

Project 1

Project Description: Website Sign-Up

In this project, you will write a program that prompts a user to sign up for a website. The user must come up with a username and password, then log in using the username and password.

There are requirements for both the username and password. If **either one** doesn't meet the requirements, print an appropriate error message and ask the user for a new username and password.

If they are both valid, store them as variables. Then ask the user to log in using the username and password they chose.



Username Requirements

Inform the user of these requirements. The username must:

- Follow all the Python conventions for a variable name. It must start with a lowercase letter and only contain letters, numbers, and underscores.
- Not be in a list of taken usernames. This list will be given to you.
- Taken usernames = 'admin', 'admin123', 'superuser', 'superuser123'

If the username doesn't meet these requirements, print either "Invalid username" or "Username taken" based on the context, and continue looping.



Password Requirements

Inform the user of these requirements. The password must be:

- At least 8 characters long
- Contains at least one uppercase letter
- Contains at least one lowercase letter
- Contains at least one digit
- Contains at least one of these characters: !, ?, @, #, \$, ^, &, *, _, -
- Doesn't contain any spaces

If the password doesn't meet the requirements, print the message “Invalid password” and continue looping.



Logging In

Once the user has created a valid username and password, print “Sign up successful”.

Now, prompt them to log in. Ask them to enter their username and password.

If either one doesn't match, print “Incorrect username or password” and continue looping.

Otherwise, print “Login successful” and end the program.



Sample Program Run

```
To sign up, enter a username and password.  
The username must start with a lowercase letter and only contain letters, numbers, and underscores.  
The password must be at least 8 characters long, contain at least one uppercase letter, contain at least  
one lowercase letter, contain at least one digit, contain at least one special character, and not have any spaces.  
Username: user2  
Password: !Abc&Def7  
Username taken  
Username: user26  
Password: 123  
Invalid password.  
Username: S p a c e s  
Password: !Abc&Def7  
Invalid username.  
Username: user26  
Password: !Abc&Def7  
Sign up successful.  
Please log in, using your username and password.  
Username: user2  
Password: !Abc&Def7  
Incorrect username or password.  
Username: user26  
Password: !Abc&Def7  
Login successful.
```



Work Time