TEST PLAN

„Mój TAURON” mobile application

Version 1.0

HISTORY OF CHANGES

Version	Date	Author	Comment
1.0	20.09.2023	Paweł Aksman	Creating the document

METRIC

Document name	Test plan of **Mój TAURON** mobile application
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Contents

1. Document purpose

The purpose of this document is to provide information regarding the organization, conduct of tests and test documentation. The following part of the document will include information regarding:

- test subject
- test subject description
- test elements
- test range
- test design techniques
- test data requirements
- test environment
- test environment requirements
- input/output criteria
- criteria for passing tests
- test termination criteria
- list of tools that will be used during the testing process
- implementation of tests
- test reporting
- roles and responsibilities

At the end of the document there is a test schedule describing the start and end dates of individual tasks.

The document was prepared by the Contractor and submitted to the Ordering Party for approval of this document.

2. Test subject

The subject of the tests is to verify the functionality and conduct non-functional tests of the Tauron mobile application.

3. Description of the test subject

The **"Moj TAURON"** mobile application is prepared for retail customers of the TAURON Group.
Thanks to it, the customer can conveniently manage contracts and invoices and pay bills quickly and safely.
Additionally - if the Customer has a "telerachunek" account - he will be able to provide meter readings using the application. Then, information about the costs of electricity consumption appears immediately.

4. Test elements

Testom funkcjonalnym oraz niefunkcjonalnym podlegać będą:

- graphical user interface
- interactive elements in sections and screens
- login
- reset a password
- change of payer name
- payment filtering
- change the email on the „Szczegóły umowy” screen
- change of telephone number on the „Szczegóły umowy” screen
- change of correspondence address on the „Szczegóły umowy” screen
- copying data on the „Numery kont do wpłaty” screen
- payment function
- invoice download

- filtering archive invoices
- sending meter reading
- menu
- setting notifications on the „Powiadomienia” screen
- quick login settings

5. Scope of tests

Test element	Scope of tests
Graphical user inerface	Usability tests
Interactive elements in sections and screens	Functional tests
	Performance tests
Login	Functional tests
Reset a password	Functional tests
	Security tests
Change of payer name	Functional tests
Payment filtering	Functional tests
Change the email on the „szczegóły umowy” screen	Functional tests
	Security tests
Change of telephone number on the „Szczegóły umowy” screen	Functional tests
	Security tests
Change of correspondence address on the „Szczegóły umowy” screen	Functional tests
Copying data on the „Numery kont do wpłaty” screen	Functional tests
	Performance tests

Payment function	Functional tests
	Performance tests
	Security tests
Invoice download	Functional tests
	Performance tests
Filtering archive invoices	Functional tests
	Performance tests
Sending meter reading	Functional tests
Menu	Functional tests
Setting notifications on the „Powiadomienia” screen	Functional tests
Quick login settings	Functional tests

6. Test design techniques

The following techniques will be used in black box testing

- syntax-based testing
- decision tables
- use cases
- scenarios
- boundary value analysis

The BNF method will be used to test the "First name" and "Last name" fields, which will contain symbols characteristic of Polish spelling. The "Surname" field will include tests to check the system's behavior after entering a two-part surname.

The BNF method will also be used when examining the mobile phone number field, where both the correct number

length and the correctness of the mobile network characteristics will be taken into account.

7. Test Data Requirements

- for testing the email address field in the "Zmień adres e-mail" view, should be included addresses with a large number of characters and correct but very rare addresses
- for „Numer telefonu” field tests should also be included foreign telephone numbers which have differentators which are characteristic for foreign networks

8. Test environment

Two test environments will be used to conduct the tests:

- test environment 1 - desktop device - will contain all the necessary tools needed to automate functional tests and conduct performance and security tests

- test environment 2 - mobile device - will be used to conduct manual non-functional tests including usability testing

Test environment 1

Computer name	DESKTOP-7SD26JU
Operating system	Windows 10 Home 64-bit (10.0, Build 19045) (19041.vb_release.191206-1406)
Language	Polski

System manufacturer	HP
System model	HP 250 G4 Notebook PC
BIOS	F.24 (type: UEFI)
Processor	Intel(R) Pentium(R) CPU N3700 @ 1.60GHz (4 CPUs), ~1.6GHz
Memory	4096MB RAM
Available operating system memory	3938MB RAM
Paging file	4994MB użytych, 4832MB dostępnych
DirectX version	DirectX 12
DxDiag version	10.00.19041.2075 64bit Unicode

