

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	Status
1	As a user, I would like to be able to make an account using an email address or a Google account	5	In-progress: moved to sprint 2
2	As a user, I would like to be able to login through my email or Google account	2	In-progress: moved to sprint 2
3	As a user, I would like to be able to log out of my account	2	Completed in sprint 1
4	As a user, I would like to be able upload files or images	10	Completed in sprint 1

5	As a user, I would like to share my files with other users	10	Planned for sprint 2
6	As a user, I would like to be able to delete files or images that have been previously uploaded	5	In-progress: moved to sprint 2
7	As a user, I would like to be able to delete my account from the site	4	In-progress: moved to sprint 2
8	As a user, I would like to see a list of previously uploaded files.	4	Complete in sprint 1
9	As a user, I would like to create a 6 digit passcode to encrypt and decrypt files	4	Complete in sprint 1
10	As a user, I would like to be able to set my timeout options for viewing my files.	5	Complete in sprint 1
11	As a user, I would like to accept or deny to view a shared file.	10	Planned for sprint 2
12	As a user, I would like to be able to change my password	2	Planned for sprint 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	Planned for sprint 2
14	As a user, I would like to be able to download the files and images stored in my account	20	Planned for sprint 2
15	As a user, I would like to be able to download the encrypted files and images	5	Planned for sprint 2
16	As a user, I would like to have an option to automatically delete the files after specified time	7	Planned for sprint 2
17	As a user, I would like to be to add comments to the files and images I have uploaded	3	Completed in sprint 1
18	As a user, I would like to be able to find my files and images by searching for the title	5	Completed in sprint 1
19	As a user, I would like to be able to sort my files and images by date or title	5	Planned for sprint 2
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	Planned for sprint 2

21	As a developer, I would like to prevent users from right-clicking files and images	10	Planned for sprint 2
22	As a developer, I would like to implement a 3 phase verification before allowing the user to download the file	5	Completed in sprint 1
23	As a developer, I would like the link used to view the file on web-app should be encoded	10	In progress: moved to sprint 2
24	As a developer, I would like the link used to download the file to be encoded and should expire after a chosen amount of time	3	Planned for sprint 2
	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 MongoDB	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

System Response

- | | |
|---|--|
| <ol style="list-style-type: none"> 1. Select the delete button adjacent that is to be deleted 2. Confirm deletion | <ol style="list-style-type: none"> 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 fileAction

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 accountAction

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

System Response

5. Create a text file with the given text user
6. Encrypt file
7. Upload file on cloud

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

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/imageAction

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/nameAction

1. Search by title in search box

System Response

2. Filter files by search parameter

Case: Sorting the files and images by name or timeAction

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 youAction

1. Select view shared files checkbox

System Response

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