Session 5: Software Part 2

Tech Skills 101: Driver's Ed for the Digital World

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For awareness

- Apple has release new **major** OS versions

  - macOS Tahoe 26.0.1

  - iOS 26.0.1

- If you have not yet upgraded, consider waiting until the 26.1 versions of both are available—which is likely to be as early as the week of October 27

  - The 26.0 versions have some issues that cause "sluggish" behaviors and drain the battery

- When you do upgrade, be prepared to spend time exploring changes — especially explore apps you use / depend on the most

Agenda

- File system basics — including (a lot of) terms

  1. Files and folders are arranged in a hierarchy

  2. Some apps *implicitly* save/read stored data for you and some apps require you to take explicit steps to save/read stored data

- Common scenarios

  - File manager apps

  - Accessing files via an app

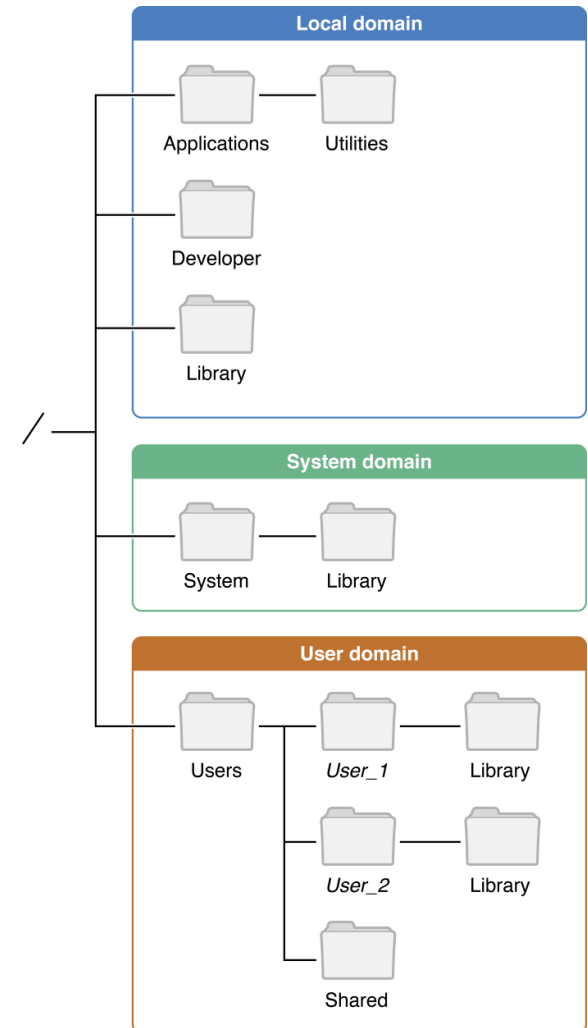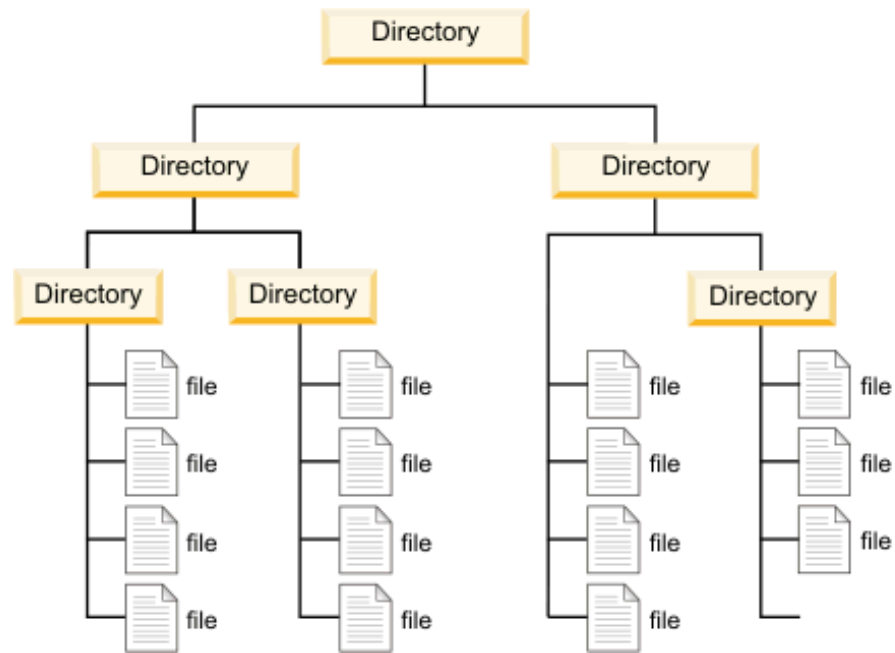- Time permitting: Backing up and cleaning up

