|  |
| --- |
|  |
| EPAM-EXT\_2021 |

| Related Artifacts | |
| --- | --- |
| Ref. | Name |
| 1 | EPM-SPI\_Summary.doc |
| 2 | EPM-SPI\_TestCases.xlsx |
| 3 | EPM-SPI\_Defect\_build\_2021.xlsx |
| 4 | EPM-SPI\_Defect\_build\_2022.xlsx |
| 5 | EPM-SPI\_TestResultReport\_LSH\_build\_2021.doc |
| 6 | EPM-SPI\_TestResultReport\_LSH\_build\_2022.doc |
| 7 | EPAM-EXT\_2021.side |
| 8 | https://cake64.ru/ |

|  |  |
| --- | --- |
| Abbreviations and Acronyms | |
| CPU | Central processing unit |
| RAM | Random access memory |
| OS | Operating system |
| MS | Microsoft |

Contents

[1 Introduction 3](#_Toc454973702)

[2 Scope of Work 3](#_Toc454973703)

[2.1 Components and Functions to be Tested 3](#_Toc454973704)

[2.2 Components and Functions Not to be Tested 3](#_Toc454973705)

[2.3 Third-Party Components 3](#_Toc454973706)

[3 Quality and Acceptance Criteria 3](#_Toc454973707)

[4 Critical Success Factors 3](#_Toc454973708)

[5 Risk Assessment 3](#_Toc454973709)

[6 Resources 3](#_Toc454973710)

[6.1 Key Project Resources 3](#_Toc454973711)

[6.2 Test Team 3](#_Toc454973712)

[6.3 Test Hardware 3](#_Toc454973713)

[6.4 Test Tools 3](#_Toc454973714)

[7 Test Documentation and Deliverables 3](#_Toc454973715)

[8 Test Strategy 3](#_Toc454973716)

[8.1 Entry Criteria 3](#_Toc454973717)

[8.2 Test Methods 3](#_Toc454973718)

[8.3 Test Types 3](#_Toc454973719)

[8.4 Test Levels 3](#_Toc454973720)

[8.4.1 Smoke Test 3](#_Toc454973721)

[8.4.2 Critical Path Test 3](#_Toc454973722)

[8.4.3 Extended Test 3](#_Toc454973723)

[8.5 Bug and Documentation Tracking 3](#_Toc454973724)

[8.5.1 Bug Severity Definitions 3](#_Toc454973725)

[9 Testing Schedule 3](#_Toc454973726)

[Appendix A. Schema of Test Environment 3](#_Toc454973727)

# Introduction

This document describes the approach and methodologies used by the testing team to plan, organize and perform the testing applications of the EPAM-EXT\_2021.

The project EPAM-EXT\_2021 is the website of the "Ваниль Корица" pastry-shop. The functionality of the website provides information about the pastry-shop, products and the possibility of ordering products.

The EPAM-EXT\_2021 consists of the one web application.

# Scope of Work

## Components and Functions to be Tested

|  |  |  |  |
| --- | --- | --- | --- |
| # | Application/ component name | Function name | Reference |
| 1 | Authorization form | 1. Input fields 2. Authorization 3. Sign out of account |  |
| 2 | Checkout | 1. Adding an item to the cart being authorized 2. Filling in the checkout fields being authorized 3. Adding an item to the cart without authorized 4. Filling in the checkout without authorized |  |
| 3 | Links to social networks | 1. Link to Facebook 2. Link to Google Maps 3. Link to Twitter 4. Link to VK 5. Link to Instagram |  |
| 4 | Search | 1. Product search |  |
| 5 | Home page | 1. Menu button performance |  |
| 6 | Personal account | 1. Opening pages:   “ТЕКУЩИЕ ЗАКАЗЫ”  “ЛИЧНЫЕ ДАННЫЕ”  “ИСТОРИЯ ЗАКАЗОВ”  “КОРЗИНА”  “ПОДПИСКИ”  “КОНТАКТЫ” |  |
| 7 | Page “О КОНДИТЕРСКОЙ” | 1. Opening pages:   “О КОНДИТЕРСКОЙ”  “МЫ ГАРАНТИРУЕМ”  “ПИЩЕВАЯ И ЭНЕРГЕТИЧЕСКАЯ ЦЕННОСТЬ ПРОДУКЦИИ” |  |
| 8 | Page “ТОРТЫ” | 1. Opening pages:   “Каталог тортов”  “Торты и десерты в наличии“  “Виды начинки для тортов“  “Торты на заказ в Саратове”  “Торты на День Рождения“  “Детские торты”  “Свадебные торты” |  |
| 9 | Page “ДОСТАВКА” | 1. Opening pages:   “ДОСТАВКА”  “ОПЛАТА”  “ВОЗВРАТ ТОВАРА” |  |
| 10 | Page “КАК ЗАКАЗАТЬ” | 1. Opening page “КАК ЗАКАЗАТЬ” |  |
| 11 | Page “ОТЗЫВЫ” | 1. Adding a review |  |
| 12 | Page “ДЕКОР” | 1. Checking video playback |  |
| 13 | Page “КОФЕЙНЯ” | 1. Opening pages:   “Кофейня”  “Кофейня на Некрасова”  “Кофейня на Политехнической” |  |
| 14 | Product page | 1. Enlarging a product photo 2. Product rating 3. Adding a comment |  |

