

# Encryption x2

## Product Backlog

### Problem Statement

In this day and age, cybersecurity is at a paramount. As the number of Internet users is continually increasing, so is the number of users who have bad intentions. Therefore, we need a service where you can store files that are important to you securely. Encryption x2 handles that for you by encrypting your uploaded documents, and allowing you to access them only with an access key. Users can also share their encrypted files with other users.

### Background Information

Personal security is a big issue when using computers. There are cases of theft of personal information, sensitive or not. We want to develop a web app that not only allows users to store files remotely, but encrypts them as well. Users can store sensitive data without worrying about confidentiality even if the device is lost. We allow the user to upload their files on our webapp and we take care of the encryption process. We will be using AES 128 bit algorithm which is quite robust and efficient.

### Environment

We will use HTML and VueJS for the front-end and Node.js for the backend. We are using Heroku to host our website, MongoDB for our database to contain all the links, and AWS S3 for cloud storage to store all the files and images.

### Requirements

#### Functional

Backlog ID	Functional Requirements	Hours
1	As a user, I would like to be able to make an account using an email address or a Google account	5
2	As a user, I would like to be able to login through my email or Google account	2
3	As a user, I would like to be able to log out of my account	2
4	As a user, I would like to be able upload files or images	10
5	As a user, I would like to share my files with other users	10
6	As a user, I would like to be able to delete files or images that have been previously uploaded	5

7	As a user, I would like to be able to delete my account from the site	4
8	As a user, I would like to see a list of previously uploaded files.	4
9	As a user, I would like to create a 6 digit passcode to encrypt and decrypt files	4
10	As a user, I would like to be able to set my timeout options for viewing my files.	5
11	As a user, I would like to accept or deny to view a shared file.	10
12	As a user, I would like to be able to change my password	2
13	As a user, I would like to be able to write and create files within the website and store them to my account	5
14	As a user, I would like to be able to download the files and images stored in my account	20
15	As a user, I would like to be able to download the encrypted files and images	5
16	As a user, I would like to have an option to automatically delete the files after specified time	7
17	As a user, I would like to be to add comments to the files and images I have uploaded	3
18	As a user, I would like to be able to find my files and images by searching for the title	5
19	As a user, I would like to be able to sort my files and images by date or title	5
20	As a user, I would like to be able to see all the files and images that I am sharing or are being shared with me	10
21	As a developer, I would like to prevent users from right-clicking files and images	10
22	As a developer, I would like to implement a 3 phase verification before allowing the user to download the file	5
23	As a developer, I would like the link used to view the file on web-app should be encoded	10
24	As a developer, I would like the link used to download the file to be	3

	encoded and should expire after a chosen amount of time	
	Total	161

## Non-functional

Backlog ID	Non-Functional Requirements	Hours
25	As a developer, I would like to be able to inspect and test my code.	100
26	As a user, I would like to have my personal information secured.	5
27	As a user, I would like to be able to navigate through the website easily.	10
28	As a developer, I would like to learn how to use AWS S3	10
29	As a developer, I would like to learn how to use Heroku	10
30	As a developer, I would like to learn how to use Mongo DB	10
31	As a developer, I would like to learn how to use Node.js	10
32	As a developer, I would like to learn how to use Vue.js	10
	Total	165

## Use Cases

### Case: Creating an account

#### Action

1. Select account option
3. Input account credentials
5. Grant access to user if credentials are correct
7. Enter 6-digit access key
8. Provide answer to security question

#### System Response

2. Give user form to input credentials
4. Verify that credentials are correct/valid
6. Prompt user to create 6-digit access key
8. Prompt user to answer security question
9. Store all the credentials in the table

### **Case: Logging In**

#### Action

1. Enter account credentials
2. Gain access to the account

#### System Response

2. Verify if the credentials are correct

### **Case: Logging Out**

#### Action

1. Select the logout button

#### System Response

2. Pull up user login screen

### **Case: Deleting account from website**

#### Action

1. Navigate to account settings page
2. Select the delete account button

#### System Response

3. Logs the user out
4. Removes the account along with the files and images from the database and cloud storage

### **Case: Uploading files and images to account**

#### Action

1. Select the upload button
2. Choose the file/image you would like to upload from your computer

#### System Response

3. Encrypt the file or image with AES encryption
4. Stores the link and file/image to database and cloud storage

### **Case: Deleting files and images from account**

#### Action

1. Select the delete button adjacent that is to be deleted
2. Confirm deletion

#### System Response

3. Remove file from cloud and the link to file that file from the database

### **Case: Sharing files and images with other users**

#### Action

1. Select option to share
3. Enter the user to share with
5. Give that user an option to accept or deny

#### System Response

2. Prompt the user to enter who they would like to share it with
4. Send a notification to that user
6. If they accept, they have access

### **Case: Accept or Deny another user's request to share a file**

#### Action

2. User chooses accept or deny

#### System Response

1. Notify the user when they have a request
- 3.

### **Case: Viewing files and images that were uploaded**

#### Action

1. Navigate to Home Page
2. Select the file to view
3. Enter passcode and select decrypt

#### System Response

4. Verify passcode entered
5. Retrieve encryption key from DB
6. Decrypt file and display file on the page
7. Disable right-click and text select

### **Case: Changing password**

#### Action

1. Navigate to the account settings page
2. Select change password button
3. Input previous password and new password
4. Select submit button

#### System Response

5. Change password attribute from the database
6. Successfully changed password notification appears

### **Case: Downloading the original file**

#### Action

1. Select the download button
3. Enter response to 3-step verification

#### System Response

2. Prompt the user with the 3-step verification
4. Verify responses
5. If responses are correct, begin download

### **Case: Downloading the encrypted file**

#### Action

1. Select the download button next to the file

#### System Response

2. Prepare link for download

### **Case: Creating new text files through the website and storing them to personal account**

#### Action

1. Select the add sign
2. Write text in the space provided

#### System Response

5. Create a text file with the given text user
6. Encrypt file

3. Select Submit

7. Upload file on cloud

**Case: Setting a timer for when to automatically delete file/image**

Action

1. Select option for time to delete

System Response

2. Delete the file at at the selected time

**Case: Adding comments or notes when uploading a file/image**

Action

1. Input comments or notes when uploading file/image  
2. Select submit button to upload file with the written comment

System Response

3. Encrypt the file and store to cloud along with the written comment

**Case: Searching for files/images by inputting title/name**

Action

1. Search by title in search box

System Response

2. Filter files by search parameter

**Case: Sorting the files and images by name or time**

Action

1. Click on Title or Date tab

System Response

2. Changes the main hub and sorts based on selected button

**Case: Viewing all the files/images you are sharing or are being shared to you**

Action

1. Select view shared files checkbox

System Response

2. Changes the main hub and only shows the shared files and images