Title: Random Password Generator

Description:

This Python program generates a random password based on user-specified criteria such as length, complexity level, and character types (uppercase letters, lowercase letters,digits, punctuation).

Functions:

1. generate\_password (length, complexity, uppercase=True, lowercase=True, digits=True, punctuation=True):

- Generates a random password based on the specified length, complexity level, and character types.

- Parameters:

- length: Integer, the length of the password to be generated.

- complexity: String, the complexity level of the password ("easy" or "hard").

- uppercase: Boolean, whether to include uppercase letters in the password (default is True).

- lowercase: Boolean, whether to include lowercase letters in the password (default is True).

- digits: Boolean, whether to include digits in the password (default is True).

- punctuation: Boolean, whether to include punctuation characters in the password (default is True).

- Returns:

- String, the randomly generated password.

2. ask\_yes\_no\_question(question):

- Helper function that asks the user a yes/no question.

- Parameters:

- question: String, the question to ask the user.

- Returns:

- Boolean, True if the user responds with 'y' or 'yes', False if the user responds with 'n' or 'no'.

Usage:

1. Input the desired length of the password.

2. Input the complexity level ("easy" or "hard").

3. Answer the questions to include uppercase letters, lowercase letters, digits, and punctuation in the password based on the complexity level.

4. The program generates and displays the random password based on the specified criteria.

Example:

Enter the length of the password: 12

Enter the complexity level (easy/hard): hard

Include uppercase letters? (y/n): y

Include lowercase letters? (y/n): y

Include digits? (y/n): y

Include punctuation? (y/n): n

Generated Password: 1X2n9A3o1i0z

Notes:

- The password length must be a positive integer.

- At least one character type (uppercase, lowercase, digits, punctuation) must be selected for the password generation.

- The program validates user input to ensure that the complexity level is either "easy" or "hard".