Secure Password Generator

Overview

The Secure Password Generator program is designed to generate random passwords based on user-specified criteria. The program allows users to select the desired length and character types (e.g., letters, numbers, symbols) for the password. The program then generates a password based on the selected criteria and displays it to the user. Additionally, the program provides an option to copy the generated password to the clipboard.

Program Structure

The program consists of the following components:

1. **Password Criteria Selection**: This component allows users to specify the desired length and character types for the password.

2. **Random Password Generation**: This component generates a password based on the selected criteria.

3. **Display Generated Password**: This component displays the generated password to the user.

4. **Copy to Clipboard**: This component provides an option to copy the generated password to the clipboard.

Program Flow

The program flow is as follows:

1. The user is prompted to select the desired length and character types for the password.

2. The user's input is validated to ensure that the length is a positive integer and the character types are valid.

3. Based on the user's input, a password is generated using a random number generator.

4. The generated password is displayed to the user.

5. The user is provided with an option to copy the generated password to the clipboard.

Key Features

The program has the following key features:

- **Password Criteria Selection**: The program allows users to select the desired length and character types for the password.

- **Random Password Generation**: The program generates a password based on the selected criteria using a random number generator.

- **Display Generated Password**: The program displays the generated password to the user.

- **Copy to Clipboard**: The program provides an option to copy the generated password to the clipboard.

Benefits

The program has the following benefits:

- **Secure Password Generation**: The program generates secure passwords based on user-specified criteria.

- **Easy to Use**: The program is easy to use and provides a simple interface for users to select the desired password criteria.

- **Convenient**: The program provides an option to copy the generated password to the clipboard, making it convenient for users to use the password.

Conclusion

In conclusion, the Secure Password Generator program is a useful tool for generating secure passwords based on user-specified criteria. The program is easy to use, provides a simple interface, and offers a convenient option to copy the generated password to the clipboard.