The "Reference" column is empty because there are no requirements. Nothing to refer to.

## Components and Functions Not to be Tested

|  |  |  |  |
| --- | --- | --- | --- |
| # | Application/ component name | Function name | Reference/Comment |
| 1 | Account registration | "Номер телефона" field | There are no phone numbers to test. A work phone number for registration is required. To register an account, must receive SMS |
| 2 | Making an order | "Номер телефона" field in "Покупатель" form | There is no way to place an order. There are no phone numbers to make an order. To place an order, you must receive SMS. Will not be automated |
| 3 | Payment for the order | "Оплата" form | There are no bank cards to check. A working bank card is required to pay for registration.  There is no way to check the payment upon receipt of the order in cash |
| 4 | Quick contact form | Form "Контактные данные" and "Звонок" | There are no phone numbers to check. A work phone number is required to check the quick contact form. Out of scope |
| 5 | Bonus program | Link to bonus program | The functionality of the bonus program is not the functionality of our web application |
| 6 | Mobile version of the website |  | Will not to be tested as there is no set of mobile devices to test |

## Third-Party systems

|  |  |  |  |
| --- | --- | --- | --- |
| # | Component name | Component role | Reference/Comment |
| 1 | Бонус Плюс | Provides loyalty program services (bonus program) | https://bonusplus.pro/ |
| 2 | Яндекс.Карты | Provides the services of indicating the location of pastry shops and coffee shops on the map, choosing a pastry shop or coffee shop on the map when ordering online and displaying user ratings in the “Яндекс.Карты” service | https://yandex.ru/maps/ |
| 3 | YouTube | The site has videos uploaded through the YouTube video hosting. Used on the "ДЕКОР" page | https://www.youtube.com/ |
| 4 | ЮKassа (Яндекс.Касса) | The service allows you to pay online using МИР, VISA, Mastercard and Qiwi Wallet | https://yookassa.ru/ |
| 5 | Facebook | Link to the store page on the social network | https://facebook.com/ |
| 6 | Google Maps | Link to the location of the pastry shop on the map and user reviews. Used in the section "МЫ В СОЦСЕТЯХ" | https://www.google.ru/maps/ |
| 7 | Twitter | Link to the store page on the social network. Used in the section "МЫ В СОЦСЕТЯХ" | https://twitter.com/ |
| 8 | VK | Link to the store page on the social network. Used in the section "МЫ В СОЦСЕТЯХ" | https://vk.com/ |
| 9 | Instagram | Link to the store page on the social network. Used in the section "МЫ В СОЦСЕТЯХ" | https://www.instagram.com/ |

# Quality and Acceptance Criteria

* The product should work according to the requirements and functional specification listed at sections [Scope of work](#_2._Scope_of_work), [References](#_6._References);
* The product bug level should reach the acceptance criteria defined in Contract/Requirements, or if other is not specified, the product should not have bugs with severity Critical and Major to be released for production.

# Critical Success Factors

* Meet a schedule and complete development and testing of all functionality in term.
* Application shouldn’t have known bugs with severity Critical and Major at the time of Final Release.
* Functional requirements do not have last minute changes.

