```
import random
import string

def welcome():
    print("=== Welcome to the Secure Password Generator ===")
    print("You can customize your password's length and character types.")
    print("_____")

def get_user_preferences():
    while True:
        try:
            length = int(input("Enter the desired password length (minimum 6): "))
            if length < 6:
                print("Password should be at least 6 characters long for better security.")
                continue
            break
        except ValueError:
            print("Please enter a valid number.")

    print("\nSelect character types to include in your password:")
    include_lower = input("Include lowercase letters? (p/o): ").lower() == 'p'
    include_upper = input("Include uppercase letters? (p/o): ").lower() == 'p'
    include_digits = input("Include digits? (p/o): ").lower() == 'p'
    include_symbols = input("Include special characters? (p/o): ").lower() == 'p'

    if not any([include_lower, include_upper, include_digits, include_symbols]):
        print(" At least one character type must be selected. Try again.")
        return get_user_preferences()

    return length, include_lower, include_upper, include_digits, include_symbols

def generate_password(length, lower, upper, digits, symbols):
    char_pool = ''
    if lower:
        char_pool += string.ascii_lowercase
    if upper:
        char_pool += string.ascii_uppercase
    if digits:
        char_pool += string.digits
    if symbols:
        char_pool += string.punctuation

    if not char_pool:
        return "Error: No character types selected."



    password = []
    if lower:
        password.append(random.choice(string.ascii_lowercase))
    if upper:
        password.append(random.choice(string.ascii_uppercase))
    if digits:
        password.append(random.choice(string.digits))
    if symbols:
        password.append(random.choice(string.punctuation))

    remaining_length = length - len(password)
    password += random.choices(char_pool, k=remaining_length)

    random.shuffle(password)
    return ''.join(password)

def check_strength(password):
    print("\nAnalyzing Password Strength...")
    score = 0
    if any(c.islower() for c in password): score += 1
    if any(c.isupper() for c in password): score += 1
    if any(c.isdigit() for c in password): score += 1
    if any(c in string.punctuation for c in password): score += 1
    if len(password) >= 12: score += 1

    if score <= 2:
        print("Weak password")
    elif score == 3:
        print("Moderate password")
    else:
        print("Strong password"
```



```
def main():
    welcome()
```

```
        length, lower, upper, digits, symbols = get_user_preferences()
        password = generate_password(length, lower, upper, digits, symbols)
        print("\nGenerated Password:", password)
        check_strength(password)
        print("_____________________________________________________________")

    if __name__ == "__main__":
        main()
```

```
=== Welcome to the Secure Password Generator ===
You can customize your password's length and character types.
_____________________________________________________________
Enter the desired password length (minimum 6): 12

Select character types to include in your password:
Include lowercase letters? (p/o): p
Include uppercase letters? (p/o): p
Include digits? (p/o): p
Include special characters? (p/o): p

Generated Password: h>Q7.IWyL2%;

Analyzing Password Strength...
Strong password
_____________________________________________________________
```