

Name: Rohit Ingole

Project Title: Cyber Security Project - Password Strength Checker

Project Overview:

This project checks the strength of a password based on specific security rules.

It ensures the password includes uppercase, lowercase, numeric, and special characters, and is at least 8 characters long.

Technologies Used:

- Python
- Regular Expressions (re module)

Code Explanation (Step-by-Step):

1. Import the 're' module to use regular expressions.
2. Define a function `check_password_strength`` which takes a password as input.
3. Check the length of the password.
4. Use regex to validate if the password contains:
 - At least one lowercase character
 - At least one uppercase character
 - At least one digit
 - At least one special character
5. Return whether the password is weak or strong.
6. Take user input and display the result.

Sample Output:

Input: Abc123@#

Output: Strong: Your password is secure!

```
import re

def check_password_strength(password):
    if len(password) < 8:
        return "Weak: Password should be at least 8 characters long."
    if not re.search("[a-z]", password):
        return "Weak: Add at least one lowercase letter."
    if not re.search("[A-Z]", password):
        return "Weak: Add at least one uppercase letter."
    if not re.search("[0-9]", password):
        return "Weak: Add at least one number."
    if not re.search("[!@#$%^&*(),.?\\\":{}|<>]", password):
        return "Weak: Add at least one special character."
    return "Strong: Your password is secure!"

# Test it
user_password = input("Enter your password: ")
result = check_password_strength(user_password)
print(result)
```