

Starting the lesson

A Premiere Pro project file stores links to all the video, graphic, and sound files you have imported. Each item is displayed in the Project panel as a clip. The name *clip* originally described sections of celluloid film (lengths of film were literally clipped to separate them from a roll), but these days the term refers to any item in the project, regardless of the type of media. You could have an audio clip or an image sequence clip, for example.

Clips displayed in the Project panel appear to be media files, but they are actually only links to those files. It's helpful to understand that a clip in the Project panel and the media file it links to are two separate things. You can delete one without affecting the other (more on this later).

When working on a project, you will create at least one *sequence*—that is, a series of clips that play, one after another, with special effects, titles, and sound, to form your completed creative work. While editing, you will choose which parts of your clips to use and in which order they'll play.

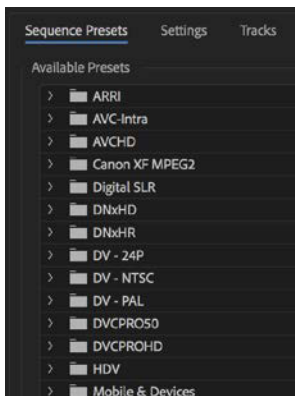
The beauty of nonlinear editing with Premiere Pro is that you can change your mind about almost anything, at any time.

Sequences contain a series of clips that play, one after another.



Premiere Pro project files have the file extension .prproj.

Starting a new project is simple. You create a new project file, import media, choose a sequence preset, and start editing.



When you create a sequence, you'll choose playback settings (things such as frame rate and frame size) and place multiple clips in it. It's important to understand how the sequence settings change the way Premiere Pro plays your video and audio clips. To speed things up, you can use a sequence preset to choose the settings and then make adjustments if necessary.

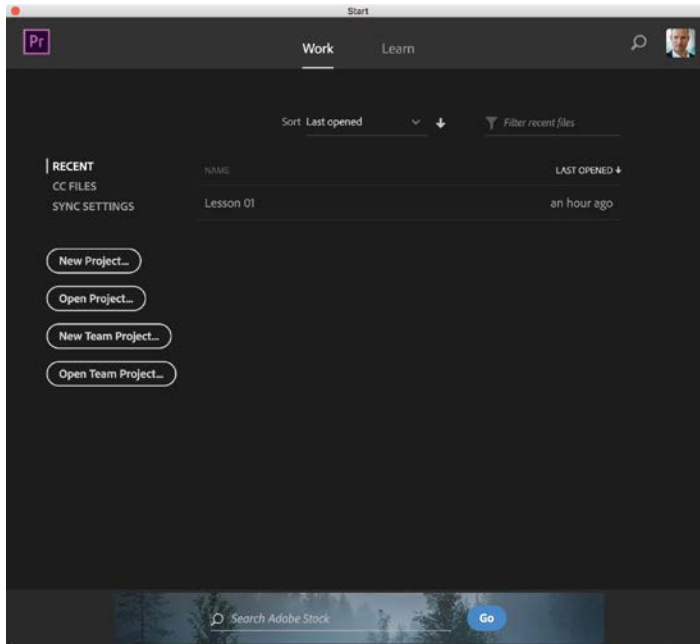
You need to know the kind of video and audio your camera records because your sequence settings will usually be based on your original source footage. Most Premiere Pro sequence presets are named after cameras. If you know which camera was used to capture the footage and which particular video format was recorded, you'll know which sequence preset to choose.

In this lesson, you'll learn how to create a new project and choose sequence settings that tell Premiere Pro how to play your clips. You'll also learn about different kinds of audio tracks and what preview files are.

Creating a project

Let's begin by creating a new project.

- 1 Launch Premiere Pro. The Start screen appears.



