

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 log out of my account	2
2	As a user, I would like to be able upload files	10
3	As a user, I would like to share my files with other users	10
4	As a user, I would like to be able to delete files that have been previously uploaded	5
5	As a user, I would like to see a list of previously uploaded files.	4
6	As a user, I would like to create a 6 digit passcode to encrypt and decrypt files	4

7	As a user, I would like to be able to set my timeout options for viewing my files.	5
8	As a user, I would like to accept or deny to view a shared file.	10
9	As a user, I would like to have an option to automatically delete the files after specified time	7
10	As a user, I would like to be to add comments to the files I have uploaded	3
11	As a user, I would like to be able to find my files by searching for the title	5
12	As a user, I would like to be able to see all the files that are being shared with me	10
	Total	161

Non-functional

Backlog ID	Non-Functional Requirements	Hours
13	As a developer, I would like to be able to inspect and test my code.	100
14	As a user, I would like to have my personal information secured.	5
15	As a user, I would like to be able to navigate through the website easily.	10
16	As a developer, I would like to learn how to use AWS S3	10
17	As a developer, I would like to learn how to use Heroku	10
18	As a developer, I would like to learn how to use MongoDB	10
19	As a developer, I would like to learn how to use Node.js	10
20	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: Uploading files to account

Action

1. Select the upload button
2. Choose the file 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 to database and cloud storage

Case: Deleting files 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

System Response

2. Prompt the user to enter who they would

- | | |
|---|-------------------------------------|
| 3. Enter the user to share with | like to share it with |
| 5. Give that user an option to accept or deny | 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

System Response

- | | |
|--------------------------------|---|
| 2. User chooses accept or deny | 1. Notify the user when they have a request |
|--------------------------------|---|

Case: Viewing files that were uploaded

Action

System Response

- | | |
|--------------------------------------|--|
| 1. Navigate to Home Page | 4. Verify passcode entered |
| 2. Select the file to view | 5. Retrieve encryption key from DB |
| 3. Enter passcode and select decrypt | 6. Decrypt file and display file on the page |

Case: Adding comments or notes when uploading a file

Action

System Response

- | | |
|---|---|
| 1. Input comments or notes when uploading file | 3. Encrypt the file and store to cloud along with the written comment |
| 2. Select submit button to upload file with the written comment | |

Case: Searching for files by inputting title/name

Action

System Response

- | | |
|----------------------------------|-------------------------------------|
| 1. Search by title in search box | 2. Filter files by search parameter |
|----------------------------------|-------------------------------------|

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

Action

System Response

- | | |
|--------------------------------------|--|
| 1. Select view shared files checkbox | 2. Changes the main hub and only shows the shared files and images |
|--------------------------------------|--|