

Project Features list:

- User account creation
 - New users must be able to create an account that will be used to manipulate files later on.
- File upload
 - Being able to put compressed files into our cloud system.
- File download
 - Being able to download files from the cloud system that your user account has authorization to read.
- File permission modifications
 - Allow users to provide other users authorization to their files, or to remove this access. This should enable file sharing with a file owner.
- File browsing
 - Allow users to view files with which they have permission to view/download.
- File encryption
 - Encrypt files that are in the cloud in order to protect them from other users who are not owners of them.
- File decryption
 - Be able to decrypt files when the owner or another user with permission to use it wants to use them.
- CLI access
 - Allow users to use their terminal interface in order to perform file manipulations (sharing, uploading, downloading, etc.). No user account manipulations may be performed on this interface.
- GUI Access
 - Allow users to have an in browser method to perform file manipulations which are the same as above. Also this will be the source of user account manipulations.
- Account deletion
 - Allow users to remove their accounts.
- File deletion
 - Allow users to be able to remove a file from the cloud interface.

Functional Requirements:

- **User Account Creation:**
 - Must record a username and password for a given user.

- Create a unique ID for this user that can be used in recording and performing account manipulations.
- **File Upload**
 - Must store file on remote server for user account
 - Must be accessible and visible to user account
- **File Download**
 - Must serve only authorized files to a user account
 - Must serve static file to user instance from remote server.
- **File permission modification**
 - Must be able to add access to files for other users that don't own the file
- **User Account Deletion:**
 - Must remove record of a username and password for a given user.
 - Remove the associated unique ID for this user.
- **File Encryption:**
 - Must store the file in a format unreadable to the server

Nonfunctional Requirements:

- **User Account Creation:**
 - Username only be allowed to consist of letters, numbers, or special characters.
 - Passwords must consist of at least 1 upper-case letter, 1 lower-case letter, and at least 1 number.
- **File upload:**
 - Alert the user that the file was uploaded to remote server
- **File download:**
 - Alert the user where the file was downloaded to
- **File permission modification**
 - Notify the person receiving permissions that they have been added.
 - Notify the file owner of the successful addition.
- **User Account Deletion:**
 - Notify the user with a message that the deletion actions have been performed successfully.
- **File encryption:**
 - Have a secret user key in the user's local environment to decrypt the files for viewing and encrypt the files before going to the remote server.

Project Plan:

Can be found [here](#). This is a kanban chart showing the current status of all of our features and who they are assigned to.

The order of development we are going to try and achieve is:

1. GUI and CLI (10/18/19 - 10/29/19)
2. User Account Creation and File Upload (10/29/19 - 11/4/19)
3. File Compression and File Download (11/4/19 - 11/11/19)
4. File Permission Modification and User Account Deletion (11/11/19 - 11/18/19)
5. File Encryption (11/18/19 - 12/2/19)

The dates for completion of each of these tasks will be on Mondays. The items listed in step 1 will be worked on now until 10/29/19 where they should be functional enough to move on. Step 2 will start once step 1 finishes so at the latest this will be 10/29/19 and run until the following week (11/4/19). Step 3 will follow the same pattern. At the latest it will start on the fourth and it will then be expected to be completed on the 11th. Step 4 will be the same, ending on the 18th. On the final step we will do a two week sprint. This means that work on encryption will start on the 18th and be completed no later than 12/2/19 which is the deadline.