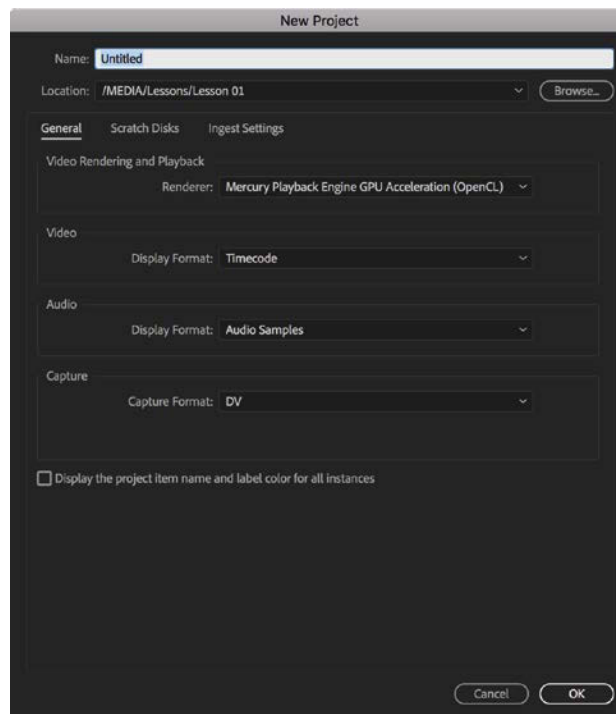
The Name heading lists previously opened projects. You should see Lesson 01 under this heading.

There are several other options in this window.

- **RECENT:** Displays recently opened project files stored locally (this is the default option).
- **CC FILES:** Displays recently opened project files stored in your Creative Cloud Files folder. These are the same as any other project files but will automatically be stored in the cloud, in addition to your local storage.
- **New Project:** Click this link to open the New Project dialog box.
- **Open Project:** Click this link to browse to and open an existing Premiere Pro project file.

- **New Team Project:** If you have a Creative Cloud for Teams license, you have the option to create dynamically shared Premiere Pro projects.
- **Open Team Project:** If you have access to a Creative Cloud for Teams project, you can open it by clicking this option.
- **Magnifying glass icon:** The magnifying glass icon at the top right of the Start screen opens a search option, which will display information from the online help system. You'll need to be connected to the Internet to access Adobe Premiere Pro Help.
- **User icon:** Next to the magnifying glass is a thumbnail of your Adobe ID profile picture. If you have just signed up, this may be a generic thumbnail. Click the icon to manage your account online.
- **Search Adobe Stock:** The Adobe Stock service provides access to stock photos, videos, and animated motion graphics templates. You can search for items at the bottom of the Start screen.

2 Click New Project to open the New Project dialog box.



Below the new project name and location options, this dialog box has three tabs: General, Scratch Disks, and Ingest Settings. All the settings in this dialog box can be changed later, and in most cases, you'll want to leave them as they are. Let's take a look at what they mean.

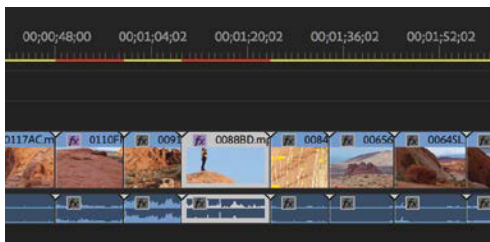
Exploring video rendering and playback settings

While you're working creatively with video clips in your sequences, it's likely you will apply some visual effects. Some special effects can be played immediately, combining your original video with the effect and displaying the results as soon as you click Play. When this happens, it's called *real-time playback*.

Real-time playback is desirable because it means you can watch the results of your creative choices right away.

If you use lots of effects on a clip or if you use effects that are not designed for real-time playback, your computer may not be able to display the results at the full frame rate. That is, Premiere Pro will attempt to display your video clips, combined with the special effects, but it will not show every single frame each second. When this happens, it's described as *dropping* frames.

Premiere Pro displays colored lines along the top of the Timeline panel to tell you when extra work is required to play back your video. No line or a yellow line means Premiere Pro expects to be able to play without dropping frames. A red line means Premiere Pro may drop frames when playing that section of the sequence.



● **Note:** A red line at the top of the Timeline panel doesn't necessarily mean frames will be dropped. It just means visual adjustments aren't accelerated, so on a less powerful machine dropped frames are more likely.

If you can't see every frame when you play your sequence, it's OK! It won't affect the final results. When you're done editing and you output your finished sequence, it'll be full quality, with all the frames (more on this in Lesson 18, "Exporting Frames, Clips, and Sequences").

Real-time playback can make a difference to your editing experience and your ability to preview the effects you apply with confidence. There is a simple solution if frames are being dropped: preview rendering.

You render effects in a sequence by choosing a render option from the Sequence menu.



Many menu options display a keyboard shortcut on the right. In this case, it's Enter (Windows) or Return (macOS).

What do *rendering* and *real time* mean?

Think of *rendering* as an artist's rendering, where something is visualized, taking up paper and taking time to draw. Imagine you have a piece of video that is too dark. You add a visual effect to make it brighter, but your video-editing system is unable to both play the original video and make it brighter. In this situation, you'd have your system render the effect, creating a new temporary video file that looks like the original video combined with the visual effect to make it brighter.

