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| IMG_256 | **Project “Post Angels”** |
|  | Project “Post Angels”  Test Plan  **Project Documentation** |
|  | By: Kobylianska Dariia  Cr: 01.03.2024  Mod: |

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| Background | Test Plan is a part of the overall production documentation describing what, when, how and by whom will be tested. |
| Purpose | To identify subsystems, responsible persons, timing of test process and create a testing procedure that can be replicated for each build. |
| Scope | Project testing process |
| Audience | Development Department, Project Management and Quality Assurance Department. |
| Revision History | |  |  |  |  | | --- | --- | --- | --- | | **Version** | **Date** | **Author** | **Reason** | | 1.0 | 01/03 | Dariia Kobylianska | Initial Version | |  |  |  |  | |
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# 1.Introduction

## 1.1 General information

The document describes the testing methods and approaches that will be used by the testers.

The test plan can be used by testers, managers, and developers.

The object of testing is an activity aimed at checking the functionality of the website and mobile platform functions.

A site containing the main functions of the online service.

The test plan includes the purpose, scope, schedule, risks, tools and approach. This document will clearly state what the test results will be and what is considered to be in and out of scope.

## 1.2 Purpose

The purpose of this Test Plan is to describe the process of testing the Ukrainian and English versions of the website on popular versions of browsers in order to:

- determine existing information about the project to be tested;

- describe the testing strategies that will be used;

- determine the necessary resources for testing;

- create test cases/checklists covering scenarios of site use;

- document bugs in the bug-tracking system;

- provide test results.

The results will be sent to the customer in the form of reports. All bugs found will be tracked using the bug tracking system.

## 1.3 Entry and Exit Criteria

Testing can be started if the following conditions are met:

- Readiness of the test platform (user story)

- Completion of the development of the necessary functionality

- Availability of all necessary documentation

- Availability of tested requirements, user stories or models

- Availability of test data and other necessary resources

Testing is completed if the following conditions are met:

- The test result meets the quality criteria

- The requirements for the number of open bugs have been met

- Successful completion of 100% of Smoke testing and 90% of Critical testing cases, provided that 100% of critical and high importance defects are eliminated. The final coverage of requirements by test cases should be at least 80%.

# 2. Project Framework

## 2.1 Site testing area

The scope of site testing includes testing of the following components:

1. Product requirements

2. Site layout

3. Site navigation

4. Categories:

5. Logo

6. Possibility of donation

7. Site design

8. Main page

9. Projects page

10. Partners page

11. Contact form

12. Cookies die

13. Site speed

14. Layout

15. Payment system

The following types of testing will not be used:

1. White box testing

# 3. Work Plan

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| --- | --- | --- |
| **Task** | **Start** | **End** |
| Preparation of the test plan |  |  |
| Coordination of the test plan |  |  |
| Designing test cases/  Check-lists |  |  |
| Performing testing |  |  |
| Reporting |  |  |

# 4. Test Plan and Test Strategy

## 4.1 Test Methods

Manual functional testing – is considered as main method of application testing

## 4.2 Test Types

The main types of testing that will be performed are:

- Static testing: The goal is to check the site for compliance with requirements and documentation.

- Functional testing: The goal is to identify functional errors, inconsistencies with user requirements and expectations through the implementation of test scenarios.

- Positive testing: The goal is to check the correct behavior of the site with valid data in accordance with the technical requirements and documentation.

- Negative testing: The goal is to check the correct behavior of the site with invalid data in accordance with the technical requirements and documentation.

- User interface testing (UI testing): The purpose is to check the compliance of the application with the requirements for the graphical interface.

- Usability testing: The goal is to evaluate the ease of use of the site for a potential user.

- Responsive testing: The goal is to check the optimization of the display of the web page on different screen sizes.

- Gray box testing: The goal is to check HTML, including the compliance of HTML elements with form fields on the site.

- Black box testing: The goal is to analyze the functional or non-functional specification of the site without knowledge of its internal structure.

- Dynamic testing: The goal is to analyze the behavior of the site and its components during their operation.

- Performance testing: The purpose is to check the speed of the website.

- Load testing: The goal is to determine the site's behavior under the expected load level.

- Localization testing: The purpose is to check the site for compliance with language, cultural and/or religious norms.

- Retesting: The goal is to confirm the correction of the error and the operation of the functionality.

- Regression testing: The goal is to check the functionality of the existing functionality and to check for the absence of third-party errors after updating the build.

- Smoke testing: The goal is to check the operation of the most important, critical functions in the system

## 4.3 Bug reports

The testing procedure includes the following points:

- Notification of detected software errors.

- Various aspects of the site under test should be checked.

Information listed in each bug report:

- Product name.

- The browser where the tests were performed with the version specified.

- The system where testing was carried out with the indication of the version.

Each bug report contains the following information about the defect:

- Brief description of the problem.

- Unique defect number.

- The location of the defect in the software product.

- Prerequisites.

- Steps to reproduce the error.

- Software environment.

- Actual result.

- Expected result.

- Seriousness.

- Priority.

- Author.

- Assignment (who should fix the defect).

- Additional information about the defect in the form of attached screenshots or video recordings.

