Contents

[1. Introduction 1](#_Toc451097589)

[1.1. Purpose 1](#_Toc451097590)

[1.2. Goals 1](#_Toc451097591)

[1.3. Scope 1](#_Toc451097592)

[2. Resources and Planning 1](#_Toc451097593)

[2.1. Test Environment 1](#_Toc451097594)

[2.2. Roles and Responsibilities 2](#_Toc451097595)

[2.2.1. Test Manager 2](#_Toc451097596)

[2.2.2. Developers 2](#_Toc451097597)

[2.3. Risks and Contingencies 2](#_Toc451097598)

[2.4. Schedule 2](#_Toc451097599)

[3. Test Approach Strategy 3](#_Toc451097600)

[3.1. Functional Test Strategy 3](#_Toc451097601)

[3.1.1 Features to be tested 3](#_Toc451097602)

[3.2. Integration Test Strategy 3](#_Toc451097603)

[3.2.2. Features to be tested 4](#_Toc451097604)

[3.3. Performance Test Strategy 4](#_Toc451097605)

[3.3.1. Features to be tested 4](#_Toc451097606)

[3.3.2. Features not to be tested 4](#_Toc451097607)

[3.4. UAT Strategy 4](#_Toc451097608)

[3.4.1. Features to be tested 4](#_Toc451097609)

[3.4.2. Features not to be tested 5](#_Toc451097610)

[4. Test Case management 5](#_Toc451097611)

[4.1. Reporting rules 5](#_Toc451097612)

[4.1.1. Bug Reporting 5](#_Toc451097613)

[4.1.2. Bug tracking system 5](#_Toc451097614)

[4.2. Bug Fixing and SLA 6](#_Toc451097615)

[4.3. Deployment 6](#_Toc451097616)

[4.4. Retest 6](#_Toc451097617)

[4.5. Test Deliverables 6](#_Toc451097618)

[4.6. Entry criteria conditions: 6](#_Toc451097619)

[4.7. Exit criteria conditions: 7](#_Toc451097620)

[4.8. Suspension criteria 7](#_Toc451097621)

[4.9. Resumption Criteria: 7](#_Toc451097622)

[4.10. Pass/Fail criteria 7](#_Toc451097623)

# 1. Introduction

## 1.1. Purpose

This document contains high level Test Plan for the High Tech Promodoro Clock project and it supports the following objectives:

Provide brief review of project goals and functionality and identify the components that should be tested;

* Identify the required technical resources;
* Specify team member responsibilities;
* Provide an estimation of test efforts and risks;
* Identify procedures for test execution and reporting;
* List the recommended requirements for test activities (high level);

## 1.2. Goals

The main test goals are to meet user needs and functional specifications required in order the system fully to cover its purpose. Integration should be done between the High Tech Promodoro Clock, Screen, Buzzer and Console.

## 1.3. Scope

High Tech Promodoro Clock will be delivered by Ailiak Solutions and will be integrated with the following systems:

* Buzzer
* Screen
* Console

Based on the above components overview, the following testing will be in scope:

|  |  |
| --- | --- |
| Type | Object of testing |
| Functional Testing | All of the requirements |
| Integration Testing | High Tech Promodoro Clock integration with the external hardware (screen, buzzer, console) |
| Performance Testing | Core Application |
| User Acceptance Testing | User Interface and its functionalities |

# 2. Resources and Planning

This section includes all preparations in pre-testing phase.

## 2.1. Test Environment

The test environment (hardware, software, application configurations and physical arrangements) is set up to enable test preparation and execution.

## 2.2. Roles and Responsibilities

### 2.2.1. Test Manager

* Create a Master Test Plan and a Test Cases documents;
* Create daily test case progress report;
* Create daily issue report;
* Control tests execution;
* Overview of progress;
* Prepare Summary Reports;
* Prepare and perform test activities;
* Analyze the Requirements from the client;
* Prepare Test Cases for different kind of testing;
* Prepare Test Data’s for the test cases;
* Execute the Test Cases;
* Give mandatory information of a defect to developers in order to fix it;

### 2.2.2. Developers

* Help Test specialist in understanding the implemented functionality;
* Debug;
* Write/perform of unit tests;
* Analyze issues and fix bugs.

