POSTGRADUATE STUDY "Software Tester" WSB Merito University in Warsaw

Mobile App Testing with Appium



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Project Goal

Automation of tests to ensure effective and repeatable testing.

Tester's name	Application under test
Anna Pawełek	Headspace

Environment

Emulator: eSMART

Android: 13

Android Studio Flamingo 2022.2.1

Appium Doctor 1.16.2

Android Debug Bridge 1.0.41

Appium 1.22.3

Appium Inspector 2023.4.3

Node 18.16.0

Npm 9.6.5

Python 3.11.3

Java 19.0.1

PyCharm Community Edition 2023.1

Android Studio Flamingo 2022.2.1

Test Scenario

Account Registration via Email

Mandatory fields of the registration form:

- First name
- Last name
- E-mail address
- Password

Password requirements:

Consists of 8+ characters and at least 3 of the following:

- 1 lowercase letter
- 1 capital letter
- 1 digit
- 1 special character

Test Cases

ID	Test Case Name			
TC_REGISTRATION_1_0	Account registration using a blank form			
TC_REGISTRATION_1_1	Account registration using a password consisting of 1 uppercase letter,			
	lowercase letters, 1 number, 1 special character			
TC_REGISTRATION_1_2	Account registration using a password consisting of 1 uppercase letter,			
	lowercase letters, 1 number			
TC_REGISTRATION_1_3	Account registration using a password consisting of 1 uppercase letter,			
	lowercase letters, 1 special			
TC_REGISTRATION_1_4	Account registration using a password consisting of lowercase letters, 1 digit, 1			
	special character			
TC_REGISTRATION_1_5	Account registration using a password consisting of uppercase letters, 1 digit, 1			
	special character			
TC_REGISTRATION_1_6	Account registration using a too short password			

ID: TC REGISTRATION 1 0 - Account registration using a blank form

Preconditions:

The environment is set, the application is installed on the emulator. The user is not logged in.

Action:

- 1 Open the Headspace app on the emulator.
- 2 Click "Continue with email".
- 3 Leave all the fields blank.
- 4 Click "Create an account".

Expected result:

The account is not created.

ID: TC_REGISTRATION_1_1 - Account registration using a password consisting of 1 uppercase letter, lowercase letters, 1 number, 1 special character

Preconditions:

The environment is set, the application is installed on the emulator. The user is not logged in.

Action:

- 1 Open the Headspace app on the emulator.
- 2 Click "Continue with email".
- 3 Enter a valid name in first name field.
- 4 Enter a valid last name in last name field.
- 5 Enter a valid email in the email address field.
- 6. Enter a valid password in the password field.
- 7. Click "Create an account".

Expected result:

The account is created.

ID: TC_REGISTRATION_1_2 - Account registration using a password consisting of 1 uppercase letter, lowercase letters, 1 number

Preconditions:

The environment is set, the application is installed on the emulator. The user is not logged in.

Action:

- 1 Open the Headspace app on the emulator.
- 2 Click "Continue with email".
- 3 Enter a valid name in first name field.
- 4 Enter a valid last name in last name field.
- 5 Enter a valid email in the email address field.
- 6. Enter a valid password in the password field.
- 7. Click "Create an account".

Expected result:

The account is created.

ID: TC_REGISTRATION_1_3 - Account registration using a password consisting of 1 uppercase letter, lowercase letters, 1 special character

Preconditions:

The environment is set, the application is installed on the emulator. The user is not logged in.

Action:

- 1 Open the Headspace app on the emulator.
- 2 Click "Continue with email".
- 3 Enter a valid name in first name field.
- 4 Enter a valid last name in last name field.
- 5 Enter a valid email in the email address field.
- 6. Enter a valid password in the password field.
- 7. Click "Create an account".

Expected result:

The account is created.

ID: TC_REGISTRATION_1_4 - Account registration using a password consisting of lowercase letters, 1 digit, 1 special character

Preconditions:

The environment is set, the application is installed on the emulator. The user is not logged in.

Action:

- 1 Open the Headspace app on the emulator.
- 2 Click "Continue with email".
- 3 Enter a valid name in first name field.
- 4 Enter a valid last name in last name field.
- 5 Enter a valid email in the email address field.
- 6. Enter a valid password in the password field.
- 7. Click "Create an account".

Expected result:

The account is created.