When your edited sequence plays, sections that are rendered display the newly rendered video file instead of the original clip (or clips). The process is invisible and seamless. In this example, the rendered file plays back like the original video file but brighter.

When the part of your sequence with the brightened clip is finished, your system invisibly and seamlessly switches back to playing your other original video files.

The downside of rendering is that it takes up extra space on your hard drive, and it takes time. Also, because you're viewing a new video file that is based on your original media, there might be some minor loss of quality. The upside with rendering is that you can be confident your system will be able to play the results of your effect at full quality, with all the frames per second. This might be important if you output to tape, but it won't change output to a file.

Real-time playback, by contrast, is instant! When using a real-time special effect, your system plays the original video clip combined with the special effect right away, without waiting for it to render. The only downside with real-time performance is that the amount you can do without rendering depends on how powerful your system is. More effects are more work to play back, for example. In the case of Premiere Pro, you can dramatically improve real-time performance by using the right graphics card (see the sidebar "The Mercury Playback Engine"). Plus, you'll need to use effects that are designed for GPU acceleration, and not all effects are.

When you render, Premiere Pro plays back the results of your special effects at high quality and full frame rate, without your computer having to do any more work than playing a regular video file.

In the New Project dialog, if the Renderer menu is available, it means you have graphics hardware in your computer that meets the minimum requirements for GPU acceleration and it is installed correctly.

The menu has two types of options:

- **Mercury Playback Engine GPU Acceleration:** If you choose this option, Premiere Pro will send many playback tasks to the graphics hardware on your computer, giving you lots of real-time effects and easy playback of mixed formats in your sequences. You may see an option to use CUDA, OpenCL, or Metal for GPU acceleration, depending on your graphics hardware.

- **Mercury Playback Engine Software Only:** This is still a major advancement in playback performance, giving you excellent performance that uses all of the available power in your computer. If your system does not have graphics hardware that can be used for GPU acceleration, only this option will be available, and you won't be able to open this menu.

You will almost certainly want to choose GPU acceleration and benefit from the additional performance if you can. If you experience performance or stability issues using GPU acceleration, choose the Software Only option in this menu.

Choose a GPU option now, if it's available.

The Mercury Playback Engine

The Mercury Playback Engine improves playback performance, making it faster and easier than ever to work with multiple video formats, multiple special effects, and multiple layers of video (for effects such as picture-in-picture).

The Mercury Playback Engine has three main features.

- **Playback performance:** Premiere Pro plays back video files with great efficiency, especially when working with the types of video that are difficult to play back, such as H.264, H.265, or AVCHD. If you're filming with a DSLR camera, for example, chances are your media is recorded using the H.264 codec. Thanks to the Mercury Playback Engine, you'll find that these files play back with ease.
- **64-bit and multithreading:** Premiere Pro is a 64-bit application, which means it can use all the random access memory (RAM) on your computer. This is particularly useful when you're working with high-definition or ultra-high-definition video (HD, or 4K and above). The Mercury Playback Engine is multithreaded, which means it uses all the CPU cores in your computer. The more powerful your computer is, the higher the performance you'll see in Premiere Pro.
- **CUDA, OpenCL, Apple Metal, and Intel graphics support:** If you have powerful enough graphics hardware, Premiere Pro can send some of the work for playing back video to the graphics card, rather than putting the entire processing burden on the CPU in your computer. The results are even better performance and responsiveness when working with sequences, and many special effects will play in real time, without dropping frames.

For more information about supported graphics cards, see <http://helpx.adobe.com/premiere-pro/system-requirements.html>.

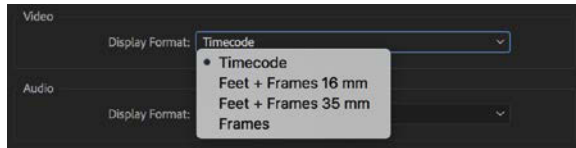
Setting the video and audio display formats

The next two sections of the General tab in the New Project dialog box allow you to choose how Premiere Pro should measure time for your video and audio clips.

In most cases, you'll choose the default options: Timecode from the Video Display Format menu and Audio Samples from the Audio Display Format menu. These settings don't change the way Premiere Pro plays video or audio clips, only the way time is measured.

