📁 File System Basics

Imagine your computer is a giant filing cabinet. The file system is the system you use to organize the drawers, hanging folders, and individual documents so you can find everything quickly. It determines how and where your data is stored, named, and retrieved. Without a file system, your computer would just be a collection of unsorted information – pure chaos!

🌳 Understanding Folder Structure and Hierarchy

The way data is organized in a file system is called a **hierarchy**. This sounds complicated, but it's quite simple. Think of a family tree: there are grandparents, then parents, then children. Everyone has their fixed place in the structure.

🗺️ The Root

Every file system has a starting point, so to speak, the main trunk of the tree. This is called the **root directory** or, in English, **Root**. Everything else branches out from here.

On Windows systems, this is often a drive letter like C:\. On Linux or macOS, it's simply a forward slash /.

📂 Folders and Subfolders

A **folder** (sometimes also called a **directory**) is like a drawer in your filing cabinet. You can store things in it. To improve organization, you can place smaller boxes inside a drawer. These are the **subfolders**.

01

C:\ (This is the root, your main drive)
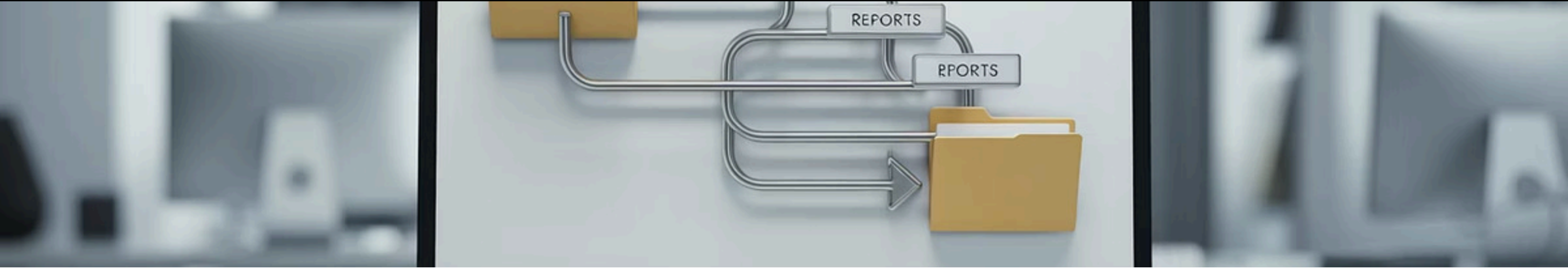
02

Users (A folder directly in the main drive)

03

YourName (A subfolder within the "Users" folder)

04

Documents, Pictures, Music (Further subfolders)

05

Vacation 2025 (A subfolder within "Pictures")

📍 The Path

The exact "route" to a file or folder is called the **path**. The path to your vacation folder from the example above would be: C:\Benutzer\DeinName\Bilder\Urlaub 2025. Like a precise address for your data.

This nested structure helps you keep track. You know exactly that you'll find your vacation photos in the "Urlaub 2025" folder, which is located in the "Bilder" folder, and so on.

📁 Difference Between Files and Folders

Although often used together, files and folders are two fundamentally different things. It's important to know the difference to effectively use your computer.

📄 What is a File?

A **file** is the actual container for your information. This can be anything: a text you've written, a photo you've taken, a song you're listening to, or a program you're running. Every file has a name and an extension (e.g., .txt, .jpg, .mp3), which tells the computer what kind of file it is and with which program it should open it.

Resume.docx A text document	**Sunset.jpg** An image
FavoriteSong.mp3 A music file	**Photoshop.exe** An executable program file

📂 What is a Folder?

