[**https://lucid.app/lucidchart/662465c1-b324-4d00-8b89-0809bfae846f/edit?viewport\_loc=-253%2C210%2C1824%2C987%2C0\_0&invitationId=inv\_63c7a63e-db35-43e0-b1aa-9c30c1b45c57**](https://lucid.app/lucidchart/662465c1-b324-4d00-8b89-0809bfae846f/edit?viewport_loc=-253%2C210%2C1824%2C987%2C0_0&invitationId=inv_63c7a63e-db35-43e0-b1aa-9c30c1b45c57)

**Registration System Functionalities:**

1. Allow users to create an account from the start page
2. Implement a user-friendly registration form with necessary fields such as first/last name, username, email, and password
3. Validate user inputs for error handling
4. Add domain-specific email verification to confirm user identity
5. Utilize an encryption algorithm for storing and protecting user credentials
6. Generate unique user identifiers
7. Provide users with a confirmation message upon successful registration

*User Story*: As a new user, I want to be able to create an account from the start page. This means using a simple registration form with my first and last name, username, email, and password, ensuring my details are validated for accuracy and completeness. I also expect to receive a unique user identifier for seamless interaction within the system.

Requirement 1: Enable User Registration

Data Points:

* Start page with a visible button to create an account
* User-friendly registration form with fields for first name, last name, chosen username, email, and password
* UI elements for entering necessary information

Logic Breakdown:

* Implement a button or link on the start page labeled "Create Account" to initiate the registration process
* Design an intuitive and user-friendly UI registration form with fields for first name, last name, chosen username, email, and password
* Ensure the UI is responsive and accessible
* Perform validation for fields like email to ensure correct format
* Include appropriate labels, placeholders, and validation messages to guide users in providing accurate information

Requirement 2: Validate User Inputs and Email Verification

Data Points:

* Validation checks for each input field
* Error messages for invalid inputs
* Highlighted or marked fields with errors
* Email verification link/token
* Confirmation message

Logic Breakdown:

* Implement input validation checks for accuracy and completeness
* Display clear error messages for users and visually highlight error fields
* Send a verification email with a unique link/token to the provided email address
* Implement a mechanism to validate the email link/token
* Confirm user identity through the email link/token and display a confirmation message

Requirement 3: Utilize an encryption algorithm for storing user credentials

Data Points:

* Encrypted user passwords
* Hashed password storage in the database
* Encrypted API keys

Logic Breakdown:

* Employ a secure encryption algorithm bcrypt to hash and store user passwords
* Ensure that plain-text passwords are not stored in the database
* Generate strong and unique API keys for each user using a secure random number generator

Requirement 4: Generate Unique User Identifiers and Confirmation

Data Points:

* Unique user ID
* Confirmation message
* Redirect to the login page

Logic Breakdown:

* Develop a system for generating unique user identifiers during the registration process
* Display a confirmation message upon successful registration
* Redirect users to the login page for seamless transition

**Login System Functionalities:**

1. Allow users to log into their account if already registered
2. Develop a secure login page with fields for username or email and password
3. Clearly communicate reasons for login failure, such as incorrect username/email, password
4. Utilize HTTPS secure authentication to ensure data encryption
5. Implement a "Remember Me" option by generating a session or web token to match the user identifier
6. Provide users with a logout option after a successful login

*User Story*: As a registered user, I want to be able to log into my account. This means using a user-friendly login page equipped with fields for entering either my username or email along with my password. In case of any login errors, I anticipate clear communication, specifying reasons such as an incorrect username/email or password. The implementation of a "Remember Me" option, would be helpful for future sessions. After a successful login, I want a visible logout option.

Requirement 1: Enable User Login

Data Points:

* Access to login after successful registration
* Secure login page with fields for username/email and password
* "Remember Me" option
* Logout option

Logic Breakdown:

* Allow users to log into their account if already registered
* Develop a secure login page with input fields for both username/email and password
* Implement a "Remember Me" option by generating a session or web token to match the user identifier
* Provide a visible logout option after a successful login

Requirement 2: Communicate Login Failure and HTTPS Encryption

Data Points:

* Clear communication for login failure reasons (incorrect username/email, password)
* Highlighted or marked fields with errors
* Utilization of HTTPS secure authentication for data encryption

Logic Breakdown:

* Clearly communicate reasons for login failure, specifying if it's due to an incorrect username/email or password
* Display clear error messages for users and visually highlight error fields
* Implement HTTPS secure authentication to ensure the encryption of data during the login process

**Password Management System Functionalities:**

1. Store passwords using standard hashing algorithms
2. Guide users with providing with a password complexity and criteria options
3. Allow users to reset their password from the login and their account page
4. Add a secure password reset page with fields for username or email
5. Implement a password reset flow with a reset link sent to the user’s email
6. Suggest users to set up security questions during the registration process for a secondary method of a password reset

*User Story*: As a user who forgot the password, I want to be able to reset it either from the login or my account page. It should allow me to input my username or email and have the reset link sent. Having a prompt during registration to set up security questions for a secondary method of password would be useful. Additionally, it would be helpful to view the suggestions on complexity and criteria in order to create a password.

