**3.Test Case: Login Window Testing**

users\_db = {

"user1": {"password": "pass123", "attempts": 0, "locked": False},

"user2": {"password": "mypassword", "attempts": 0, "locked": False}

}

MAX\_ATTEMPTS = 3

def login(username, password):

if username == "" or password == "":

return "Error: Username and password cannot be empty!"

if username not in users\_db:

return "Error: Username does not exist!"

user\_data = users\_db[username]

if user\_data['locked']:

return "Error: Account is locked due to multiple failed login attempts."

if user\_data["password"] == password:

users\_db[username]["attempts"] = 0

return "Login successful!"

else:

users\_db[username]["attempts"] += 1

if users\_db[username]["attempts"] >= MAX\_ATTEMPTS:

users\_db[username]["locked"] = True

return "Error: Account locked due to too many failed login attempts."

return "Error: Invalid credentials!"

def forgot\_password():

return "Redirecting to forgot password page..."

def run\_test\_cases():

print("\nTest Case 1: Successful login")

print(login("user1", "pass123"))

print("\nTest Case 2: Invalid credentials")

print(login("user1", "wrongpassword"))

print("\nTest Case 3: Empty field handling")

print(login("", ""))

print("\nTest Case 4: Account lockout after 3 failed attempts")

print(login("user1", "wrongpassword"))

print(login("user1", "wrongpassword"))

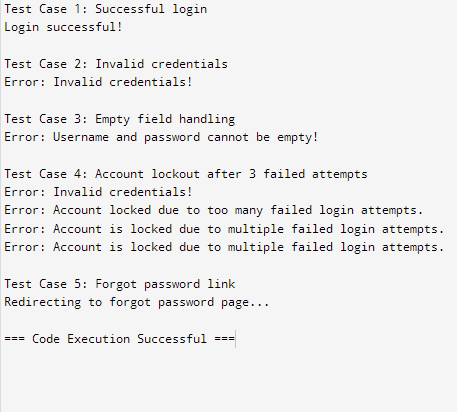
print(login("user1", "wrongpassword"))

print(login("user1", "pass123"))

print("\nTest Case 5: Forgot password link")

print(forgot\_password())

run\_test\_cases()



**6. WebDriver commands**

1. get(String URL)

driver.get("https://www.example.com");

2. findElement(By locator)

WebElement element = driver.findElement(By.id("username"));

3. sendKeys(String value)

element.sendKeys("myUsername");

4. click()

button.click();

5. getTitle()

String title = driver.getTitle();

System.out.println(title);

6. getCurrentUrl()

String url = driver.getCurrentUrl();

System.out.println(url);

7. close()

driver.close();

8. quit()

driver.quit();

9.getText()

String text = element.getText();

System.out.println(text);

10. getAttribute(String attributeName)

String attributeValue = element.getAttribute("src");

System.out.println(attributeValue);

**7. navigate to different URLs**

from selenium import webdriver

from selenium.webdriver.common.by import By

import time

driver = webdriver.Chrome(executable\_path='path/to/chromedriver')

try:

url1 = "https://www.google.com"

search\_query1 = "selenium"

driver.get(url1)

time.sleep(2)

search\_box = driver.find\_element(By.NAME, "q")

search\_box.send\_keys(search\_query1)

search\_box.submit()

time.sleep(5)

print("Test Case 1: Search Results for 'selenium' on Google")

print(driver.current\_url)

url2 = "https://www.amazon.com"

driver.get(url2)

time.sleep(2)

print("Test Case 2: Navigated to Amazon")

print(driver.current\_url)

initial\_url = "https://www.example.com"

target\_url = "https://www.seleniumhq.org"

driver.get(initial\_url)

time.sleep(2)

driver.get(target\_url)

time.sleep(5)

print("Test Case 3: Redirected to Selenium HQ")

print(driver.current\_url)

finally:

driver.quit()

**output:**

Test Case 1: Search Results for 'selenium' on Google

<https://www.google.com/search?q=selenium>

Test Case 2: Navigated to Amazon

<https://www.amazon.com/>

Test Case 3: Redirected to Selenium HQ

<https://www.seleniumhq.org/>

**8. conditional command implementations**

def check\_number\_sign(number):

if number > 0:

return f"The number {number} is positive."

elif number < 0:

return f"The number {number} is negative."

else:

return f"The number {number} is zero."

def can\_vote(age):

if age >= 18:

return "You are eligible to vote."

else:

return "You are not eligible to vote."

def validate\_access(username, password):

correct\_username = "admin"

correct\_password = "pass123"

if username == correct\_username and password == correct\_password:

return "Access granted."

else:

return "Access denied."

def main():

print("Choose a test case to run:")

print("1. Check if a number is positive or negative")

print("2. Determine if a person can vote based on age")

print("3. Validate user access based on credentials")

choice = int(input("Enter the test case number (1, 2, or 3): "))

if choice == 1:

number = int(input("Enter a number: "))

print(check\_number\_sign(number))

elif choice == 2:

age = int(input("Enter your age: "))

print(can\_vote(age))

elif choice == 3:

username = input("Enter your username: ")

password = input("Enter your password: ")

print(validate\_access(username, password))

else:

print("Invalid choice. Please select 1, 2, or 3.")

# Run the main function

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

main()

**OUTPUT:**

**Sample Run 1: Check if a number is positive or negative**

Choose a test case to run:

1. Check if a number is positive or negative

2. Determine if a person can vote based on age

3. Validate user access based on credentials

Enter the test case number (1, 2, or 3): 1

Enter a number: 5

The number 5 is positive.

**Sample Run 2: Determine if a person can vote based on age**Choose a test case to run:

1. Check if a number is positive or negative

2. Determine if a person can vote based on age

3. Validate user access based on credentials

Enter the test case number (1, 2, or 3): 2

Enter your age: 16

You are not eligible to vote.

**Sample Run 3: Validate user access based on credentials**

Choose a test case to run:

1. Check if a number is positive or negative

2. Determine if a person can vote based on age

3. Validate user access based on credentials

Enter the test case number (1, 2, or 3): 3

Enter your username: admin

Enter your password: pass123

Access granted.

**9.Automation testing for web applications**

from selenium import webdriver

from selenium.webdriver.common.by import By

from selenium.common.exceptions import NoSuchElementException

import time

application\_url = "https://sample-webapp-url.com/login"

valid\_username = "testuser"

valid\_password = "testpassword"

welcome\_message\_text = "Welcome, testuser!"

driver = webdriver.Chrome(executable\_path="/path/to/chromedriver")

try:

driver.get(application\_url)

username\_field = driver.find\_element(By.ID, "username")

password\_field = driver.find\_element(By.ID, "password")

username\_field.send\_keys(valid\_username)

password\_field.send\_keys(valid\_password)

login\_button = driver.find\_element(By.ID, "loginButton")

login\_button.click()

time.sleep(3)

try:

welcome\_message = driver.find\_element(By.XPATH, f"//\*[contains(text(), '{welcome\_message\_text}')]")

if welcome\_message:

print("Test Passed: Login successful, welcome message found.")

else:

print("Test Failed: Welcome message not found.")

except NoSuchElementException:

print("Test Failed: Welcome message not found.")

except Exception as e:

print(f"Test Failed: {e}")

finally:

driver.quit()

**Expected Output:**

**Successful Login Scenario:**  
Test Passed: Login successful, welcome message found.

**Unsuccessful Login Scenario:**

Test Failed: Welcome message not found.

**Error Handling Scenario**:

Test Failed: <error\_message>