ID: TC_REGISTRATION_1_5 - Account registration using a password consisting of uppercase letters, 1 digit, 1 special character

Preconditions:

The environment is set, the application is installed on the emulator. The user is not logged in.

Action:

- 1 Open the Headspace app on the emulator.
- 2 Click "Continue with email".
- 3 Enter a valid name in first name field.
- 4 Enter a valid last name in last name field.
- 5 Enter a valid email in the email address field.
- 6. Enter a valid password in the password field.
- 7. Click "Create an account".

Expected result:

The account is created.

Preconditions:

The environment is set, the application is installed on the emulator. The user is not logged in.

Action

- 1 Open the Headspace app on the emulator.
- 2 Click "Continue with email".
- 3 Enter a valid name in first name field.
- 4 Enter a valid last name in last name field.
- 5 Enter a valid email in the email address field.
- 6. Enter too short password (max 7 characters) in the password field.
- 7. Click "Create an account".

Expected result:

The account is not created.

Link to the recording of the test execution: https://vimeo.com/865577235/5c064b4d87?share=copy

```
💏 test_tc_registration.py 🤇
       import unittest
       from appium import webdriver
       from appium.webdriver.common.appiumby import AppiumBy
       from customLogger.custom_logger import customLogger as cl
      class RegistrationTest(unittest.TestCase):
           def setUp(self):
               desired_caps = {}
               desired_caps['platformName'] = 'Android'
               desired_caps['platformVersion'] = '13'
               desired_caps['deviceName'] = 'eSMART'
               desired_caps['appPackage'] = 'com.getsomeheadspace.android'
               desired_caps['appActivity'] = '.splash.SplashActivity'
               desired_caps['automationName'] = 'UiAutomator2'
               desired_caps['uiautomator2ServerLaunchTimeout'] = 200000
               desired_caps['uiautomator2ServerInstallTimeout'] = 200000
               desired_caps['appWaitForLaunch'] = 'false'
               desired_caps['unicodeKeyboard'] = True
               desired_caps['resetKeyboard'] = True
               localAppiumUrl = 'http://127.0.0.1:4723/wd/hub'
               self.driver = webdriver.Remote(localAppiumUrl, desired_caps)
               log = cl()
```

```
log.info("Launched the app")
def tearDown(self):
    self.driver.quit()
def test_registration_1_0_blank_fields(self):
    continueWithEmail = "com.getsomeheadspace.android:id/continueWithEmailButton" # id
    signUpPageTitle = "com.getsomeheadspace.android:id/titleTextView" # id
    isThePasswordCorrect = "//android.widget.ImageView[@index='1']" # xpath
   self.driver.implicitly_wait(35)
    element = self.driver.find_element(AppiumBy.ID, continueWithEmail)
    element.click()
    log = cl()
    log.infb("Clicked the Continue with email button")
```

```
signUpPageTitle = "com.getsomeheadspace.android:id/titleTextView" # id
firstName = "com.getsomeheadspace.android:id/firstNameEditText" # id
lastName = "com.getsomeheadspace.android:id/lastNameEditText" # id
emailAddress = "com.getsomeheadspace.android:id/emailEditText" # id
password = "com.getsomeheadspace.android:id/passwordEditText" # id
isThePasswordCorrect = "//android.widget.ImageView[@index='1']" # xpath
firstNameValue = "Sheldon"
lastNameValue = "Cooper"
emailAddressValue = "sc@imaginary.com"
passwordValue = "P@sswor1"
self.driver.implicitly_wait(35)
element = self.driver.find_element(AppiumBy.ID, continueWithEmail)
element.click()
log = cl()
log.info("Clicked the Continue with email button")
element = self.driver.find_element(AppiumBy.ID, signUpPageTitle)
self.assertTrue(element.is_displayed())
```

```
# taking a screenshot

# taking a screenshot | "C:/Users/shade/PycharmProjects/pythonProject/AppiumProject/screenshots"

# saving a comment about the status of the executed step

log.info("Took the TC_1_1_SingUpPageConfirmation.png")

# saving a comment about the status of the executed step

log.info("Sing Up page opened")

# locating the first name field

element = self.driver.find_element(AppiumBy.ID, firstName)

# clicking the first name field

element.click()

# saving a comment about the status of the executed step

log.info("Clicked the First name field")

# entering the first name

element.send_keys(firstNameValue)

# saving a comment about the status of the executed step

log.info("First name entered")

# saving a comment about the status of the executed step

log.info("First name entered")

# saving a comment about the status of the executed step

log.info("First name entered")

# saving a comment about the status of the executed step

log.info("First name entered")

# saving a comment about the status of the executed step

log.info("First name field

element = self.driver.find_element(AppiumBy.ID, lastName)

# saving a comment about the status of the executed step

log.info("Clicked the Last name field

element.click()

# saving a comment about the status of the executed step

log.info("Clicked the Last name field)
```

```
# entering the last name
element.send_keys(lastNameValue)
log.info("Last name entered")
element = self.driver.find_element(AppiumBy.ID, emailAddress)
# clicking the email address field
element.click()
log.info("Clicked the Email address field")
element.send_keys(emailAddressValue)
log.info("Email address entered")
element = self.driver.find_element(AppiumBy.ID, password)