A **folder** (or Directory) is, however, just a **container**. It does not directly contain information like text or images itself. Its sole purpose is to house and organize other files and even other folders. So, it's like the drawer, while the file is the document inside it.
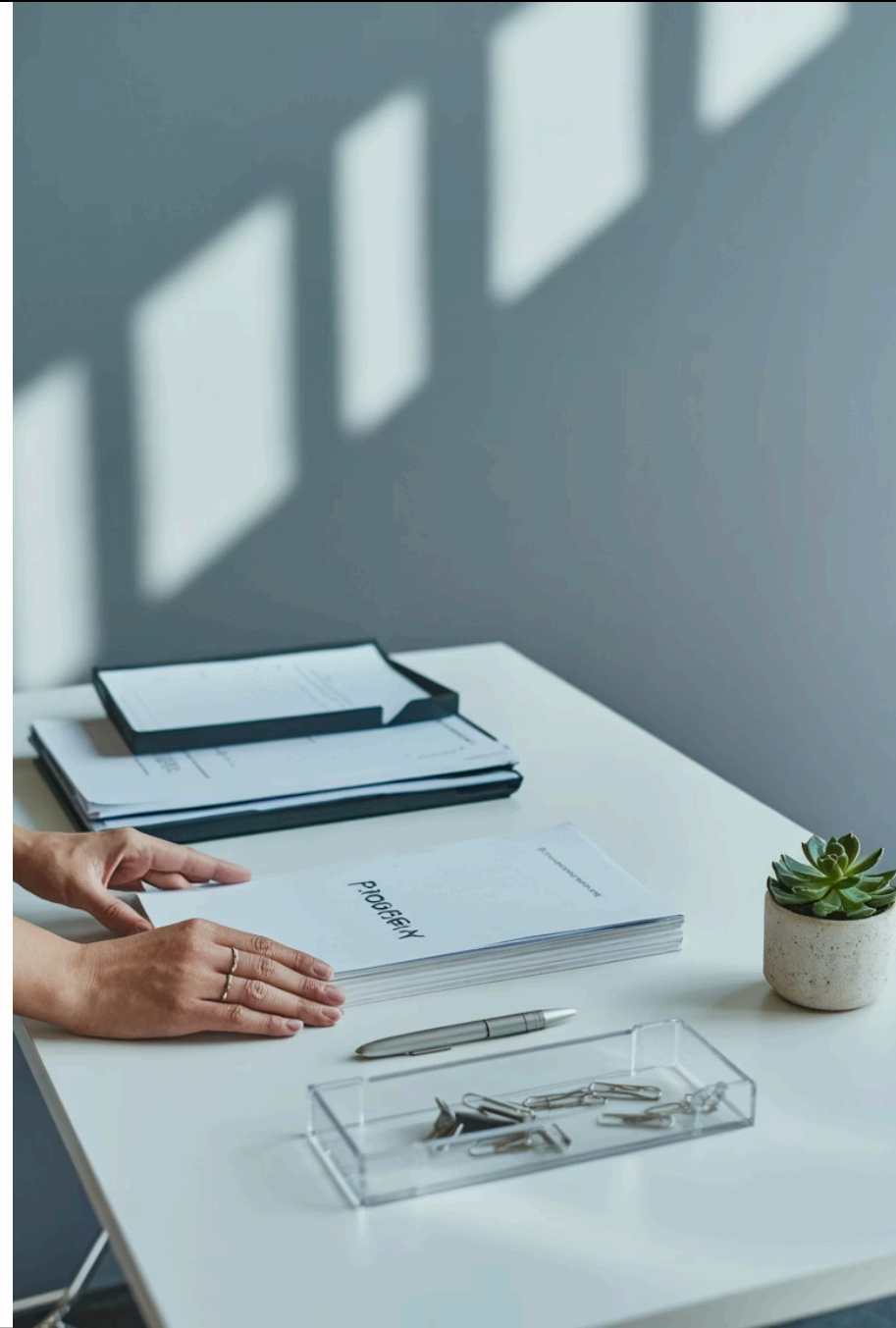
⚖️ The Differences at a Glance

Characteristic	📄 File	📁 Folder
Purpose	Stores specific data (text, image, music, etc.)	Serves to organize files and other folders
Content	Contains information that can be read by a program	Contains a list of files and subfolders
Analogy	A sheet of paper, a photo, a CD	A file folder, a drawer, a hanging file
Size	Has a specific file size (e.g., 2 megabytes)	Usually has no significant size itself (only its content)
Icon	Often shows a preview or a program icon	Is usually represented as a folder or file cabinet

In short: **Files contain the work, folders create the order.** You put your files in folders to avoid losing them and to group them logically.
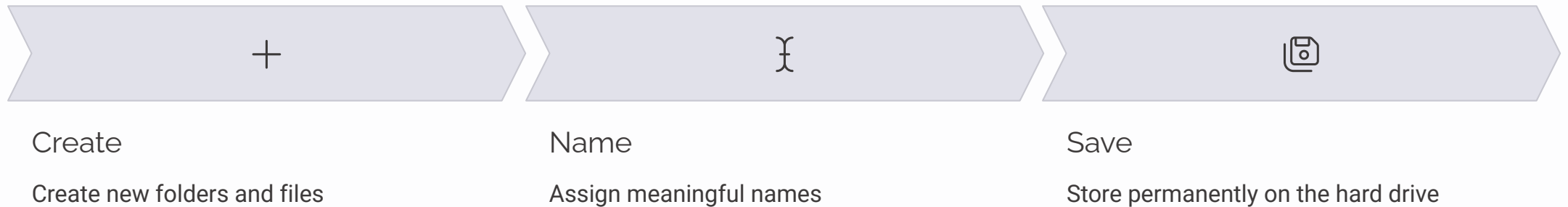
🛠️ File Operations

