**TEST PLAN OF THE “Кошелёк” APPLICATION**

**TEST PLAN OUTLINE**

*1) Test Plan Identifier*

*2) References*

*3) Introduction*

*4) Test Items*

*5) Software Risk Issues*

*6) Features to be Tested*

*7) Features not to be Tested*

*8) Approach*

*9) Item Pass/Fail Criteria*

*10) Suspension Criteria and Resumption Requirements*

*11) Test Deliverables*

*12) Remaining Test Tasks*

*13) Environmental Needs*

*14) Staffing and Training Needs*

*15) Responsibilities*

*16) Schedule*

*17) Planning Risks and Contingencies*

*18) Approvals*

*19) Glossary*

**1 Test Plan Identifier**

This test plan is the main plan for testing the discount card management function in the “Кошелёк” application. It was assigned the number AA-FDC-01.1.

Kurnosova E. and Tolstik M. were appointed responsible for the development of the test plan.

The approval will be made by Leshko V.

The test plan must be developed and submitted for approval no later than 18.03.2023.

**2 References**

This test plan is related to the following documents:

* The main test plan for the “Кошелёк” application A A-MTP-01.1
* Technical requirements TR-01.03
* IEEE 829 Standards for Development and Testing Processes
* Corporate standards and guidelines \*\*\*\*\*003

**3 Introduction**

This is the main test plan for the discount card management function. In this plan, only those items and elements that are associated with the user's discount cards will be considered.

The document describes the testing methods and approaches that will be used by the testers of the testing department to test the application. The test plan can be used by both testers and managers, developers. The object of testing is an activity aimed at verifying the functionality of the discount card management function in the “Кошелёк” mobile application for Android and iOS operating systems.

The test plan of the project pursues the following goals:

● Identify existing information about the project and software components to be tested.

● Describe the testing strategies to be used.

● Determine the necessary resources to carry out testing work.

● Provide the test results. The results will be sent to the customer in the form of reports. All errors found will be tracked using a bug tracking system.

The estimated timeframe for this project is very tight (seven (7) weeks), so any delays in the development process or in installing and verifying third-party software can have a significant impact on the test plan. Acceptance testing is expected to take two (2) weeks.

**4 Test Items**

The list below lists those elements (use cases, functional requirements, non-functional requirements) that have been identified as testing targets. This list represents what will be tested in the “Кошелёк”application version 7.80.00.

1. Functional testing

Concept document, section 12.2: "The application must add a discount card to the catalog"

Concept document, section 12.2: "The discount card should be displayed after adding".

Document section 12.2: "The application must convert the photo and barcode of the discount card into an icon."

Additional specification, Section 9.3: "The added discount card must be opened and display a barcode to be provided at the point of sale."

Additional specification, section 9.3: "The added discount card can be deleted".

1. User Interface Testing

Check interface compliance with layouts

Section 10 of the concept document: "The application should be simple and understandable to use for a community of users who are computer literate, without additional training in working with the system."

1. Performance testing

Check the configuration time of the discount card photo in the database and the conversion to an icon

Check the opening time of the discount card page.

Concept document, section 12.3: "The system must process photos with a delay of no more than 10 seconds."

Additional specification, Section 7.2: "The system must open the discount card page with a delay of no more than 5 seconds."

1. Configuration testing

Vision document, section 12.2: "The client component of the system must work with Android and iOS."

Additional specification, Section 9.4: "The application must be supported by the following versions:

1. Android versions 12,12.1,13
2. IOS versions 14, 15, 16

Does it work without the Internet

1. Localization testing

When choosing another region, the system should offer discount cards of stores corresponding to this region

Vision document, section 12.2: "The application supports 2 regions: the Russian Federation, the Republic of Belarus"

**5 Software Risk Issues**

The following risks associated with testing the “Кошелёк” application are likely:

|  |  |  |  |
| --- | --- | --- | --- |
| ***Risk*** | ***Priority*** | ***Elimination plan*** | ***Responsible person*** |
| The application will not work without an Internet connection | High | 1. The application was returned to the developer for elimination  2. Сonducting a re-test  3. Сonducting regression testing  4. The testing and development schedule will be pushed back by the appropriate number of days | Test Team Lead |
| The database will process the photo incorrectly and will not form an icon | High | 1. The application was returned to the developer for elimination  2. Сonducting a re-test  3. Сonducting regression testing  4. The testing and development schedule will be pushed back by the appropriate number of days | Test Team Lead |
| The barcode will not pass verification and will not be read in the store | High | 1. The application was returned to the developer for elimination  2. Сonducting a re-test  3. Сonducting regression testing  4. The testing and development schedule will be pushed back by the appropriate number of days | Test Team Lead |
| There are also likely risks from the team (illness) | Normal | 1. Transferring tasks to other employees  2. The testing and development schedule will be pushed back by the appropriate number of days | Test Team Lead |

**6 Features to be Tested**

Below is a list of areas to focus on while testing the application.