The Video Display Format menu

There are four options for Video Display Format. The correct choice for a given project largely depends on whether you are working with video or celluloid film as your source material. It's rare to produce content using film, so if you are not sure, choose Timecode.



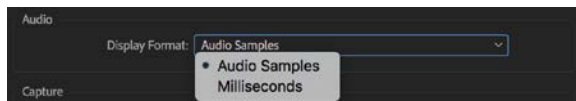
The choices are as follows:

- **Timecode:** This is the default option. Timecode is a universal standard for counting hours, minutes, seconds, and individual frames of video. The same system is used by cameras, professional video recorders, and nonlinear editing systems all around the world.
- **Feet + Frames 16 mm or Feet + Frames 35 mm:** If your source files are captured from film and you intend to give your editing decisions to a lab so they can cut the original negative to produce a finished film, you may want to use this standard method of measuring time. Rather than measuring time as seconds and frames, this system counts the number of feet plus the number of frames since the last foot. It's a bit like feet and inches but with frames rather than inches. Because 16mm film and 35mm film have different frame sizes (and so different numbers of frames per foot), there's an option for each.
- **Frames:** This option simply counts the number of frames of video. This is sometimes used for animation projects and is another way that labs like to receive information about edits for film-based projects.

For this exercise, leave Video Display Format set to Timecode.

The Audio Display Format menu

For audio files, time can be displayed as samples or milliseconds.



● **Note:** Many of the terms used in Adobe Premiere Pro come from film editing, including the term *bin*. In traditional film editing, editors hang film clips on hooks over large bins, with the long piece of celluloid trailing into the bin to keep it safe.

- **Audio Samples:** When digital audio is recorded, sound level samples are taken, as captured by the microphone, thousands of times a second. In the case of most professional video cameras, this happens 48,000 times per second. Premiere Pro gives you the option to display time when playing clips and sequences as hours, minutes, seconds, and frames, or as hours, minutes, seconds, and samples.
- **Milliseconds:** With this mode selected, Premiere Pro can display time in your sequences as hours, minutes, seconds, and thousandths of a second.

By default, Premiere Pro lets you zoom the Timeline enough to view individual clip segment frames. However, you can easily switch to showing your audio display format instead. This powerful feature lets you make the tiniest adjustments to your audio.

For this project, leave the Audio Display Format option set to Audio Samples.

About seconds and frames

When a camera records video, it captures a series of still images of the action. If there are enough images captured each second, it looks like moving video when played back. Each picture is called a *frame*, and the number of frames each second is usually called *frames per second* (fps), or *frame rate*.

The fps will vary depending on your camera/video format and settings. It could be any number, including 23.976, 24, 25, 29.97, 50, or 59.94. Most cameras allow you to choose between more than one frame rate and more than one frame size. It's important to know which was chosen when filming.

Setting the capture format

It's most common to record video as a file you can work with immediately. However, there may be times you need to capture from videotape.

The Capture Format menu tells Premiere Pro what videotape format you are using when capturing video to your storage drive.

Capturing from DV and HDV cameras

Premiere Pro can capture from DV and HDV cameras using the FireWire connection on your computer, if it has one. FireWire is also known as IEEE 1394 and i.LINK.

Capturing from third-party hardware

Not all video decks use a FireWire connection, so you may need additional third-party hardware installed to be able to connect your video deck for capture.

● **Note:** The Mercury Playback Engine can share performance with video input and output hardware for playback, thanks to a feature called Adobe Mercury Transmit.

If you have additional hardware, you should follow the directions provided by the manufacturer to install it. Most likely you'll install software supplied with your hardware. The software install will likely discover Premiere Pro on your computer, automatically adding extra options to this menu and to others.

Follow the directions provided with your third-party equipment to configure new Premiere Pro projects.

For more information about the video capture hardware and video formats supported by Premiere Pro, visit <http://helpx.adobe.com/premiere-pro/compatibility.html>.

Ignore this setting for now because you will not be capturing from a tape deck in this exercise, and you can change the setting as needed later.

Displaying the project item names and label colors

There's a check box at the bottom of the New Project dialog box described as *"display the project item name and label color for all instances."*

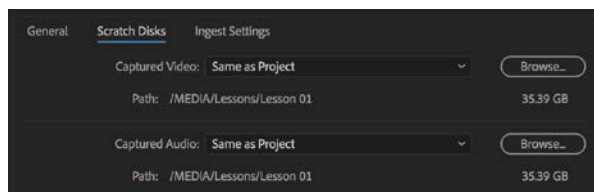
☐ Display the project item name and label color for all instances

With this option enabled, when you change the color of a clip or change the clip name, all copies of the clip used anywhere in the project will update accordingly. If this option is not selected, only the copy you select will be changed.