## 2.3. Risks and Contingencies

The main risks and contingencies are:

* Unexpected project scope expansions;
* Schedule Expansion due to performance optimization if needed;
* Continuous changing business requirements;
* Complexities involved in testing the applications;
* Failure to identify complex functionalities and time required to develop those functionalities;
* Unplanned Test Cases Addition during Test Execution;
* Test environment preparation problems;
* Communication problems between different systems;
* Late delivery of the software.

## 2.4. Schedule

Brief Summary:

|  |  |  |
| --- | --- | --- |
| Activities | Start date | End date |
| Functional Testing | 17.05.16 | 20.05.16 |
| Integration Testing | 20.05.16 | 20.05.16 |
| Performance Testing | 20.05.16 | 20.05.16 |
| User Acceptance Testing | 01.06.16 | 08.05.16 |

# 3. Test Approach Strategy

The following table presents a list of all project components, which will be tested, and corresponding test methods and tools, used for testing.

|  |  |  |  |
| --- | --- | --- | --- |
| Item | Test type | Test method | Tool |
| High Tech Promodoro Clock | Functional Testing | Manual |  |
| High Tech Promodoro Clock | System Integration Testing | Manual |  |
| High Tech Promodoro Clock | Performance Testing | Manual |  |
| High Tech Promodoro Clock | User Acceptance Testing | Manual |  |

## 3.1. Functional Test Strategy

Functional Tests will be performed over all requirements developed by Ailiak Solutions.

### 3.1.1 Features to be tested

The functionality test phase of the project will test all functionalities and business processing areas associated with each of the High Tech Promodoro Clock main functionalities.

## 3.2. Integration Test Strategy

The purpose of the Integration Test is to confirm that the Integration between High Tech Promodoro Clock and surrounding systems (buzzer, screen, console) are working as specified. Since integration is a complex area, late errors found in integration components could take a long time to fix and therefore cause heavy delays, therefore it is important to specifically test these components as early as possible.

### 3.2.2. Features to be tested

The Integration Test focuses first and foremost to perform a point-to-point test of each integration point. Those will be tested to make sure basic functionality is working. Basic functionality can be defined as:

* Timer bar on the screen works as expected
* Goal counter on the screen works as expected

## 3.3. Performance Test Strategy

Performance testing is performed to verify the High Tech Promodoro Clock release is capable of operating under the agreed requirements.

The following are also among the key objectives of performance testing:

* Assess environment stability.
* Proactively diagnose and mitigate performance problems.
* Determine optimal hardware configuration from the perspective of performance.
* Determine optimal application configuration from the perspective of performance.
* Verify the scalability of the system.
* Identify bottlenecks that hinder system response time.
* Performance in Surrounding Systems.

### 3.3.1. Features to be tested

The Performance Test phase of the project will test the stability of the High Tech Promodoro Clock systems and ensure the agreed metrics has been reached. Execution will be done loading a larger amount of records. No testing tools will be used.

### 3.3.2. Features not to be tested

The following points are not in the scope for the Performance Test:

* Performance testing of other external hardware systems interfaces/processes.

## 3.4. UAT Strategy

The purpose of the User Acceptance Test (UAT) is to verify, that the application works as expected and meets the requirements of the client.

This is the final testing activity of the Testing Phases. This will test that the agreed to UAT scenarios and conditions that represent the needs of the client have been executed successfully with the expected test results.

End users (client) will test various functions of High Tech Promodoro Clock system. Testing Team has responsibility to ensure test data and environments, also to monitor processes through surrounding systems and coordinate issue logging along with bug fixing.

### 3.4.1. Features to be tested

The scope covers the High Tech Promodoro Clock functionalities, which are within the scope of the project. The focus of the test is to verify especially the high priority functional areas for the application.