Test environment 2

Device name	Xiaomi Redmi 12
MIUI version	MIUI Global 14.0.6 14.0.6(TMXEUXM)
RAM	4.0+2.0 GB
Processor	MediaTek Helio G88 octa-core Max 2.00GHz

Android version	13 TP1A.220624.014
Model	23053RN02Y
Baseband version	MOLY.LR12A.R3.MP.V253.4.P26
Kernel version	4.19.191-perf-g0c0eb75f1890
Space available	90.0 GB
Total memory	128 GB

Additionally, an Internet connection with a speed of 100.0 Mb/s will be provided.

- for test environment 1, the connection will be made via a network cable
- in the case of test environment 2, the connection will be established via WIFI

9. Test environment requirements

- **test environment 1**
  - the latest versions of tools for performing functional automatic tests, performance tests and security tests should be installed or updated
  - a plugin must be installed in the development environment enabling connection to a tool for testing applications on physical devices made available within the device pool

- **test environment**
    - the operating system should be checked regularly for available updates

  In addition, a stable Internet connection must be provided for both test environments to enable all tests to be carried out efficiently

10. Input/Output criteria

The input criteria are:

- test environment configured correctly and as required and ready for testing
- the functionality that is being tested has completed its implementation phase
- in the case of security tests - the client must give written consent to conduct penetration tests

The output criteria are:

- the results of the tests are consistent with the requirements contained in the documentation

11. Criteria for passing the tests

- the graphical user interface meets all the assumptions specified in the usability requirements
- clicking an interactive element takes you to the appropriate section or view
- correct operation of the login function
- correct system behavior after entering incorrect data in the login form
- the system is not susceptible to malicious code injection

- correct operation of the password reset function
- correct system behavior after entering incorrect data in the password change form
- the password reset mechanism does not allow an attacker to change any user's password and thus take over their account
- correct operation of the payer name change function
- proper operation of functions responsible for filtering payments
- correct operation of the e-mail address change function in the "Szczegóły umowy" view.
- the maximum wait time after clicking the button is the same as the time specified in the requirements
- correct system behavior after entering incorrect data in the "Dane osobowe" form
- the system is free from errors in the logic of the discount code handling mechanism
- correct system behavior after entering the correct discount code
- correct system behavior after entering incorrect data in the "Dane do faktury" form.
- proper operation of the functions responsible for changing the correspondence address in the "Szczegóły umowy" view.
- correct operation of the functionalities responsible for copying data in the "Numery kont do wpłaty" view.
- proper operation of functionalities responsible for payment processing
- proper operation of functionalities responsible for filtering archived invoices
- proper operation of the menu
- correct operation of functionalities responsible for notification settings in the "Powiadomienia" view.
- correct operation of functionalities responsible for quick login settings in the "Szybkie logowanie" view.

12.Test completion criteria

The termination criterion was considered to be the moment of tests completion.

13. List of tools that will be used to conduct the tests

The following tools will be used during testing:

LoadRunner	Performance tests
MobSF	Security tests
OWASP ZAP	Security tests
Microsoft Playwright	Test automation
Appium	Test automation
Appium Inspector	Test automation - improving the process of creating and checking automation scripts for mobile applications
InteliJ IDEA	Test autoamation - IDE
AndroidDriver	Test automation – a library for automating tests of mobile applications
Appium Studio	Test automation – a plug-in that allows connection to a tool for testing applications on physical devices
SauceLabs	Cloud application testing
Qase	Test management

Programming languages used during test automation

Appium	Java

14.Tests realization

The date for carrying out individual tests is given in the test schedule attached to the document. The order of test execution follows the order of test cases in individual scenarios. If a negative test result is obtained, the test case will be repeated. If the test fails again, the tester will include information describing the defect in the defect report. This report will also include information regarding the test data used (if any) for testing purposes and the reproduction steps that must be taken to repeat the test.

15.Test reporting

After conducting the tests, the Contractor's representative will provide the Ordering Party with the test results, which will consist of test scenarios implemented during the testing process and automatic test reports in HTML format generated by the ExtentReports tool. If it is not possible to carry out the tests for reasons attributable to the Ordering Party, the Contractor's representative will provide protocols excluding scenarios of unconducted tests.

17.Test schedule

A Gantt chart was used to prepare the test design and execution schedule, which takes into account the division into individual tasks and their timing.