element.click()
log.info("Clicked the Password field")
```

```
lastName = "com.getsomeheadspace.android:id/lastNameEditText" # id
emailAddress = "com.getsomeheadspace.android:id/emailEditText" # id
password = "com.getsomeheadspace.android:id/passwordEditText" # id
isThePasswordCorrect = "//android.widget.ImageView[@index='1']" # xpath
emailAddressValue = "hw@blabla.com"
firstNameValue = "Howard"
lastNameValue = "Wolowitz"
passwordValue = "Passwor1"
self.driver.implicitly_wait(35)
element = self.driver.find_element(AppiumBy.ID, continueWithEmail)
element.click()
log = cl()
log.info("Clicked the Continue with email button")
element = self.driver.find_element(AppiumBy.ID, signUpPageTitle)
self.assertTrue(element.is_displayed())
```

```
element.send_keys(lastNameValue)
log.info("Last name entered")
# locating the email address field
element = self.driver.find_element(AppiumBy.ID, emailAddress)
element.click()
log.info("Clicked the Email address field")
element.send_keys(emailAddressValue)
log.info("Email address entered")
element = self.driver.find_element(AppiumBy.ID, password)
element.click()
log.info("Clicked the Password field")
# entering the password
element.send_keys(passwordValue)
```

```
element = self.driver.find_element(AppiumBy.XPATH, isThePasswordCorrect)
       self.assertTrue(element.is_displayed())
       self.driver.save_screenshot("C:/Users/shade/PycharmProjects/pythonProject/AppiumProject/screenshots"
\tt def\ test\_registration\_1\_3\_passwordContaining\_1upperCaseCharacter\_lowerCaseCharacters\_1specialCharacter(self):
   signUpPageTitle = "com.getsomeheadspace.android:id/titleTextView" # id
   emailAddress = "com.getsomeheadspace.android:id/emailEditText" # id
    isThePasswordCorrect = "//android.widget.ImageView[@index='1']" # xpath
    firstNameValue = "Leonard"
    lastNameValue = "Hofstadter"
    passwordValue = "P@ssword"
    self.driver.implicitly_wait(35)
    element = self.driver.find_element(AppiumBy.ID, continueWithEmail)
    element.click()
    log = cl()
    element = self.driver.find_element(AppiumBy.ID, signUpPageTitle)
    self.assertTrue(element.is_displayed())
```

```
log.info("Took the TC_1_3_SingUpPageConfirmation screenshot")
log.info("Sing Up page opened")
element = self.driver.find_element(AppiumBy.ID, firstName)
# clicking the first name field
element.click()
log.info("Clicked the First name field")
element.send_keys(firstNameValue)
log.info("First name entered")
element = self.driver.find_element(AppiumBy.ID, lastName)
element.click()
log.info("Clicked the Last name field")
element.send_keys(lastNameValue)
```

```
# saving a comment about the status of the executed step
                log.info("Last name entered")
                element = self.driver.find_element(AppiumBy.ID, emailAddress)
                element.click()
                log.info("Clicked the Email address field")
                # entering the email address
                element.send_keys(emailAddressValue)
                # saving a comment about the status of the executed step
                log.info("Email address entered")
                # locating the password field
                element = self.driver.find_element(AppiumBy.ID, password)
                # clicking the password field
                element.click()
                log.info("Clicked the Password field")
                element.send_keys(passwordValue)
433
```

```
element = self.driver.find_element(AppiumBy.XPATH, isThePasswordCorrect)
        self.assertTrue(element.is_displayed())
def test_registration_1_4_passwordContaining_lowerCaseCharacters_1number_1specialCharacter(self):
   signUpPageTitle = "com.getsomeheadspace.android:id/titleTextView" # id
   firstName = "com.getsomeheadspace.android:id/firstNameEditText" # id
   emailAddress = "com.getsomeheadspace.android:id/emailEditText" # id
    emailAddressValue = "penny@hof.com"
    firstNameValue = "Penny"
    lastNameValue = "Hofstadter"
    self.driver.implicitly_wait(35)
    element = self.driver.find_element(AppiumBy.ID, continueWithEmail)
    log = cl()
    element = self.driver.find_element(AppiumBy.ID, signUpPageTitle)
    self.assertTrue(element.is_displayed())
```

```
log.info("Took the TC_1_4_SingUpPageConfirmation screenshot
                log.info("Sing Up page opened")
                element = self.driver.find_element(AppiumBy.ID, firstName)
                element.click()
                # saving a comment about the status of the executed step
                log.info("Clicked the First name field")
                # entering the first name
                element.send_keys(firstNameValue)
                log.info("First name entered")
                # locating the last name field
                element = self.driver.find_element(AppiumBy.ID, lastName)
                # clicking the last name field
                element.click()
                log.info("Clicked the Last name field")
                element.send_keys(lastNameValue)
526
```

```
log.info("Last name entered")
                # locating the email address field
                element = self.driver.find_element(AppiumBy.ID, emailAddress)
                element.click()
                log.info("Clicked the Email address field")
                # entering the email address
                element.send_keys(emailAddressValue)
                log.info("Email address entered")
                # locating the password field
