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## Tech Coach Corner – PDF? DOC? JPEG? GIF? MP3? MP4? ZIP? File formats explained in English

by LTCL Coach Bryan Smith

I've gotten these questions multiple times in the last year... "What is a PDF?", "How do I open a ZIP file?", and "Is an MP3 file a picture or a video?" The general topic here is file formats, also called file types or filename extensions.

But first, let's back up and start with "What is a file?" Files are how computing devices store and retrieve information. Files can then be copied, renamed, or deleted. They can be opened by programs/apps in order to view or edit them. Files can also be sent to others by "attaching" the file to an email.

File formats can be determined by looking at the full name of the file. The three or four characters after the last period (".") indicate the file format. This is how a computer, which includes tablets and modern smart phones, knows what program or app(lication) to use to open the file for use. So, if you open a file that has a file name of IMG0015.JPG, the computer will know that this is an image and it will launch a program/app to display the picture.

Now, let's review common file formats that you may have seen or heard people talking about. In most cases, there is no case sensitivity in file extensions, i.e., PDF is the same as pdf. All modern computing devices support the ability to open each of these types of files; however, it depends on the device and the software/apps installed as to what can further be done with files of these types, like editing them.

File extension	Type of format	Description
PDF	Document	Portable Document Format. Basically, a read-only version of a document that can be easily shared or printed.
DOC or DOCX	Document	Microsoft Word Document. MS Word is a very popular word-processing program that allows someone to create/edit letters, pamphlets, posters, mailing labels, etc.

ZIP	Compressed file(s)	Compressed file or files. You can think of a “zipped” file as a package that has something bigger in it, and in the case of multiple files, a ZIP file allows a single file to replace multiple files in a simple way. Creating and working with ZIP files is an intermediate-level task.
GIF	Video	Simple animation video. These are usually several images that play in a loop. You might see these show up as animated emojis in an email.
JPG or JPEG	Image	Compressed image. Most (all?) digital cameras have the ability to take an image and save it to a JPG file. There are *many* image types, but JPG is by far the most popular.
MP3	Audio	Compressed audio. This is a very common audio format and you may have seen it when seeing a file that contains music. Other common audio file formats are
MP4	Video	Compressed video. This is a very common video format and you may have seen it when seeing a file that contains video. Other common video file formats are WMV (Microsoft) and MOV (Apple).

The last three file formats are compressed formats. This means that some resolution (detailed accuracy) is removed in order to make the file as small as possible. This is acceptable since these files are often viewed or listened to on portable devices and absolute accuracy is not necessary. There are also “raw” file formats for images, audio, and video, but these are usually used by professional photographers for printing, musicians or audiophiles for high-fidelity listening, or theaters for eye-popping large screens.

This column’s purpose isn’t to list and explain every file format, just some common ones that you may see or hear others refer to. If you want to understand a file type that I didn’t cover here, you can search the Internet, e.g., if you saw a file type of “PPT”, type “What file type is PPT?” into a web search and you’ll see that it is a Microsoft PowerPoint Presentation file. Or, you can search for a file format in this Wikipedia entry called [List of File Formats](#).

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