

# Week 0 Friday: Introduction to File System

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## Understanding Your Computer's File System

### Introduction

A computer's file system is like a digital filing cabinet. It helps you organize your files (documents, pictures, homework assignments, etc.) in a way that makes them easy to find and manage. Just like you wouldn't throw all your papers into a single drawer, you shouldn't keep all your digital files in one place either.

### Navigation tools:

- Windows users use **File Explorer**. Shortcut: **Win + E**
- MacOS users use **Finder**.

### Home Directory

The **home directory** is the main folder for your user account on your computer. It contains all your personal files, settings, and subfolders. Think of it as your personal workspace on the computer.

- On **Windows**, your home directory is usually found at: `C:\Users\YourUsername`
- On **MacOS**, your home directory is found at: `/Users/YourUsername`

### Folders and Subfolders

- **Folders** are like drawers in a filing cabinet. They help you organize your files.
- **Subfolders** are folders that exist within other folders. They help you further categorize and organize your files. - You can put subfolders in subfolders. There is no limit to how many levels deep the subfolders go.

## Creating Folders: Windows and MacOS

### Windows Instructions

1. **Create a subfolder for Stats21 in Documents:**
  - Open File Explorer and navigate to a relevant location, like Documents.
  - Right-click anywhere in the white space, choose **New > Folder**.
  - Name the folder whatever you wish, for example: Stats21.
2. **Create subfolders for your homework within Stats21:**
  - Double-click on Stats21 to open it.
  - Right-click inside the Stats21 folder, choose **New > Folder**.
  - Name the first folder homework1.

- Repeat the process to create a second folder named homework2.

## MacOS Instructions

### 1. Create a subfolder for Stats21 in Documents:

- Open Finder and navigate to a relevant location, like Documents.
- Right-click anywhere in the white space, choose **New Folder**.
- Name the folder whatever you wish, for example: Stats21.

### 2. Create subfolders for your homework within Stats21:

- Double-click on Stats21 to open it.
- Right-click inside the Stats21 folder, choose **New Folder**.
- Name the first folder homework1.
- Repeat the process to create a second folder named homework2.

## Folder Structure Diagram

After completing these steps, your folder structure should look like this:

```
Documents/
├── Stats21/
│   ├── homework1/
│   └── homework2/
```

## Avoiding Spaces in Folder and File Names

Using spaces in file or folder names can cause issues, especially when using command-line interfaces or sharing files across different systems. Instead of spaces, use underscores (\_) to separate words (snake case). Another option is to use capital letters and no spaces to separate words (camel case).

**Example:** - Instead of “My Homework”, use “my\_homework” or “MyHomework”.

## Do Not Keep Everything in Your Downloads Folder!

Your **Downloads** folder is like a temporary holding area. It’s easy for files to get lost in the clutter if you keep everything there. Instead, create specific folders and subfolders for different projects or categories. This will make it easier to find and manage your files.

Move files you download from the downloads folder to the subfolders you created.

1. Open File Explorer/Finder and click on **Downloads** in the left pane.
2. Find the file you want to move. Right-click on the file and select **Cut** (or press Ctrl/Command + X). This action will prepare the file to be moved.
3. Navigate to the location you want to move the file Documents > Stats21 > homework1.
4. Paste the File: Right-click anywhere inside the homework1 folder. Press Ctrl/Command + V. Your file will be moved from the Downloads folder to the homework1 folder.

## Command Line Instructions

### Windows Command Line

1. Open the Command Line Interface (CLI) tool:

- Windows: **Open PowerShell:**

- Press Win + R, type powershell, and press Enter.

- MacOS **Open Terminal:**

- Press Command + Space, type Terminal, and press Enter.

2. **Navigate to Documents in your home directory:**

- The command `cd` changes directory.
- The command `cd ~` changes the directory to your home directory.
- The command `cd ~\Documents` changes the directory to the Documents folder within your home directory.

```
cd ~\Documents
```

3. **Create the Stats21 Folder:**

```
mkdir Stats21
```

4. **Create the Subfolders:**

```
cd Stats21
mkdir homework1
mkdir homework2
```