File operations are all the basic things you do with your files and folders. Imagine working with real documents and folders on your desk: You take a new sheet of paper, label it, put it in a folder, move the folder to another shelf, or throw an old sheet into the trash.

✨ Create, Name, and Save

These are the first steps to bring order to your digital life. You create new elements and give them meaningful names so you can find them again later.

+	I	🖫

Create

Create new folders and files

Name

Assign meaningful names

Save

Store permanently on the hard drive

🆕 Create a New Folder

When you start a new project, for example, a report on "The Planets," it's smart to first create a suitable folder for it.

01
Go to the location where the folder should be

(e.g., on the desktop or in your "Documents" folder)

02
Right-click on an empty space

03
In the menu, select "New" and then "Folder"

04
Immediately give the new folder a name

A new folder appears, with its name highlighted

📄 Create a New File

Creating a new file usually happens directly from within a program.

1. Open the program you want to work with (e.g., a word processor like Word or an image editing program)

2. In the program, you usually click on **"File"** and then on **"New"**

3. Now you have an empty file (an empty document, an empty image, etc.) that you can edit. However, it only exists in the computer's memory so far. To keep it permanently, you must save it.

✏️ Naming and Renaming

A good name is worth its weight in gold! Document1.docx isn't much help if you want to know what's in it three weeks from now. So be as specific as possible! Report_Planets_Mars.docx is much better.

Naming When Creating

As described above, you can give a new folder a name directly upon creation. For files, you assign the name at the moment of the first save.

Renaming Something

1. Click once on the file or folder to select it
2. Right-click on the selected item
3. Choose the **"Rename"** option from the menu
4. The name becomes editable again, and you can change it. Press the Enter key when finished.
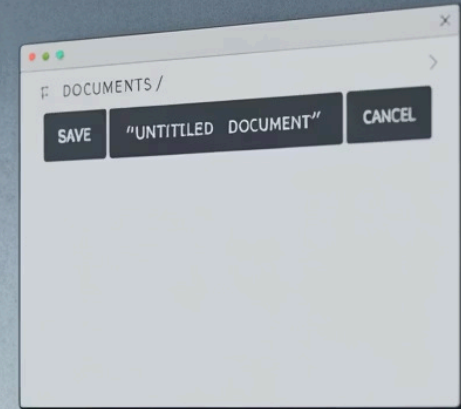
💾 Saving

Saving is like filing a document in your physical filing cabinet. If you don't, all your work will be lost as soon as you close the program or lose power.

"Save"

If the file already has a name and location, it will simply be overwritten with the latest changes.

"Save As..."

You use this command when you save a file for the very first time, or if you want to create a copy under a different name or in a different location.

📦 Copy, Move, and Delete

These are the actions you use to manage and tidy up your existing organization.

Copy

Creates an exact duplicate in another location. The original remains untouched.

Move

Removes the item from its original location and places it in a new location.

Delete

Removes the item to free up space and improve clarity.

👯 Copying (Duplicating)

When copying, you create an exact duplicate of a file or folder (including all its contents) in a different location. The original remains untouched in its old place. This is useful if you want to create a backup or use a template for something new.

01

Right-click on the file/folder

you want to copy

02

Select "Copy" from the menu

03

Go to the destination folder

where the copy should be pasted

04

Right-click on an empty space

05

Select "Paste"

Done!

🚚 Moving (Cut and Paste)

Moving a file or folder removes it from its original location and places it in a new one. No copy is created; the item simply changes its "home."

01

Right-click on the file/folder

you want to move

02

Select "Cut" from the menu

You'll often see the item's icon become slightly transparent

03

Go to the new destination folder

04

Right-click on an empty space

05

Select "Paste"

The item disappears from the old location and appears in the new one

Comparison: Copy vs. Move

Action	👯 Copy & Paste	🚚 Cut & Paste (Move)
Result	The original remains where it was. An exact copy appears at the new location.	The original is removed from its old location and appears at the new location.
Quantity afterwards	You have the item **twice** (or more).	You still only have the item **once**.
Analogy	**Photocopying** a document.	**Taking** a document from one folder **and placing it in another**.
Menu Command	Copy	Cut

🗑 Delete

If you no longer need a file or folder, you can delete it to free up space and improve organization.

