOver, which provides a spoken description of what is on the screen

5. Click on the **Audio** option to select an on-screen flash for alerts, and settings for how sound is played

6. Click on the **Keyboard** option to access settings for customizing the keyboard

7. Click on the **Mouse & Trackpad** option to access settings for customizing these devices

8. Click on the **Dictation** option to select preferences for using spoken commands

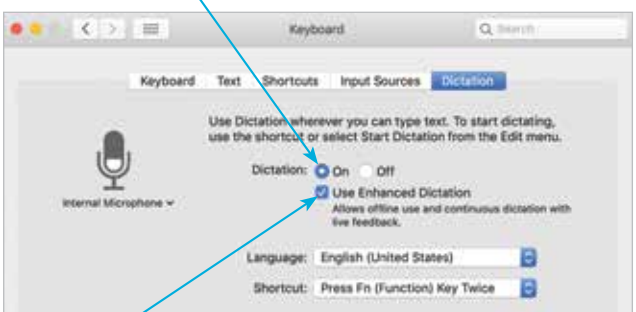
The Spoken Word

macOS Catalina not only has numerous apps for adding text to documents, emails and messages; it also has a Dictation function so that you can speak what you want to appear on screen. To set up and use the Dictation feature:

1. Click on the **Dictation** tab in **System Preferences** > **Keyboard**

2. By default, the Dictation option is **Off**

3. Click the **On** button to enable Dictation



4. Check On the **Use Enhanced Dictation** button

5. Dictation can be accessed in relevant apps by selecting **Edit** > **Start Dictation** from the Menu bar

6. Start talking when the microphone icon appears. Click **Done** when you have finished recording your text

Punctuation can be added with the Dictation function, by speaking commands such as "comma" or "question mark". These will then be converted into the appropriate symbols.

Dictation settings can also be found in **System Preferences** > **Accessibility** – see Step 8 on page 24.

Shutting Down

The Apple menu (which can be accessed by clicking on the Apple icon at the top-left corner of the Desktop, or any subsequent macOS window) is standardized in macOS. This means that it has the same options regardless of the app in which you are working. This has a number of advantages, not least being the fact that it makes it easier to shut down your Mac. When shutting down, there are three options that can be selected:

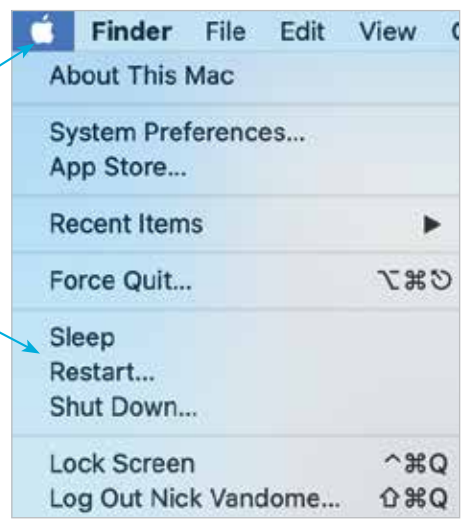
- **Sleep**. This puts the Mac into hibernation mode; i.e. the screen goes blank and the hard drive becomes inactive. This state is maintained until the mouse is moved or a key is pressed on the keyboard. This then wakes up the Mac and it is ready to continue work. It is a good idea to add a login password for accessing the Mac when it wakes up, otherwise other people could wake it up and gain access to it. To add a login password, go to **System Preferences** > **Security & Privacy** and click on the **General** tab. Check On the **Require password** checkbox and select from one of the timescale options (**immediately** is best).
- **Restart**. This closes down the Mac and then restarts it again. This can be useful if you have added new software and your computer requires a restart to make it active.
- **Shut Down**. This closes down the Mac completely once you have finished working.

When shutting down, make sure you have saved all of your open documents, although macOS will prompt you to do this if you have forgotten.

If a password is added, the Lock screen will appear whenever the Mac is woken from sleep and the password will be required to unlock it.

Users of the Apple Watch can unlock their Mac running macOS Catalina, without a password.

macOS Catalina has a **Resume** function, where the Mac opens up in the same state as when it was shut down. See page 54 for details.

Click here to access the **Apple menu**

Click here to access one of the shut-down options