# Risk Assessment

**Agenda:**

|  |  |  |
| --- | --- | --- |
| Grade | Probability | Impact |
| High | The probability of occurrence is high, from 60% or more | Seriously affects the system or product delivery process. Basic functionality not working, or system crash |
| Medium | The probability of occurrence is medium, from 10% to 60% | Medium system impact or product delivery process. Problem with workaround, secondary features do not work properly |
| Low | The probability of occurrence is low, from 0% to 10% | Not seriously system impact or product delivery process. UI issue or cosmetic flaw |

|  |  |  |  |
| --- | --- | --- | --- |
| Risk name | Probability | Impact | Steps to mitigate |
| One tester works on the project. In case of his illness or unexpected absence, there is a risk of a complete stop of the testing process. | Medium | High | Take at least one more tester into the testing team or be able to replace the main tester with another |
| Changing / adding functionality at the last moment | Low | High | A clear and concise description of the tested functionality in the test plan. Communication with the customer throughout the entire product life cycle. Discussion of the area of responsibility and changes in terms. Have a plan of action in case the application is not ready for release |
| Closure of one or more of the coffee shops due to the COVID-19 pandemic | Medium | Medium | Due to the prolonged COVID-19 pandemic and frequent lockdowns, small businesses are suffering huge losses. People have become less likely to use the services of coffee shops. Maintaining a coffee shop may not be practical and in order to keep the core business of a pastry shop, one or more coffee shops may close. Each of the coffee shops has its own section on the site and is covered with tests. |

# Resources

## Key Project Resources

|  |  |  |
| --- | --- | --- |
| # | Project Role | Name, e-mail, location |
| 1 | Project Manager | I. B., [I\_B@epam.com](mailto:I_B@epam.com), Saratov |
| 2 | Project Coordinator, Key Developer | Andrey Mramornov, [andrewmrmrnv@gmail.com](mailto:andrewmrmrnv@gmail.com), Saratov |
| 3 | Test Leader | I. B., [I\_B@epam.com](mailto:I_B@epam.com), Saratov |

## Test Team

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| # | Project Role | Name | Location | Responsibilities |
| 1 | Tester | Andrey Mramornov | Saratov | Summary, test plan, test cases, bug reports, test result reports, functional testing, automated testing, regression testing |

## Test Hardware

Clients:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| # | Role | Resource | Hardware configuration | Software configuration |
| 1 | Testing machine | MYPC-WIN | CPU Intel Core i5-4570, RAM 16gb, memory HDD 500gb | OS Windows 10 Home Edition 19042.1415, Browser Google Chrome 96.0.4664.110 |

## Test Tools

|  |  |  |
| --- | --- | --- |
| # | Tool | Comment |
| 1 | MS Office Word 2016 | For test documentation |
| 2 | MS Office Excel 2016 | For test documentation and functional testing |
| 3 | Selenium IDE 3.17.2 | For automated testing |

# Test Documentation and Deliverables

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| # | Title | Responsible person(s) | Frequency (delivery time) | Method of delivery |
| 1 | Summary | Andrey Mramornov | Once before the testing start | By e-mail |
| 2 | EPAM-EXT\_2021 TestPlan | Andrey Mramornov | Once before the testing start | By e-mail |
| 3 | Pastry-shop “Ваниль Корица” TestCases | Andrey Mramornov | Before the testing start | By e-mail |
| 4 | Bug report for build\_2021 | Andrey Mramornov | Upon finding a bug | By e-mail |
| 5 | Test Result Reports for build\_2021 | Andrey Mramornov | Weekly | By e-mail |
| 6 | Bug report for build\_2022 | Andrey Mramornov | Upon finding a bug | By e-mail |
| 7 | Test Result Reports for build\_2022 | Andrey Mramornov | Weekly | By e-mail |
| 8 | EPAM-EXT\_2021.side file with Smoke Test autotests for Selenium IDE | Andrey Mramornov | Every time before launching a new build | By e-mail |

# Test Strategy

The EPAM-EXT\_2021 applications will be tested using a “black box” approach, which is based on the requirements and functional specification without knowledge of the internal structure or program source code.

## Entry Criteria

The Testing Team may suspend partial or full-testing activities on a given build if any of the following occurs:

* It is impossible to install successfully the new build following the readme.
* There is a fault with a feature that prevents its testing.
* Application does not contain the specified change(s).
* New claimed functionality doesn’t work or works improperly.
* A severe problem has occurred that does not allow testing to continue.
* Development has not corrected the problem(s) that previously suspended testing.
* A new version of the software is available to test.

## Test Methods

Testing is the process of attempting to find discrepancies between the program and its functional specification/ requirements. The goal is to make sure that all functions of the EPAM-EXT\_2021 applications work correctly.

* Manual functional testing – is considered as the main method of the application testing.
* Automated functional testing – smoke test will be performed manually/ automatically using tools described in section [Test Tools](#_8.4_Test_Tools).

## Test Types

### Function Testing

The purpose of functional testing is aimed at checking the correctness of the functionality of the application (the correctness of the implementation of functional requirements).