                element = self.driver.find_element(AppiumBy.ID, password)
                # clicking the password field
                element.click()
                log.info("Clicked the Password field")
                # entering the password
                element.send_keys(passwordValue)
                # saving a comment about the status of the executed step
557
                log.info("Password entered")
```

```
element = self.driver.find_element(AppiumBy.XPATH, isThePasswordCorrect)
       self.assertTrue(element.is_displayed())
def test_registration_1_5_passwordContaining_upperCaseCharacters_1number_1specialCharacter(self):
   signUpPageTitle = "com.getsomeheadspace.android:id/titleTextView" # id
   emailAddress = "com.getsomeheadspace.android:id/emailEditText'
     emailAddressValue = "rajesh@imaginary.in"
     self.driver.implicitly_wait(35)
     element = self.driver.find_element(AppiumBy.ID, continueWithEmail)
     element.click()
     log.info("Clicked the Continue with email button")
     element = self.driver.find_element(AppiumBy.ID, signUpPageTitle)
     self.assertTrue(element.is_displayed())
     self.driver.save_screenshot("C:/Users/shade/PycharmProjects/pythonProject/AppiumProject/screenshots"
     log.ihfo("Took the TC_1_5_SingUpPageConfirmation screenshot")
     log.info("Sing Up page opened")
```

```
element = self.driver.find_element(AppiumBy.ID, firstName)
element.click()
log.info("Clicked the First name field")
element.send_keys(firstNameValue)
log.info("First name entered")
element = self.driver.find_element(AppiumBy.ID, lastName)
element.click()
log.info("Clicked the Last name field")
element.send_keys(lastNameValue)
log.info("Last name entered")
```

```
# locating the email address field
element = self.driver.find_element(AppiumBy.ID, emailAddress)

# clicking the email address field
element.click()

# saving a comment about the status of the executed step
log.info("Clicked the Email address field")

# entering the email address
element.send_keys(emailAddressValue)

# saving a comment about the status of the executed step
log.info("Email address element.send_keys(emailAddressValue)

# saving a comment about the status of the executed step
log.info("Email address entered")

# locating the password field
element = self.driver.find_element(AppiumBy.ID, password)

# clicking the password field
element.click()

# saving a comment about the status of the executed step
log.info("Clicked the Password field")

# saving a comment about the status of the executed step
log.info("Clicked the Password field")

# saving a comment about the status of the executed step
log.info("Password element.send_keys(passwordValue)

# saving a comment about the status of the executed step
log.info("Password entered")

# locating the isThePasswordCorrect indicator and checking if the password is correct or not
```

```
element = self.driver.find_element(AppiumBy.XPATH, isThePasswordCorrect)
        log.info("Password is not correct, an account cannot be created")
       self.driver.save_screenshot("C:/Users/shade/PycharmProjects/pythonProject/AppiumProject/screenshots"
def test_registration_1_6_too_short_password(self):
   signUpPageTitle = "com.getsomeheadspace.android:id/titleTextView" # id
   firstName = "com.getsomeheadspace.android:id/firstNameEditText" # id
   lastName = "com.getsomeheadspace.android:id/lastNameEditText" # id
   emailAddress = "com.getsomeheadspace.android:id/emailEditText" # id
   password = "com.getsomeheadspace.android:id/passwordEditText" # id
   isThePasswordCorrect = "//android.widget.ImageView[@index='1']" #xpath
   emailAddressValue = "bmaryann@rost.com"
    lastNameValue = "Rostenkowski"
    passwordValue = "P@sswo1"
    self.driver.implicitly_wait(35)
    element = self.driver.find_element(AppiumBy.ID, continueWithEmail)
    element.click()
    log = cl()
    log.info("Clicked the Continue with email button")
    element = self.driver.find_element(AppiumBy.ID, signUpPageTitle)
    self.assertTrue(element.is_displayed())
    self.driver.save_screenshot("C:/Users/shade/PycharmProjects/pythonProject/AppiumProject/screenshots"
    log.info("Took the TC_1_6_SingUpPageConfirmation screenshot")
    log.info("Sing Up page opened")
```

```
# locating the first name field
                element = self.driver.find_element(AppiumBy.ID, firstName)
                element.click()
                log.info("Clicked the First name field")
                element.send_keys(firstNameValue)
                log.info("First name entered")
                # locating the last name field
                element = self.driver.find_element(AppiumBy.ID, lastName)
                element.click()
                # saving a comment about the status of the executed step
                log.info("Clicked the Last name field")
                # entering the last name
                element.send_keys(lastNameValue)
                log.info("Last name entered")
774
```

```
element = self.driver.find_element(AppiumBy.ID, emailAddress)
         element.click()
         element.send_keys(emailAddressValue)
         element = self.driver.find_element(AppiumBy.ID, password)
         element.click()
         log.info("Clicked the Password field")
         element.send_keys(passwordValue)
         log.info("Password entered")
           element = self.driver.find_element(AppiumBy.XPATH, isThePasswordCorrect)
           self.assertFalse(element.is_displayed())
if __name__ == '__main__':
```

