

Secure Password Generator and Manager

A Python-based desktop application built using **Tkinter** that generates strong and unique passwords and securely manages the user's credentials locally.

Key Features

- **Robust Password Generation:** Automatically creates high-entropy passwords made up of a balanced mix of uppercase letters, lowercase letters, numbers, and special symbols.
- **Local Persistence:** Website credentials are stored in a local text file.
- **Intuitive GUI:** A clean and responsive graphical interface that allows quick input, generation, and saving.
- **Input Integrity:** It has validation checks to make sure key fields like Website and Password are filled before saving.

Getting Started

Requirements

Overview to run this application, you must have:

1. **Python 3.x** installed.
2. The **tkinter** library which generally comes installed with standard Python installations.
3. The **Pillow (PIL)** library to handle images - used for the application logo.

Then, install the necessary external library using pip:

```
pip install Pillow
```

Setup and Implementation

1. Save the main application code, for example as password_generator.py.
2. **Setup Note (Important):** This application uses a locally defined path for the logo image. You will need to edit this image path in the Python script to point to where your logo file is before running.
3. Run the application from your command line:

```
python "password generator.py"
```

User's Guide

1. **Enter Information:** Populate the **Website** and **Email/Username** fields.
2. **Generate Password:** Click the **Generate Password** button. The application will immediately generate a strong password and fill in the Password field.
3. **Save Credentials:** Click the **Add** button.
 - o The application will first validate that the Website and Password fields are not empty.
 - o A confirmation dialog box will appear, asking you to review the credentials before saving.
 - o Upon confirmation, the data is saved to a local file (python project 2 updated.txt) in a pipe-separated format (Website | Email | Password\n).
 - o The Website and Password fields are automatically cleared for the next entry.

Project Details

Category	Detail
Development Status	Complete prototype
Language / Framework	Python / Tkinter

Data Storage	Local Plain Text File (python project 2 updated.txt)
Current Limitation	The storage file is not yet encrypted. Encryption to be implemented in future work.

Contact

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