Leave this deselected for now.

Setting up the scratch disks

Whenever Premiere Pro *captures* (records) video from tape, renders special effects, saves backup copies of the project file, downloads content from Adobe Stock, or imports animated motion graphics templates, new files are created on your hard drive.



Scratch disks are the locations these files are stored. They can be physically separate disks, as the name suggests, or any subfolder on your storage. Scratch disks can be located all in the same place or in separate locations, depending on your hardware and workflow requirements. If you're working with really large media files, you may get a performance boost by putting all your scratch disks on physically separate hard drives.

There are generally two approaches to storage for video editing.

- **Project-based setup:** All associated media files are stored with one project file in the same folder (this is the default option for scratch disks and the simplest to manage).
- **System-based setup:** Media files associated with multiple projects are saved to one central location (perhaps high-speed network-based storage), and the project file is saved to another location. This might include storing different kinds of media files in different locations.

To change the location of the scratch disk for a particular type of data, choose a location from the menu next to the data type. The choices are:

- Documents (to store the scratch disk in the Documents folder in your system user account).
- Same As Project (to store the scratch disk with the project file); this is the default option.
- [Custom] is automatically chosen if you click Browse and choose a specific location for the scratch disk.

Below each Scratch Disk location menu, a file path shows the current setting.

Your scratch disks might be stored on local hard drives or on a network-based storage system; any storage location your computer has access to will work. However, the speed of your scratch disks can have a big impact on performance, so choose fast storage if possible.

Using a project-based setup

By default, Premiere Pro keeps any newly created media together with the project file (this is the Same As Project option). Keeping everything together this way makes finding associated files simple.

It makes it easier to stay organized if you move media files into the same folder before you import them. When you're finished with your project, you can remove everything from your system by deleting the single folder your project file is stored in.

There's a downside, though: Storing your media files on the same drive as your project file means the drive has to work harder while you edit, and this can impact playback performance.

Using a system-based setup

Some editors prefer to have all their media stored in a single location. Others choose to store their capture folders and preview folders in a different location from their project. This is a common choice in editing facilities where multiple editors share several editing systems, all connected to the same storage. It's also

common among editors who have fast hard drives for video media and slower hard drives for everything else.

There's a downside with this setup too: Once you finish editing, you'll likely want to gather everything together for archiving. This is slower and more complex when your media files are distributed across multiple storage locations.

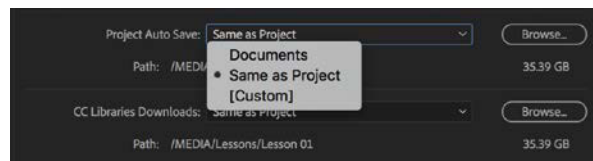
Typical drive setup and network-based storage

Although all file types can coexist on a single hard drive, a typical editing system will have two hard drives: Drive 1, dedicated to the operating system and programs, and Drive 2 (often a faster drive), dedicated to footage items, including captured video and audio, video and audio previews, still images, and exported media.

Some storage systems use local computer networks to share storage between multiple systems. If this is the case for you, check with your system administrators to make sure you have the right settings.

Setting up a Project Auto Save location

In addition to choosing where new media files are created, Premiere Pro allows you to set a location to store automatically saved files. These are additional backup copies of your project file that are created automatically while you work. Choose a location from the Project Auto Save menu on the Scratch Disks tab.



Storage drives occasionally fail, and you may lose files stored on them without warning. In fact, any computer engineer will tell you that if you have only one copy of a file, you can't count on having the file at all. For this reason, it's a great idea to set the Project Auto Save location to a physically separate drive, just in case.

In addition to storing automatically saved files in the location you choose here, Premiere Pro can store a backup of your project file in your Creative Cloud Files folder. This folder is created automatically when you install Adobe Creative Cloud. It allows you to access files in any location where Creative Cloud is installed and you are logged in.

This useful extra safety net is available by choosing Edit > Preferences > Auto Save (Windows) or Premiere Pro CC > Preferences > Auto Save (macOS).

CC Libraries Downloads

You can also use the Creative Cloud Files folder to store additional media files that you can access from any system. Collaborators on a project can use the Creative Cloud Files folder to share assets. For example, you might download logos or graphic elements to incorporate into your sequence.