How it works:

1. **Right-click** on the item you want to delete.
2. Select **"Delete"** from the menu.
3. The system often asks for confirmation: "Are you sure you want to delete this file?". Confirm with "Yes".

What happens next? Most operating systems (like Windows or macOS) don't immediately delete the file permanently. It is first moved to the **Recycle Bin**. This is a safety net! If you accidentally deleted something, you can open the Recycle Bin, right-click the file, and select **"Restore"**. It will then return to exactly where it was before.

To permanently delete a file and free up disk space, you must empty the Recycle Bin (right-click the Recycle Bin icon -> "Empty Recycle Bin"). **But beware:** After that, the file is truly gone!

🖥️ Working with Applications

Applications – or "apps" for short – are your computer's tools. Just as a craftsman uses a hammer or a saw, you use a word processor to write or a calculator to compute. Each application is made for a specific task. We'll now take a look at two absolute classics.

✍️ Simple Word Processing

A word processor (like Microsoft Word, LibreOffice Writer, or even a simple text editor) is essentially your digital sheet of paper with a super pen. You can write texts, format them, correct errors, and much more.

📄 Open Documents

Retrieve existing files from the "filing cabinet"

💾 Save Documents

Permanently secure your work

🖨️ Print Documents

Bring digital text to real paper

📄 Opening Documents

Imagine your hard drive is a large filing cabinet. Opening a document is like taking a specific folder out of this cabinet to view it or continue working on it.

01
Start the word processing program

02
Go to "File" in the menu

at the top of the window

03
Select the "Open" option

in the dropdown menu

04
Navigate to the desired folder

The "Open" dialog box appears - a small map of your computer

05
Click the file and press "Open"

Your text will then appear in the program

💾 Saving Documents

Saving is one of the most important steps! Unsaved work is like a thought you haven't written down – it can be lost in a flash (e.g., during a power outage).

Here, we distinguish between two commands, both of which you'll find in the menu under **"File"**:

Command	When to use it	What it does
Save	When you continue working on an **already saved** file.	It updates the file in its existing location with your latest changes. It happens quickly and without further prompts.
Save As...	When you save a file **for the first time** or want to create a **copy**.	It opens the "Save Dialog," where you must specify the file's **name** and **location**.

Remember: If you've worked on a document for an hour, it's a good habit to click "Save" (or use the keyboard shortcut Ctrl + S) every now and then!

🖨️ Printing Documents

If you want to transfer your digital text to physical paper, printing comes into play.

01

Ensure your printer is ready

turned on and connected to the computer

02

Go to the "File" menu

in your word processor

03

Select the "Print" option

04

Make important settings

Select printer, number of copies, page range

05

Click "Print"

The printer should now start working

🧮 Using the Calculator

Every computer has a built-in calculator app, which is perfect for quick calculations – whether for math homework or tallying up shopping costs.

▶ Find and Launch the Calculator

You can usually find the calculator through your operating system's Start menu. Simply type "Calculator" into the search bar and click on the icon that appears.

🔢 Understanding the User Interface

The app looks like a normal calculator you could hold in your hand.

Number Pad (0-9)

This is where you enter your numbers. You can either click the buttons with your mouse or use the numbers on your keyboard.

Basic Operations

The most important keys are **+** (Addition), **-** (Subtraction), ***** (Multiplication, often shown as "x"), and **/** (Division, often shown as "÷").

Equals Sign (=)

This button calculates the result of your input.

Understanding Clear Buttons

C

Stands for "Clear All." This button completely resets the calculator to zero.

CE

Stands for "Clear Entry." This button only deletes the last entered number, not the entire calculation.

Backspace (←)

Deletes the last digit of the current number.

🛒 Performing a Simple Calculation 🛒

Let's imagine you're buying a few items and want to know the total price:

- Bread: €3.50
- Milk: €1.20
- Apples: €2.80

Here's how to calculate this on a calculator:

01

Open the Calculator App

02

Enter the first number: 3.5

(The decimal point is usually entered with a period)

03

Press the plus key (+)

04

Enter the second number: 1.2

05

Press the plus key (+) again

06

Enter the third number: 2.8

07

Press the equals key (=)

The result 7.5 should now appear on the display. So you know your purchase costs €7.50. To start a new calculation, simply press the **C key**.