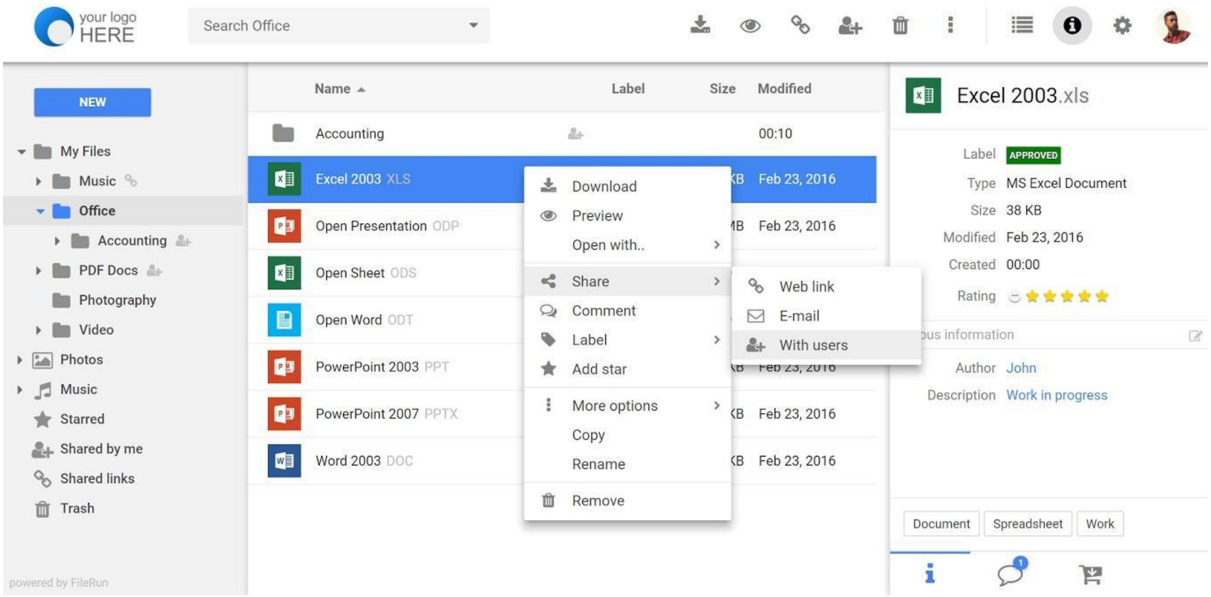
Introduction

In this project you will have to create a **system file explorer** that allows the **user** to **navigate**, **create directories** and **upload files** in the same way as he would in his usual **operating system.** The file explorer is a **tool** that allows you to directly **view and manipulate the files and directories** associated with a **path**, so you must take into account from which **path** the user starts and which path they can access.

In the following image you can see an **example** that can serve as a reference:



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Accounting			00:10
Excel 2003 XLS		KB	Feb 23, 2016
Open Presentation ODP		MB	Feb 23, 2016
Open Sheet ODS			
Open Word ODT			
PowerPoint 2003 PPT		KB	Feb 23, 2016
PowerPoint 2007 PPTX		KB	Feb 23, 2016
Word 2003 DOC		KB	Feb 23, 2016

Excel 2003.xls

Label APPROVED
Type MS Excel Document
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ous information
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Document Spreadsheet Work

What are the main objectives in this project?

- Understand how the **file system works**
- Improve your knowledge in **PHP**
- Improve your knowledge in **HTML**, **CSS** & **Javascript**

- Improve your knowledge in **logic** and **programming**

1. General analysis

First of all, you will have to **analyze the project requirements**, with which you can get an idea of the **project objectives**, then **design the structure** of the application and analyze the **actions** that the user can do so that when **programming** you have clear which are the **keys points** and a previous idea of what the **user interface** will be like .

Step 1: Analyze the project requirements

In the first step you must **analyze** the **requirements** that the **project must meet** and what **actions** the **user** can do.