A. Adding a discount card.

B. Converting a discount card and barcode from a photo to an icon.

C. The page of an already added discount card opens and displays the card and barcode

D. The card can be deleted

E. The application opens and allows you to open the discount card data without access on the internet

**7 Features not to be Tested**

Below is a list of areas that will not be specifically addressed. All testing in these areas will be indirect as a result of other testing efforts.

A. Installing the application.

Low risk, previously used and considered stable.

B. Registration/authorization

Low risk, previously used and considered stable.

C. Adding a bank card

Low risk, has been used before and is considered stable.

D. Security testing

Conducted by a separate Security Testing Plan PS01-03.23

**8 Approach**

**8.1 Testing levels**

Testing for the function of adding discount cards and managing them in the “Кошелёк” application will consist of levels of modular, system/integration (combined) and acceptance tests.

UNIT testing of the function of adding discount cards and managing them in the “Кошелёк”application will be carried out by a team of testers. Confirmation of unit testing (a list of test cases, examples of output data, information about defects) should be provided to the project manager. All information about unit testing will also be provided to the head of the testing team.

SYSTEM/INTEGRATION testing of the “Кошелёк”application after the addition of the function will be performed by testers with the assistance of developers and business analysts as needed. During SYSTEM testing, we use the end to end testing methodology, check the functionality of the application from the moment the discount card is added to the moment it is provided in the trading junkie, and the possibility of issuing a discount card by selecting from the catalog. INTEGRATION testing checks the ability to export a discount card to the partner store's application.. The application will proceed to system/integration testing after all critical defects are fixed if any show up.

ACCEPTANCE testing of the “Кошелёк”application will be carried out by the customer (or his representatives) within 14 (fourteen) business days. And then the acceptance test will be conducted by the actual end users within one month after the completion of the acceptance process.

The programs will enter acceptance testing after all critical and major defects have been corrected. Before the final completion of the acceptance tests, all open critical and major defects MUST be corrected and checked by the customer's testing representative.

**8.2 The calendar plan of work on testing**

To maximize the coverage of the application with tests, it is supposed to compile checklists and test cases. The software product must pass all scheduled tests. Only in this case you can be sure of its quality.

Work plan

|  |  |  |  |
| --- | --- | --- | --- |
| ***Task*** | ***Time*** | ***Start date*** | ***End date*** |
| Preparation of test plans | 3 days | 09.03.2023 | 13.03.2023 |
| Testing of requirements and terms of reference | 4 days | 14.03.2023 | 17.03.2023 |
| Drawing up checklists and test cases | 12 days | 20.03.2023 | 04.04.2023 |
| Running tests and writing bug reports | 11 days | 05.04.2023 | 18.04.2023 |
| Preparation of a test report | 2 days | 19.04.2023 | 20.04.2023 |

**8.3 Testing tools**

There are no special tools and programs in the “Кошелёк” application to test the function of adding discount cards and managing them. The application is designed for mobile devices and must support the following OS versions:

* Android versions 12,12.1,13
* IOS versions 14, 15, 16

**8.4 Meetings**

The testing team will meet once a week to assess the progress made to date and identify error trends and problems as early as possible. The head of the testing team will also meet with the developers and the project manager once a week. These two meetings will be scheduled on different days. Additional meetings may be convened as needed.

**8.5 Measures and metrics**

The following information will be collected by the testing team at all stages of testing. This information will be provided once a week to the test manager and the project team.

1. Defects in modulus and severity.

2. The source of the defect (requirement, design, code)

3. The time spent on the study of defects is only for critical and serious ones. All minor defects can be summed up together.

4. The number of times the program was sent to the testing team as ready for testing.

5. Defects detected at higher levels that should have been detected at lower levels of testing.

6. The ratio of tests passed and bugs found

**9 Item Pass/Fail Criteria**

The testing process will be completed after the successful addition of discount cards to the user's personal “Кошелёк” , the virtual card will be issued. Also, a prerequisite for successful testing of the application is considered to be a scenario in which the user will be able to use a virtual discount card when buying in a store, including without Internet access.

The application must work in accordance with the requirements and terms of reference. The product must not contain critical and blocking defects in the final version of the application.

**10 Suspension Criteria and Resumption Requirements**

If the function of adding discount cards and managing them in the “Кошелёк” application does not pass smoke tests, testing should be suspended until all critical defects are corrected. Testing in this case will not make any difference, just a waste of resources.

When passing the function of adding discount cards and managing them in the critical path and extended tests “Кошелёк” application, the decision to suspend testing is made only if critical defects are detected. In other cases, testing does not stop, but is carried out taking into account the location of defects.

