About Project

**Project: Basic Login Authentication System**

**1. Project Overview:**

Create a simple login authentication system using a programming language of your choice (e.g., Python, JavaScript, Java, etc.) that allows users to register, login, and access a secured page.

**2. Requirements:**

- The system should have a user registration feature where users can sign up by providing a username and password.

- The system should store user information securely (avoid storing plain text passwords).

- The system should have a login feature where users can enter their credentials to access the secured page.

- The secured page should only be accessible to logged-in users.

**3. Tools and Technologies:**

- Choose a programming language and any necessary frameworks or libraries for the implementation.

- For beginners, using simple data structures like dictionaries or arrays to store user information might be a good option.

**4. Implementation Steps:**

Here's a general outline of how to approach the implementation:

a. User Registration:

- Create a function or module to handle user registration.

- Prompt the user to enter a username and password.

- Store the user information securely in a data structure (e.g., dictionary, array).

b. Password Encryption:

- Use cryptographic libraries (e.g., bcrypt, hashlib) to hash and salt the user's password before storing it.

- Avoid storing plain text passwords to enhance security.

c. User Login:

- Create a function or module to handle user login.

- Prompt the user to enter their username and password.

- Compare the entered password with the stored hashed password to verify the login.

d. Secured Page:

- Implement a basic secured page that displays a simple message or content to authenticated users only.

**5. Error Handling:**

- Implement proper error handling to handle cases like incorrect login credentials, already registered users, etc.

**6. Testing:**

- Test the system thoroughly to ensure it works as expected, covering both positive and negative scenarios.