import re

def is\_valid\_password(password):

if len(password) < 8:

return False, "Password must be at least 8 characters long"

if not re.search(r"\d", password):

return False, "Password must contain at least one digit"

if not re.search(r"[!@#$%^&\*(),.?\":{}|<>`]", password):

return False, "Password must contain at least one special character"

return True, "Password is valid"

def test\_passwords():

valid\_passwords = ["abc123@", "mypassword1", "Pass123!"]

invalid\_passwords = ["abc123", "abc12345","abc123@"]

for password in valid\_passwords:

assert valid, f"Valid password {password} failed validation: {msg}"

for password in invalid\_passwords:

assert not valid, f"Invalid password {password} passed validation"

if \_\_name\_\_ == "\_\_main\_\_":