

Poznań, 2021-05-21

STUDIA PODYPLOMOWE „Tester Automatyzujący w Selenium”
CDV POZNAŃ

MINI PROJEKT – AUTOMATYZACJA TESTÓW DLA APLIKACJI MOBILNEJ
ANDROID

Cel projektu: Zautomatyzuj wybrane przypadki testowe dla aplikacji mobilnej systemu Android.

Opracowanie przekazane prowadzącemu powinno zawierać:

- Uzupełnioną sekcję: A - do uzupełnienia przez studentów
- B) KOD: Skrypty testowe (pliki .py) w języku Python
- C) Logi

Sprawdził:

mgr inż. Grzegorz Mazur

Opracował/Opracowali:

Marian SKIBIŃSKI

SEKCJA A

Środowisko testowe, dane konfiguracyjne (hardware/software):

System operacyjny komputera:
Ubuntu Linux 20.04.2 LTS, 64-bitowy

Dane o komputerze: Procesor Intel® Core™ i5-6200U CPU @
2.30GHz × 4, 16GB RAM

Testy z wykorzystaniem **emulatora** oraz **urządzenia fizycznego**

Emulator: Pixel 2 5.0 xxhdpi
Wersja mobilnego system operacyjnego na emulatorze:
Android 9.0 Pie x86

Urządzenie fizyczne: SAMSUNG Galaxy A5 (2017) SM-A520F
Wersja mobilnego system operacyjnego na urządzeniu: Android
8.0.0 Oreo dla ARM

java	Android Studio	node.js	npm	appium
Openjdk version "1.8.0_282" OpenJDK Runtime Environment build 1.8.0_282-8u282-b08-0ubuntu1~20.04-b08 OpenJDK 64-Bit Server VM build 25.282-b08, mixed mode	4.1.2	v14.16.0.	6.14.11	1.20.2

appium-doctor	Pycharm	python	pip	Appium Python Client	selenium
v.1.16.0	2021.1 (Community Edition), built on April 6, 2021	3.8.5	21.0.1	1.1.0	3.141.0

Test cases

Detailed information for each test case

Name of the application under test: **ProfMarcin**

Number and name of the test case (the same numbers are placed in the source code as comments before each test method; the names below are the same as the names of their respective test methods in the source code):

1. guessed_word_presents_on_buttons

Steps:

1. Start application
2. Dismiss splash screen
3. Note the words on the buttons

Expected results:

The word properly describing the picture being shown on the screen is present on at least one of the buttons

2. behaviour_after_proper_button_clicked

Steps:

1. Start application
2. Dismiss splash screen
3. Press any button that contains proper word describing the picture

Expected results:

Two (2) additional buttons should appear under the picture. The first one with @ sign, the second one with green right arrow.

All buttons with incorrect words are still seen, but they are disabled.

3. switching_to_settings

Steps:

1. Start application
2. Dismiss splash screen
3. Long press on the picture

Expected results:

New screen should appear. The new screen fully covers the old one.

The new screen should contain checkable elements.

4. clicking_on_At_button

Steps:

1. Start application
2. Dismiss splash screen
3. Remember/note the number of the buttons with words and note the words on them
4. Press any button with proper word describing the picture
5. Wait for the button with @ sign to appear
6. Press the button with @ sign

Expected results:

New buttons with words should appear in place of the previous ones.

The number of the new buttons should be the same as the number of previous buttons.

The words on newly created buttons should be the same as the words on previous buttons. Word order is not important.

All newly created buttons should be enabled.

Guessed word (and picture) should remain unchanged (this can only be checked by software, as the guessed word is printed under the picture in transparent color, so it cannot be seen by the user).

5. moving_to_next_exercise

Steps:

1. Start application
2. Dismiss splash screen
3. Note the number of buttons with words
4. Press any button with proper word describing the picture
5. Wait for the button with green arrow to appear
6. Press the button with green arrow

Expected results:

New buttons with word appeared.

Two (2) buttons under the picture (with @ sign and with green arrow) disappeared.

The number of newly created buttons should be the same as the number of previous ones (the words on new buttons are in most cases different than the words on previous buttons, however they can be the same).

All newly created buttons are enabled.

6. behaviour_after_improper_button_clicked

Steps:

1. Start application
2. Dismiss splash screen
3. Press every button NOT describing the picture

Expected results:

After pressing button(s) in step 3:

- No button appears under the picture.
- All buttons with word are still active

7. increase_level_above_upper_limit

Steps:

1. Start application
2. Dismiss splash screen
3. Go to settings by long touching on the picture
4. Click on the *plus* button (button with „+“ sign) until difficulty level reaches 6
5. Click *once* on the plus button

Expected results:

After pressing *plus* button in step 5, difficulty level is still 6

8. decrease_level_below_lowest_limit

Steps:

1. Start application
2. Dismiss splash screen
3. Go to settings by long touching on the picture
4. Click on the *minus* button (button with „-“ sign) until difficulty level reaches 1
5. Click *once* on the *minus* button

Expected results:

After pressing *minus* button in step 5, difficulty level is still 1

Perform the test No 9 (below) 3 times: for N=1, for N=2, for N=6

9. number_of_buttons_equals_difficulty_level

Steps:

1. Start application
2. Dismiss splash screen
3. Go to settings by long touching on the picture
4. Click on the *minus* or *plus* button (buttons with „-“ or „+“ sign) until difficulty level reaches **N**
5. Return to main screen by pressing Back button on the device

Expected results:

On the main screen there are **N** buttons with words

10. test_switching_to_info_activity

Steps:

1. Start application
2. Dismiss splash screen
3. Go to settings by long touching on the picture
4. Scroll down till *Info* button is seen
5. Click on the *Info* button

Expected results:

New screen should appear. The new screen fully covers the old one. The new screen has „Informacje o aplikacji” text in the action bar.

11. switching_to_main_activity

Steps:

1. Start application
2. Dismiss splash screen
3. Go to settings by long touching on the picture
4. Scroll down till *Info* button is seen
5. Click on the *Info* button
6. Click on the *Start* button

Expected results:

The main screen with picture and buttons with words should appear.

SEKCJA B

KOD: Skrypty testowe (pliki .py) w języku Python

Kod do pobrania/sklonowania z:

https://github.com/mskib77/profMarcin_POM

Testy znajdują się w następujących modułach:

- tests_on_main_activity.py
- tests_on_settings_page.py
- tests_in_info_page.py

Plik z testowaną aplikacją nosi nazwę *ProfMarcin.apk* i znajduje się w katalogu **tests** projektu. Aplikację należy zainstalować na emulatorze lub urządzeniu fizycznym.

Zalecany sposób uruchomienia testów: **python3 suite_raport.py**

Logi z wykonania testów umieszczone zostaną w katalogu **test_results** w domyślnym katalogu projektu jako pliki html.

SEKCJA C

LOGI serwera Appium:

Logi przekazano w formie spakowanego archiwum jako załącznik do maila.

Nazwa załączonego archiwum z logami: *1_Appium_Logs.7z*

Archiwum zawiera 11 plików z logami serwera Appium z poszczególnych testów. Nazwy plików odpowiadają przypadkom testowym i nazwom funkcji testujących. Numery poprzedzające nazwy plików mają za zadanie ułatwić identyfikację przypadku testowego zarówno w kodzie jak i dokumentacji.