**11 Test Deliverables**

Acceptance test plan

“Кошелёк” Application Testing Plan

Unit testing plans

Screen Prototypes

Report Layouts

Defect/Incident Reports

Test logs

**12 Remaining Test Tasks**

|  |  |  |
| --- | --- | --- |
| TASK | Assigned To | Status |
| Create an acceptance test plan | TTL, PM, Client |  |
| Create an application test plan | TTL, PM, QA |  |
| Define the rules and procedures for unit testing | TTL, PM, QA |  |
| Testing screen prototypes | Dev, Client, TTL |  |
| Checking report prototypes | Dev, Client, TTL |  |

**13 Environmental Needs**

To support the overall testing efforts at all levels within the project, access to both development systems and the application is required. For development, data collection and testing.

**14 Staffing and Training Needs**

Preferably, two (2) full-time testers are attached to the project for the system/integration and acceptance testing stages of the project. As well as Team Lead for documentation and construction of a work plan.

**15 Responsibilities**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Test Team Lead | Dev Team Lead | Project Manager | Dev  Team | Test  Team | Client |
| Documentation and execution of acceptance tests | х |  | х |  |  | Х |
| Application Testing Plan | х |  | х |  | х |  |
| Define the rules and procedures for unit testing | х |  | х |  | х |  |
| Test procedures and rules | х | х | х |  | х |  |
| Reviews of prototype screens and reports | х | х | х | х | х | х |
| Change control and regression testing | х | х | х | х | х | х |

The Project Manager/testing manager is responsible for all test plans and documentation.

The entire project team will participate in checking the system and detailed projects, as well as in reviewing any change requests that are generated by the user or as a result of defects detected during development and testing.

**16 Schedule**

Project calendar plan of the “Кошелёк” application

|  |  |  |
| --- | --- | --- |
| ***TASK*** | ***Start date*** | ***End date*** |
| Сollecting information about needs | 22.02.2023 | 28.02.2023 |
| Requirements analysis and application design development | 27.02.2023 | 14.03.2023 |
| Development of the code | 14.03.2023 | 20.04.2023 |
| Testing | 09.03.2023 | 20.04.2023 |
| Release application | 21.04.2023 | 21.04.2023 |

As part of the project plan, time was allocated for the following testing activities. Specific dates and times for each type of activity are defined in the schedule of the project plan. The persons required for each process are also detailed in the project timeline and plan. The project manager, together with the heads of the development and testing teams, will coordinate the personnel required for each task, the testing team, the development team, the management and the customer.

A. Verification of the requirements document by the testing team personnel (together with other team members) and initial creation of inventory classes, subclasses and goals.

B. Development of the test master plan by the test manager and testing with time allocated for at least two revisions of the plan.

C. Verification of the project documentation of the system by the personnel of the testing group. This will give the team a clearer understanding of the structure of the application and additionally define inventory classes, subclasses and goals.

D. Development of system/integration and acceptance test plans by the testing manager and other necessary personnel, with time allocated for at least two revisions of the plans.

e. Verification of the documentation(s) on the detailed design by the test team personnel as necessary. This will give the team a clearer understanding of the structure of the individual program and further define inventory classes, subclasses and goals.

F. Unit testing time during development.

G. Time allocated to both system/integration processes and acceptance tests.

**17 Planning Risks and Contingencies**

|  |  |  |  |
| --- | --- | --- | --- |
| ***Risk*** | ***Priority*** | ***Elimination plan*** | ***Responsible person*** |
| Makes changes to the initial requirements or projects | High | 1. The testing and development schedule will be pushed back by the appropriate number of days  2. The number of tests performed will be reduced.  3. The number of permissible defects will be increased. | Kurnosova E. |
| Smoke tests failed | High | 1. The application was returned to the developer for elimination  2. Сonducting a re-test  3. Сonducting regression testing  4. The testing and development schedule will be pushed back by the appropriate number of days | Tolstik M. |
| Critical path test failed | High | 1. The application was returned to the developer for elimination  2. Сonducting a re-test  3. Сonducting regression testing  4. The testing and development schedule will be pushed back by the appropriate number of days | Kurnosova E. |
| Possible sick leave of employees due to the pandemic | Normal | 1. Transferring tasks to other employees  2. The testing and development schedule will be pushed back by the appropriate number of days | Tolstik M. |

**18 Approvals**

|  |  |
| --- | --- |
| Project Sponsor |  |
| Development Management |  |
| Project Manager |  |
| Test Manager |  |
| Development Team Manager |  |
| Reassigned Sales |  |
| Order Entry Team Manager |  |

**19 Glossary**

|  |  |
| --- | --- |
| IEEE 829 | Institute of Electrical and Electronics Engineers |
| iOS | iPhone operating system |
| TTL | Test Team lead |
| Dev Team Lead | Development Team Lead |
| PM | Project Manager |
| Dev | Developer |
| QA | Quality Assurance |