Requirement 1: Password Management and Complexity Guidelines

Data Points:

* Password complexity and criteria guidelines/suggestions
* Password reset option from login and account page
* Security questions for a secondary method of password reset

Logic Breakdown:

* Implement a user interface that guides users on password complexity and criteria during password creation
* Provide suggestions and prompts to help users create strong and secure passwords
* Enable password reset functionality from both the login and the account page
* Implement security questions as secondary method for password reset

Requirement 2: Password Reset and Security Questions

Data Points:

* Secure password reset page with fields for username or email
* Password reset flow with a reset link sent to the user's email
* Prompt during registration to set up security questions
* Secondary method for password reset using security questions

Logic Breakdown:

* Design a secure password reset page containing fields for username or email
* Implement a password reset flow that involves sending a reset link to the user's email for security verification
* Prompt users during the registration process to set up security questions
* Create a secondary method for password reset, allowing users to answer security questions if they forget their password

**Profile Creation System Functionalities:**

1. Enable users to create profiles
2. Ensure a visually appealing and user-friendly interface for a profile page
3. Design a step-by-step profile creation wizard with intuitive navigation and clear instructions
4. Allow users to add a brief interactive bio
5. Provide an option for users to upload a profile picture
6. Integrate tooltips and contextual guidance through helpful suggestions or prompts to assist with a comprehensive and understanding profile creation

*User Story*: As a new user, I want to be able to create a profile page. The step-by-step wizard, with intuitive navigation and clear instructions would guide me through the process. I would appreciate the option to add a brief interactive bio and the ability to upload a profile picture enhancing the visual appeal of my profile. The integration of tooltips and contextual guidance would help me ensure that I can create a comprehensive profile, with helpful suggestions and prompts at every step.

Requirement 1: Enable User Profile Creation with Wizard

Data Points:

* Accessible option to create a profile
* Step-by-step profile creation wizard
* Intuitive navigation
* Clear instructions

Logic Breakdown:

* Implement a visible and accessible option for users to create a profile
* Design a step-by-step wizard with intuitive navigation for a seamless user experience
* Provide clear instructions at each step to guide users through the profile creation process
* Integrate tooltips and contextual guidance through helpful suggestions or prompts to assist with a comprehensive and understanding profile creation

Requirement 2: Design of the Profile Page

Data Points:

* Visually appealing profile page
* User-friendly interface
* Option to add a brief interactive bio
* Option to upload a profile picture

Logic Breakdown:

* Design the profile page with a visually appealing layout
* Ensure the interface is user-friendly, allowing easy interaction and navigation
* Include an option for users to add a brief, interactive bio to personalize their profiles
* Allow users to upload a profile picture for enhanced look

**Profile Editing System Functionalities:**

1. Allow users to easily update and modify their profiles
2. Implement user appropriate editable fields for profile details
3. Ensure synchronization of edited information to the user's profile page
4. Enable users to view and revert to previous versions of their profiles
5. Provide options for setting certain information as public, private, or visible to others

*User Story*: As a user, I want to be able to easily update and modify my profile. The synchronization of edited information to my profile page is likely to be essential for a reflection of changes. Having the ability to view and revert to previous versions of my profile would be very useful. The option to set specific information as public or private to others allows me to tailor my profile's visibility.

Requirement 1: Enable Profile Editing

Data Points:

* User-friendly interface for profile editing
* Editable fields for profile details
* Synchronization of edited information to the user's profile page

Logic Breakdown:

* Implement a user-friendly interface that allows users to easily update and modify their profiles
* Include editable fields for profile details, ensuring a seamless editing experience
* Ensure the edited information is synchronized into the user's profile page

Requirement 2: Customization of the Profile

Data Points:

* View and revert to previous versions of profiles
* Options for setting information as public, private, or visible to others

Logic Breakdown:

* Provide users with the ability to view and revery to the previous versions of their profiles
* Enable users to customize the visibility of specific profile information
* Implement options to set certain details as public, private, or visible to others

**Personal/Academic Information Management System Functionalities:**

1. Allow users to showcase their personal & academic background on their profile
2. Implement customizable fields for users to input personal information such as their interesting facts and contact details
3. Include fields for users to input academic details such as major, graduation year, and academic & extracurricular activities
4. Enable users to link academic projects or publications to their profiles

*User Story*: As a user, I aspire to present a view of my personal and academic information on my profile. It should allow me to input data with customizable fields for interesting facts and contact details. Additionally, I can input key academic details, such as major, graduation year, and my involvement in various academic and extracurricular activities. Having the capability to link academic projects and publications to my profile would be very useful.

Requirement 1: Personal and Academic Background on User Profiles

Data Points:

* Customizable fields for personal information
* Academic details including major, graduation year, academic & extracurricular activities

Logic Breakdown:

* Implement a user profile feature allowing users to showcase personal and academic backgrounds
* Design customizable fields for users to input personal information, such as interesting facts and contact details
* Include dedicated fields for academic details, covering major, graduation year, and involvement in academic/extracurricular activities

Requirement 2: Customizable Fields for Information

Data Points:

* Interesting facts
* Contact details
* Links to academic projects or publications

Logic Breakdown:

* Include a section for users to input interesting facts about themselves
* Provide fields for users to input and manage their contact details
* Implement a feature that allows users to link academic projects or publications to their profiles