File System Terminology

drive	• A storage device
	• Short for "disk drive"
	• Kinds
	   • Internal: the storage device found inside your desktop, laptop, smartphone, and/or tablet
	   • External: a HDD or SSDD that you attach to your desktop/laptop/smartphone/tablet using a physical USB connection
	   • Cloud: storage space "in the cloud" (often Apple's iCloud, Microsoft OneDrive, or Google Drive)

file	• A collection of digital data stored as a single object on a drive • The type of data stored in a file depends on the ***file type***
folder	• A collection of files and/or other folders • ***Directory*** is a synonym for "folder" • Note: Some apps implement a kind of folder to help you organize things in the app itself (e.g., browser bookmark folders); these folder <u>are not</u> file system folders
path	• The location on a drive of a file or folder
alias	• A "shortcut" (also referred to as a "reference") to a file or folder • An alias looks and acts like a the file or folder it refers to
metadata	• Data that defines/describes the characteristics of other data • E.g., the title, author and publication date of a book are metadata about the book
smart folder	• A folder whose contents using some criteria you specify. • Criteria can include things like age, type, etc

File System Metadata

name	• File and folder names can be up to 255 characters long • File/folder names cannot contain some characters (E.g., "/" and "\")
type	• Data is arranged in a file in some ***format*** • The type (of "kind") of a file indicates it's format • A file's type is indicated by • Its icon • Its file name extension (which may not be shown to you in the UI) • The OS uses a file types to associate files with apps • This is how the OS knows which app to open a file in when you open a file using a file manager
• **date/time created** • **date/time last accessed** • **date/time last modified**	• The date and time the file or folder was created, last opened (i.e., accessed/read), last changed (i.e., modified/updated) • The file system uses this metadata to • To populate your "Recent" smart folder • To remove items in the Trash folder after some period of time
geolocation	• The physical location you were at when the file was created • Geolocation metadata is only included with some types of files • Pictures/videos you take with your device are a primary example

File System Hierarchy

Directory

Directory — Directory

Directory — Directory — Directory

file
file
file
file

file
file
file
file

file
file
file
file

file
file
file

Local domain

Applications — Utilities

Developer

Library

/ —

System domain

System — Library

User domain

Users — *User_1* — Library

User_2 — Library

Shared

Special Folders

Applications	Contains the code of apps you have installed on your device
Documents	The *defacto* location for storing files you create using apps on desktops/laptops iPhones and iPads **do not** include this special folder
Downloads	Location a file is copied to when you download a file from the Internet

Library	• Contain files relating to the operating system and apps you have installed
	  • OS and app settings are stored here
	• There are three different Library folders:
	  • System Library: contains files specifically related to the operating system
	  • Root Library: contains app related files that affect every user of the desktop/laptop
	  • User Library: contains app related files that affect your desktop/laptop configuration

System	Location of the operating system
Trash	• Always (and only?) find on the macOS doc • Only found on desktops and laptops; not found on iPhones or iPads
Users	• Contains user account "profiles" • Only found on desktops and laptops; not found on iPhones or iPads

File manager apps

A *file manager* or *file browser* is a computer program that provides a user interface to manage files and folders.

from wikipedia.org

On **macOS**, the file manager is called *Finder* and the app icon looks like:

On **iOS**, the file manager is called *Files* and the app icon looks like:

On **Windows**, the file manager is called *File Explorer* and the app icon looks like:

File manager app functions

- **Open** files

- **Search** for files and folders

- **Copy** files and folders

- **Move** files and folders from one folder to another

- **Delete** files and folders

- **Modify** file and folder properties

Demo

- With Finder

  - Moving around the hierarchy

  - Changing views

  - Creating new folders

  - Moving files and folders

    - Moving a file to your desktop

  - Deleting files and folders

  - The sidebar: Favorites, cloud drives, external drives

- An app that implicitly saves your data to the file system: Contacts

- An app that requires you to explicitly save your data: Pages

  - Look at the File menu

  - Creating a new file

    - Using the same name as an existing file

  - Opening an existing file

Backing up & Cleaning up