README for Chatbot Flask Project

# Required Library Packages

To run this project, you need to install the following Python libraries:  
  
 - Flask: A micro web framework for Python to build the web application.  
 - bcrypt: A library to hash passwords and verify password hashes.  
 - Python: The version used for this project is Python 3.x.  
  
 Install Required Libraries:  
 You can install the required libraries using pip. If you haven't installed them yet, you can run the following command in your terminal:  
  
 pip install Flask bcrypt  
  
 Alternatively, if you are using a virtual environment, make sure it is activated before running the command above.

# How to Run the Project

1. Clone the Repository  
  
 https://github.com/lostinlov/chatbot.git  
  
 2. Set Up the Virtual Environment (Optional but Recommended)  
 Create and activate a virtual environment to keep your dependencies isolated  
  
 3. Install the Required Libraries  
  
 4. Run the Flask Application  
  
 5. Register or Log In  
 Once the Flask application is running, you can:  
 1. Register a new user by visiting /register and filling out the registration form.  
 2. Log in with the credentials (username and password) at /login.  
  
 After logging in, you will be redirected to the chatbot page where you can chat with the bot.  
  
 6. Log Out  
 To log out, click the Log out link, which will take you back to the login page.

# How the Project Works

This Flask application is a simple chatbot that allows users to log in with credentials, interact with a chatbot, and get responses based on their input.  
  
 1. User Registration:  
 - Users can register by providing a unique username and password.  
 - Passwords are securely hashed using bcrypt before they are stored in the "database" (in this case, an in-memory dictionary).  
  
 2. User Login:  
 - Users can log in with their username and password.  
 - The password entered is hashed and checked against the stored hash to authenticate the user.  
  
 3. Chatbot Interaction:  
 - Once logged in, users can interact with a basic chatbot by typing messages.  
 - The chatbot will respond based on pre-defined logic in the chatbot.py file.  
  
 4. Logout:  
 - Users can log out at any time, which will clear their session and redirect them back to the login page.

# Files Included in the Project

1. app.py  
 This is the main Flask application file that handles routing for the web application. It includes:  
 - User registration, login, and logout routes.  
 - A route to interact with the chatbot.  
 - Session management to keep track of logged-in users.  
  
 2. chatbot.py  
 This file contains the chatbot logic. The chatbot is a simple function that takes the user's input and returns a response. You can expand this with more sophisticated logic or integrate external APIs.  
  
 3. templates/  
 This folder contains the HTML templates used by Flask to render the pages:  
 - login.html: The login form page.  
 - register.html: The registration form page.  
 - chat.html: The page where users interact with the chatbot.

# Project Structure

chatbot-flask/  
 ├── app.py # Main Flask application file  
 ├── chatbot.py # Chatbot logic file  
 ├── templates/ # Folder containing HTML templates  
 │ ├── login.html # Login page template  
 │ ├── register.html # Registration page template  
 │ └── chat.html # Chatbot interaction page template  
 └── README.docx

# Troubleshooting

- Error: AttributeError: module 'hashlib' has no attribute 'scrypt'  
 - If you encounter this error, it is likely due to an incompatibility with the version of Python or the hashlib module. Ensure you are using bcrypt instead of hashlib for password hashing. This project uses bcrypt for secure password storage and verification.  
  
 - Issue: Web server not starting  
 - Make sure you have installed all the required libraries.

# Conclusion

This Flask-based chatbot project allows you to handle user authentication (with bcrypt password hashing) and provides a simple interface for interacting with a chatbot. The instructions above should help you set up, run, and understand the project. Thank you for reading.