Bug reports are created to provide the development team and the project manager with comprehensive information about the bugs found. They should be useful in determining the causes of errors and their correction.

## 4.4 Bug severity types

The degree of seriousness of errors can be divided into five categories:

- Blocker: Error that blocks the operation. With its appearance, all subsequent work with the program becomes impossible.

- Critical: Critical error. Disrupts the main functionality of the product under test.

- Major: A significant defect. It complicates the operation of the main functionality or makes it impossible to use additional functions.

- Minor: Minor defect. This defect affects the functionality of the system to a relatively small degree or has obvious workarounds, making it difficult to use additional functions.

- Trivial: A trivial defect. Does not affect the functionality of the project, but worsens the general impression of working with the product: typos, grammatical errors, incorrect terminology, etc.

# 5. Test approaches

The project uses a flexible approach with weekly iterations.

Test objects:

- The whole system

- System configurations

- User instructions

Levels of project testing:

- Integration testing (Integration Testing)

- System testing (System Testing)

- Acceptance Testing

Types of testing that we will use on the project:

By object of testing:

- Localization testing (Localization testing)

- Responsive testing (Responsive testing)

- Load testing (Load testing)

Functional types of testing:

- Functional testing (Functional testing)

- User interface testing (GUI Testing)

- Interoperability Testing

Non-functional types of testing:

- Usability Testing

- Performance testing

Types of testing related to changes:

- Smoke testing (Smoke Testing)

- Regression testing (Regression Testing)

- Re-testing

According to the positivity of the scenarios:

- positive testing (Positive testing)

- negative testing (Negative testing)

By operation:

- Static testing (Static testing)

- Dynamic testing

According to system knowledge:

- Black box testing

- Gray box testing

Levels of project testing:

- Integration testing (Integration Testing)

- System testing (System Testing)

- Acceptance Testing

Test design techniques:

- Equivalence Partitioning

- Boundary Value Analysis

- Error Guessing

# 6. Resources

## 6.1 Tools

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| **Process Name** | **Tools** |
| Bug tracking system | Тrello |
| Test cases/ Check-lists | Тrello |
| Image capture | Screenshots / Video capture |
| Performance tetsing | JMeter, DevTools |

## 6.2 Third-Party Components

Browsers approved for verification (including mobile versions):

- Google Chrome

- Mozilla Firefox

- Opera

- Safari

- Microsoft Edge

List of systems approved for inspection:

- Windows

- MacOS

- Android

- IOS

# 7. QA Risk Assessment

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| **Risk Assessment** | **Probability(L/M/H)** | **Resolution** |
| Product changes and modifications that were not planned and discussed in advance with the testing team. | M | In order to reduce the risk of defects, the introduction of new functionality requires coordination with the team of testers. |
| Changes to site requirements that were not previously discussed with the testing team. | L | In order to reduce the risk of defects, the introduction of new functionality requires coordination with the team of testers. |
| Delays in patching/fixing bugs. | L | Implement a streamlined bug tracking and resolution process to ensure that identified bugs are promptly logged, prioritized, assigned, and resolved within the defined timelines. |
| Insufficient number of human resources for testing the program within the established time frame. | M | To reduce the risk of defects, the team decided to increase the number of sprints to reduce the search area for possible defects. |
| Insufficient amount of experience of testers. | H | Provide comprehensive training sessions or workshops to enhance the skills and knowledge of testers, especially in areas where gaps are identified. |

# 8. QA Team Members

## 8.1 QA Team Expectations

The testing team must be provided with valid, up-to-date documentation throughout the testing process.

All necessary equipment, instruments, devices and software must be prepared before the testing process begins. If necessary, trainings were held to teach testers the necessary tools that will be used.

All critical errors must be corrected as soon as possible.

A release note should be added to each release of the test team's product. The note should explain what items, features, and functions have been added to the program and how these additions affect the product.

Developers must fix all critical bugs in software modules before releasing a new version.

## 8.2 Roles and Responsibilities

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| **Assignments** | **Team Members** | **Responsibilities** |
| Project Manager | Olha Ivanova | - Management of the testing process.  - Provision of all necessary resources for testing. |
| QA | Natalia \_\_\_\_\_ | - Collection and study of requirements.  - Documentation check.  - Planning of testing works.  - Control over testing, so that work is carried out according to the plan.  - Reports on progress, number and severity of detected errors.  - Quality control process, registration of detected errors in an approved error tracking system |
| QA | Olena \_\_\_\_ | - Collection and study of requirements.  - Documentation check.  - Planning of testing works.  - Control over testing, so that work is carried out according to the plan.  - Reports on progress, number and severity of detected errors.  - Quality control process, registration of detected errors in an approved error tracking system |

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| QA | Dariia Kobylianska (e-mail: work.kobylianska@gmail.com) | - Collection and study of requirements.  - Documentation check.  - Planning of testing works. |

# 9. Results

The final result of the testing should be a formalized final result of the testing process with described defects, as well as recommendations for improving the product from the end user's point of view.

# 10. Test results reporting

The testing process is carried out according to the SDLC model.

After the testing, the following documentation is provided to the customer:

- Test Plan

- Check lists

- Test cases

- Bug reports

- Test result report

- Test summary report