Use the Libraries panel in Premiere Pro to access these files, and when you add items to your project in this way, Premiere Pro will create a copy of them in the scratch disk location you choose from the CC Libraries Downloads menu.

Motion Graphics Template Media menu

Premiere Pro can import and display animated template graphics and titles created with After Effects or Premiere Pro. When you import a motion graphics template, a copy will be stored in the location you choose from this menu.

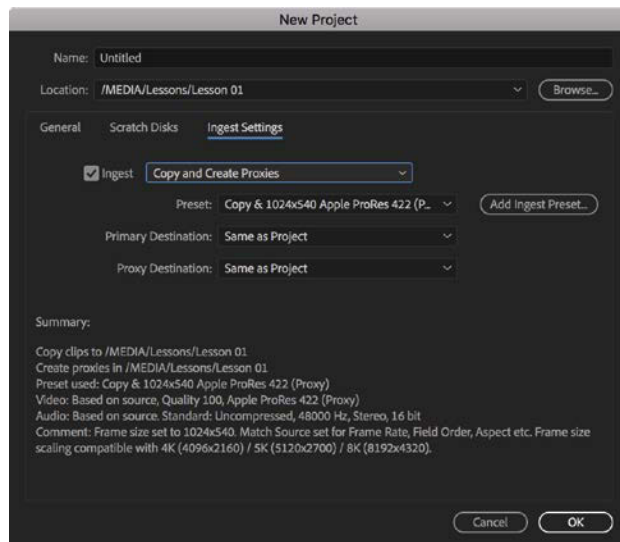
For this project, leave all your scratch disks set to the default option: Same As Project.

Choosing ingest settings

Most editors describe adding media to a project as *importing*. However, the process is also described as *ingesting*. The two words are often used interchangeably, but the word *ingest* has a broader meaning than the word *import*.

When you import a media file into a Premiere Pro project, a link is made to the original media file, and you're ready to include it in a sequence.

Depending on the scenario, selecting Ingest on the Ingest Settings tab might mean imported media files are also copied to a new location or converted to a new format.



When you select Ingest, you can choose from the menu what to do with your media files.

- **Copy** them to a new storage location
- **Transcode** them to a new codec and/or format
- **Create Proxies**, which converts them to lower-resolution media files that are easier for a lower-powered computer to play back and that take up less storage space

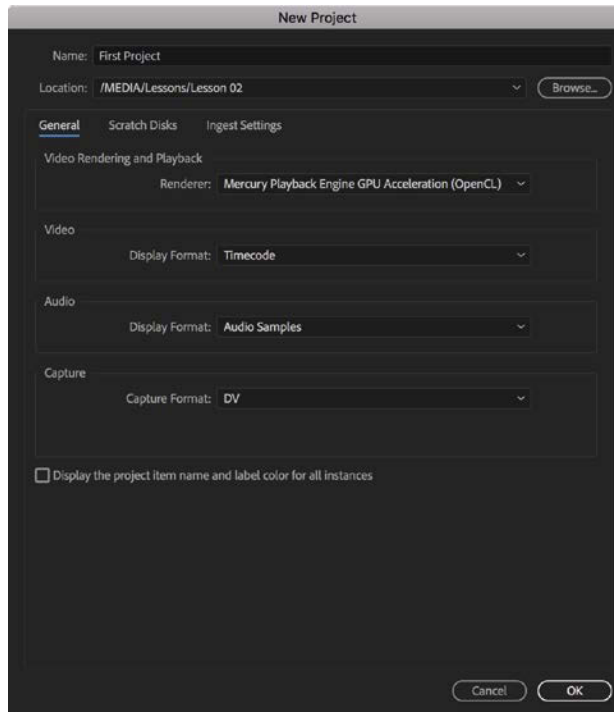


You'll be exploring these settings in Lesson 3, "Importing Media." They can be changed at any time, so for now leave Ingest deselected.

Now that you have checked that the settings are correct for this project, let's finish creating it.

- 1 Click in the Name box, and name your new project First Project.
- 2 Click Browse, and browse to the Lessons/Lesson 02 folder. Click Choose to establish this new folder as the location for the new project.

● **Note:** When choosing a location for your project file, you may want to choose a recently used location from the Location menu.



- 3 If your project is set up correctly, the General section in the New Project window should look similar to the screen shown here. If the settings match, click OK to create a new project.