Test Results

ID	TEST CASE	TEST DATA	EXPECTED RESULT	TEST RESULT
TC_REGISTRATION_1_0	Account registration using a blank form	none	The account is not created.	PASS
TC_REGISTRATION_1_1	Account registration using a password consisting of 1 uppercase letter, lowercase letters, 1 number, 1 special character	Sheldon Cooper sc@imaginary.com P@sswor1	The account is created.	PASS
TC_REGISTRATION_1_2	Account registration using a password consisting of 1 uppercase letter, lowercase letters, 1 number	Howard Wolowitz hw@blabla.com Passwor1	The account is created.	PASS
TC_REGISTRATION_1_3	Account registration using a password consisting of 1 uppercase letter, lowercase letters, 1 special character	Leonard Hofstadter leonard@hofstadter.pl P@ssword	The account is created.	PASS
TC_REGISTRATION_1_4	Account registration using a password consisting of lowercase letters, 1 digit, 1 special character	Penny Hofstadter penny@hof.com p@sswor1	The account is created.	FAIL
TC_REGISTRATION_1_5	Account registration using a password consisting of uppercase letters, 1 digit, 1 special character Created:	Rajesh Koothrappali rajesh@imaginary.in P@SSWOR1	The account is created.	FAIL
TC_REGISTRATION_1_6	Account registration using a too short password	Bernadette Mary Ann Rostenkovski bmaryann@rost.com P@sswo1	The account is not created.	PASS

Test Summary

Out of 7 test cases, 5 confirmed the expected result, while 2 had results different from the required ones. Test cases TC_REGISTRATION_1_4 and TC_REGISTRATION_1_5 revealed errors in the application. The errors have been reported in Jira and included in the project documentation.

https://github.com/AniaLaRomana/Tester_Portfolio