### Automated Testing

Automated testing is a set of techniques, approaches and tools that allows you to exclude a person from performing some tasks in the testing process. Test cases are partially or completely performed by a special tool.

### Regression Testing

The purpose of regression testing is to verify that the previously functional functionality did not contain errors caused by changes in the application or its operating environment.

### User Interface Testing

User interface testing is the process of testing controls in an application to help ensure that the interface meets the expected performance and functionality.

### Usability Testing

The purpose of regression testing is to investigate how clear the user is how to work with the product, as well as how much he likes to use the product.

## Test Levels

### Smoke Test

*Smoke Test* is performed to quickly assess the readiness of the product for further more deep and thorough testing. It includes testing EPAM-EXT\_2021 applications major functions on the one most often used and consequently most important server/ client configuration.

Smoke Test is performed under OS Windows 10 Home Edition 19042.1415 and browser Google Chrome 96.0.4664.110 client platform at MYPC-WIN. Typical Smoke Test Scenario would include the steps described in the “Smoke Test” section of the Pastry-shop “Ваниль Корица” TestCases for each of EPAM-EXT\_2021application which are referred in section [Test documentation and deliverables](#_9._Test_documentation_and deliverab)**.**

If Smoke Test failed, Testing Team sends notification and suspends testing until corrected version of the product is available.

### Critical Path Test

*Critical Path Test* will be performed after Smoke Test is passed. The goal of the Critical Path Test is to find bugs that could affect the major functionality of the application that is most important for the product users. Critical Path Test will be performed manually according to Pastry-shop “Ваниль Корица” Test Cases document on all platforms to be certified.

### Extended Test

The *Extended Test’*sgoal to find bugs related to the non-typical but still possible and likely usage scenarios (e.g. entering the incorrect data into the fields, boundary testing and so on). Extended Test will be performed both according to test cases and using ad hoc testing scenarios.

* Detailed Test Results Report containing testing process description and results summary will be issued as it specified in section [Test documentation and deliverables](#_9._Test_documentation_and deliverab).

## Bug and Documentation Tracking

Tools described in the section [Test Tools](#_8.3_Test_Tools) will be used for bug reporting and documentation tracking. The bug metrics and statistics will be included in the test results reports.

### Bug Severity Definitions

Critical – Application, component or module crash or are not accessible

Major – Data corruption/loss, a problem in major functionality, no workaround is known.

Medium – A problem with workaround, secondary features do not work properly

Minor – Cosmetic flaw

# Testing Schedule

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| # | Activity | Begin Date | End Date | Assignment | Location | Work content |
| 1 | Summary creation | 14.12.2021 | 14.12.2021 | Andrey Mramornov | Saratov | Creation Summary |
| 2 | Test plan creation | 15.12.2021 | 18.12.2021 | Andrey Mramornov | Saratov | Creation Test plan |
| 3 | Test cases creation | 19.12.2021 | 27.12.2021 | Andrey Mramornov | Saratov | Creation Test cases |
| 4 | Build\_2021 installation | 27.12.2021 | 30.12.2021 | Andrey Mramornov | Saratov | Build installation |
| 5 | Build\_2022 installation | 04.01.2022 | 07.01.2022 | Andrey Mramornov | Saratov | Build installation |
| 5 | Smoke Test execution | Execution every time after a new build |  | Andrey Mramornov | Saratov | Execution of Smoke Test |
| 6 | Critical path Test execution | Execution every time after a new build and after Smoke Test |  | Andrey Mramornov | Saratov | Execution of Critical path Test |
| 7 | Extended Test execution | Execution every time after a new build and after Critical path Test |  | Andrey Mramornov | Saratov | Execution of Extended Test |
| 8 | Bug reports | Execution every time after testing a new build |  | Andrey Mramornov | Saratov |  |
| 9 | Test Result Reports creation | Execution every time after a new build |  | Andrey Mramornov | Saratov |  |

| REVISION HISTORY | | | | | |
| --- | --- | --- | --- | --- | --- |
| Ver. | Description of Change | Author | Date | Approved | |
| Name | Effective Date |
| 1.0 | First version: execution of points 1-5 | Andrey Mramornov | 15-12-2021 |  |  |
| 2.0 | Second version: execution of points 6-8.4 | Andrey Mramornov | 16-12-2021 |  |  |
| 3.0 | Third version: execution of points 8.5-9 | Andrey Mramornov | 17-12-2021 |  |  |
| 4.0 | Final version: correction and revision of points 2.1 and 5 | Andrey Mramornov | 18-12-2021 |  |  |