Password generator program in these we are including some functions,parameters,in these program we define the password length,it should be fully alphabets or digits and special symbols are too included in these password generator.

**1. Function Definition:**

generate\_password: This function creates a password of a specified length, incorporating user preferences for character types:

***Parameters:***

length (int): Desired length of the password.

use\_uppercase (bool): Include uppercase letters if True.

use\_digits (bool): Include digits if True.

use\_symbols (bool): Include special characters if True.

***Returns:***

A randomly generated password as a string.

***Raises:***

ValueError: If the length is less than 1 or if no character sets are selected.

**2. Character Pool Initialization:**

The function starts with a base pool of lowercase letters.

It conditionally extends this pool with uppercase letters, digits, and special characters based on user preferences.

If no character types are selected, it raises a ValueError.

**3. Password Generation:**

- The function constructs the password by randomly selecting characters from the assembled pool until reaching the desired length.

**4. Main Program Execution:**

The script prompts the user to input:

-Desired password length.

Preferences for including uppercase letters, digits, and symbols.

It then calls generate\_password with these parameters and displays the resulting password.

The program includes error handling to manage invalid inputs gracefully.

This program offers a straightforward method for users to create customized random passwords, enhancing security by allowing the inclusion of various character types.