### 3.4.2. Features not to be tested

Testing the performance of the application for critical and high volume operations. This will be tested during the Performance Test stage. However, testers can take note of the performance during their testing activities and any performance related issues that are identified during UAT will be raised to Ailiak Solutions.

# 4. Test Case management

All cases will be executed manually.

Possible states of Test Case are:

* Not Run (grey)
* Passed (green)
* Failed (red)
* In Progress (pink)
* Blocked (purple)
* For Retest (grey)

Priority of test cases:

* High
* Medium
* Low

## 4.1. Reporting rules

### 4.1.1. Bug Reporting

New issue will be created in bug tracking system for any test step/case within the current Testing Phase that does not meet the expected result.

### 4.1.2. Bug tracking system

|  |  |
| --- | --- |
| Tracker type | Bug  Feature  Support  Task |
| Issue Priority | Defines the overall impact of occurred issue. Possible values:  Low  Medium  High  Urgent |
| Issue Statuses | Defines in which state of the resolution process is the issue. Possible values:  New – when issue is newly created by Test Engineer  In Progress – when the issue is being investigated by developer and resolution is being prepared  For Deployment – when resolution is found and the fix is prepared for deployment on the test environment  For Retest – when the fix is deployed on test environment and retest should be done  Reopen – when the retested fix do not meet the expected result or do not work properly  Feedback – when the developer needs more information from the other participants in order to deliver resolution  Rejected – when developer do not recognize the issue as defect/problem/incident as so or do not recognize the problem as their responsibility to provide fix;  Closed – when the occurred defect/problem/incident is retested successfully after the provided fix from the developers and no further actions are required in order to be set status Closed  Blocked – when the defect/problem/incident blocks where 50% or all test cases execution is blocked. |
| Issue Description | Description of the problem, replication steps (including any details that can improve the analysis of the issue) |

## 4.2. Bug Fixing and SLA

Ailiak Solutions should reply to the raised issues, in such a manner that will allow the project to stay in compliance with the requirements below and in accordance with the agreed Project Go Live date.

Setting Time Limited Bug-Fixing by Priority:

* Urgent - Fix within 1 day
* High - Fix within 3 days
* Medium - Fix within 4 days
* Low - Fix within 5 days

## 4.3. Deployment

Deployment of bug-fixing will be delivered at the end of the working day (18:00h).

## 4.4. Retest

Retesting will be executing after the deployment.

## 4.5. Test Deliverables

The test activities during whole project lifecycle include the following documents for every type of tests as deliverables:

* Test Cases Plan;
* Test Cases;
* Test Data;
* Test Daily Reports;
* Test Summary Reports;
* Test Requirements
* Test Entry/Exit Criteria

## 4.6. Entry criteria conditions:

* All developed code must be unit tested;
* Functional and Business requirement should be cleared, confirmed and approved;
* Test plan, test cases should be reviewed and approved;
* Test environment should be prepared;
* Test data should be available;
* All needed applications and systems are available;
* Resources are available;

## 4.7. Exit criteria conditions:

* Coverage of code/functionality/requirements reaches a specified point;
* The risk in the project is under acceptable limit;
* There is a clear schedule of fixing unresolved issues with Low and Medium;

## 4.8. Suspension criteria

* If any defects are found which seriously impact the test progress, the management may choose to suspend testing.
* Suspension criteria:
* hardware/software not available at the time indicated in the project schedule;
* the build contains many serious defects which seriously prevent or limit testing progress;
* assigned test resources are not available when needed by the test team;

## 4.9. Resumption Criteria:

If testing is suspended, resumption will only occur when the problem(s) that caused the suspension have been resolved. When a critical defect is the cause of the suspension, the “FIX” must be verified by the testing team before testing is resumed.

## 4.10. Pass/Fail criteria

* Pass Criteria: If the Actual Result is equal to the Expected Result, then the test execution is successful.
* Fail Criteria: If the Actual Result is not equal to the Expected Result, then the test execution is not successful.