- **Create**, **modify** and **delete directories**
- **Browse through directories** from an **initial path**
    - The **initial path** will start from a **folder** inside the **project repository** whose name will be "**root**".
- **Search directories** and **files** by **name**
    - In the case of **searching** for **files by name**, you must also be able to specify **their extension as part of the name**.
- **Navigate through the initial path** established and all the folders created from that path. Therefore the **user will not be able** to see or **navigate** to the **parent folders of the “root” folder**.
- **Upload a file** to a directory
- **See** the following **information** of **files** and **directories**
    - Creation date
    - Last Modified Date

    - Extension (if it’s a file)
    - Size
        - If it is less than **1 MB** show **KB**, otherwise show **MB**
- **Show** the **icon** of the main **file extensions** such as:
    - doc
    - csv
    - jpg
    - png
    - txt
    - ppt
    - odt
    - pdf
    - zip
    - rar
    - exe
    - svg
    - mp3
    - mp4
- **View** the uploaded **images**.
- **Play** the uploaded **videos**.
- **Play** the uploaded **audios**.

Step 2: Design the project structure

Before starting to **develop the project** you should take into account and **analyze** the following points:

- How will the **interface** be
  - You will have to **design a wireframe** of your application taking into account the requirements.
- What **actions** can be executed by the user
  - You will have to **design a use case diagram**
- **Analyze** and **understand** what brings more value to the user
- **Analyze** how you will organize the project at the level of **directories** and **files**

Step 3: Start to develop the project

Once you have all the **designs** and **organization** of your **project** raised, you must **start developing it**.

Step 4: Extra functionalities

In addition to the **requirements** mentioned above, you can add the following **extra functionalities** so that the **user is able to**:

- **Show the information** of the uploaded **".csv"** files on the screen.
- **Move files** and **directories between folders**
- When **deleting** a **file** or **folder**, it will be moved to a **specific folder** called "**trash**", so if you want to **delete it completely** you must delete it from the mentioned folder.

2. Project organization

Next you will have to create a document where you can explain in detail how the current project is organized. It is important that it be updated throughout the life of the project. A PDF version is required within the project folder for the project documentation.

The document must include at least:

- Requirements documentation
- Wireframes
- Use case diagram
- Record of incidents that were detected during project execution
- Record of lessons learned

3. Development

Develop the **file system explorer** taking into account its **architecture** and respecting the **frontend** and **backend layers**. It is important that you keep in mind that the **organization** is very important as well as the **documentation** you provide to the project.

4. Requirements

- You **will not be able** to use **global variables** in **PHP**.
- You must use **GIT**

- You must use the **PHP > v8**
- Create a **clear** and **orderly directory structure**
- Both the **code** and the **comments** must be written in **English**
- Use the **camelCase** code style to define variables and functions
- In the case of using **HTML**, **never** use **inline styles**
- In the case of using different programming languages **always define the implementation in separate terms**
- Remember that it is important to **divide the tasks into several sub-tasks** so that in this way you can associate each particular step of the construction with a **specific commit**
- You should try as much as possible that the **commits** and the **planned tasks** are the same
- **Delete files** that are not used or are not necessary to evaluate the project

5. Deliverables

To evaluate the project you will need the following deliveries:

- Forked repository with code: https://github.com/assembler-institute/filesystem-explorer
- You must create a correctly documented README file in the root directory of the project (see guidelines in **Resources**)
- Project documentation in PDF format

- Presentation in PDF format explaining:
  - Comparison of the original design (Wireframe) with the final result of the project
  - Comparison of the use case diagram with the actions that the user can finally perform

- Comparison of the original use case diagram with the final user actions
- What lessons you’ve learned during this project
- What problems have you encountered when developing this project?
- How you have organized and distributed the tasks

6. Resources

- File system: https://es.wikipedia.org/wiki/Administrador_de_archivos
- PHP FileSystem W3C:

  https://www.w3schools.com/php/php_ref_filesystem.asp
- PHP FileSystem [Oficial]:

  https://www.php.net/manual/es/book.filesystem.php
- README Guidelines Example:

  https://gist.github.com/PurpleBooth/109311bb0361f32d87a2

6.1. Wireframes web tools

- Moqups: https://app.moqups.com/
- Draw.io: https://app.diagrams.net/
- Cacoo: https://cacoo.com/es/