HealthSolutions

Test Strategy Document

Version 0.1

Prepared By

**Engr. Muhammad Hamza Zubair**

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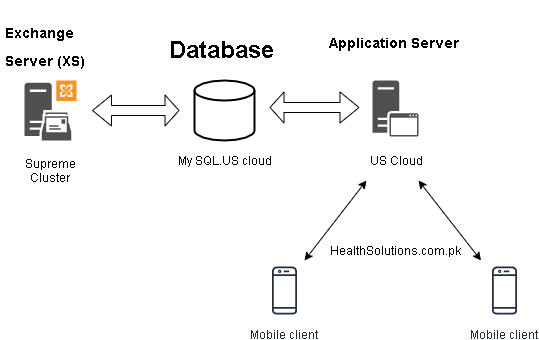
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# Testing Environment

## **Intended Client Requirement**

Test environment for HealthSolutions android and iOS apps will contain following configurations.



|  |  |
| --- | --- |
| **Hardware Resources (Android)** | |
| Resource (1) | Tecno Camon 12 Air |
| Processor | Octa core, 2 GHz, Cortex A53 processor |
| Memory | RAM - 4 GB ; ROM - 64 GB |
| Display | 720 x 1600 pixels,6.55 inches |
| Resource (2) | Moto E4 |
| Processor | Quad-Core 1.4GHz Cortex-A53 |
| Memory | RAM - 2 GB ; ROM - 16 GB |
| Display | 1280 x 720 Pixels, 24 bit color depth, 5.0 inches |

|  |  |
| --- | --- |
| **Hardware Resources (iOS)** | |
| Resource (1) | Apple iPhone 7 Plus |
| Processor | Quad-core 2.34 GHz (2 x Hurricane & 2 x Zephyr) |
| Memory | 32GB built-in, 3GB RAM |
| Display | 1080 x 1920 pixels (~326 ppi pixel density) , 5.5 inches |

## 2. **Network Requirements**

| **Resource** | **Quantity** | **Name and Type** |
| --- | --- | --- |
| Domain |  | healthsolutions.com.pk, Country Code Top-Level Domain (ccTLD) |
| Server Operating System |  | Linux |
| Mail Server (If any) |  | US Cloud Mail Exchange Server |
| Active Directory |  | HealthSolutions |
| Sharepoint Portal Server |  | - |
| Windows Sharepoint Services |  | - |
| Test Development PCs or Devices |  | Tecno Camon 12 Air, Moto e4, Apple iphone 7 plus , Lenovo think pad i5-3427U |
|  |  |  |
|  |  |  |

## 

# Introduction

## 1 Purpose

This document describes the Test Strategy for HealthSolutions android and iOS applications. It is intended that the TESTING Team of Engitech Services LLC will use this document to execute the system-testing phase. This Test Strategy document includes a discussion on the objective and assumptions of the testing activity as well as the methodology and approach.

## 2 Document Conventions

Following conventions in the documents have been adopted:

* Heading1 (Cambria (Headings), 14 pt, Bold)
* Heading 2 (Cambria, 13 pt, Bold)
* Heading 3 (Cambria, 11 pt, Bold)
* Heading 4(Cambria 11pt, Bold, Italic)

## Intended Audience and Reading Suggestions

The intended audience for this document is following:

* Developers
* Project Managers
* Stakeholders
* Software Testers
* Documentation Writer

## References

The table below identifies the documentation and availability used for developing the *Test Strategy*:

[Note: Delete or add items as appropriate.]

|  |  |  |  |
| --- | --- | --- | --- |
| **Document  (and version / date)** | **Available** | **Reviewed** | **Findings** |
| Vision and Scope | 🗹 Yes 🞏 No | 🗹 Yes 🞏 No |  |
| CRS | 🞎 Yes 🗹 No | 🞎 Yes 🞎 No |  |
| FSD | 🗹 Yes 🞏 No | 🗹 Yes 🞏 No |  |
| Use-Case Document | 🞏 Yes 🗹 No | 🞏 Yes 🞏 No |  |
| Project Plan | 🞏 Yes 🗹 No | 🞏 Yes 🞏 No |  |
| Architecture Document (Design Specifications) | 🞏 Yes 🗹 No | 🞏 Yes 🞏 No |  |
| Prototype (if any) | 🗹 Yes 🞏 No | 🗹 Yes 🞏 No |  |
| Business Model or Flow | 🗹 Yes 🞏 No | 🞏 Yes 🗹 No |  |
| Data Model or Flow | 🞏 Yes 🗹 No | 🞏 Yes 🞏 No |  |
| Risk Log (PROMO Sheet) | 🞏 Yes 🗹 No | 🞏 Yes 🞏 No |  |

## Related Process Area

## 

## Definitions & Abbreviations

|  |  |
| --- | --- |
| **Term** | **Definition** |
| TP | Test Strategy |
| Test Strategy | Activities, dependencies and effort required to conduct the System Test |
| Test Script | Scenarios to be applied and the data to be processed |

# Test Strategy

## Testing Aims and Objectives

The objective of this Test Strategy is to plan, organize and manage the activities/tasks that are required for the testing of “HealthSolutions Android & iOS applications”. This Test Strategy is formed

To define the test scope, strategy and methodology to be used for the test

To identify the activities required to prepare for and conduct testing

To identify responsibilities for the tasks included in the plan

To define the test tools and the environment needed to conduct the test

To identify test interactions with other organizations

To identify test customers and deliverables

To identify the major testing milestones

To define the sources of information used to prepare the plan

## Quality Objectives

### Primary Objective

The primary objective of testing **HealthSolutions Android & iOS apps** is to: ***identify and expose all issues and associated risks, communicate all known issues to the project team, and ensure that all issues are addressed in an appropriate matter before release.*** As an objective, this requires careful and methodical testing of the application to first ensure all areas of the system are scrutinized and, consequently, all issues (bugs) found are dealt with appropriately.

### Secondary Objective

A secondary objective of testing **HealthSolutions Android & iOS apps**  is to: ***assure that the system meets the full requirements of the customer, maintain the quality of the product, and remain within the cost range established at the project outset.*** At the end of the project development cycle, the user should find that the project has met or exceeded all of their expectations as detailed in the requirements. Any changes, additions, or deletions to the requirements document, Functional Specification, or Design Specification will be documented and tested at the highest level of quality allowed within the remaining time of the project and within the ability of the test team.

# Testing Scope

## Testing Types

### Functional Testing

|  |  |
| --- | --- |
| Test Objective: | Ensure proper target-of-test functionality, including navigation, data entry, processing, and retrieval. |
| Technique: | Execute each use case, use-case flow, or function, using valid and invalid data, to verify the following:  • The expected results occur when valid data is used.  • The appropriate error or warning messages are displayed when invalid data is used.  • Each business rule is properly applied. |
| Completion Criteria: | • All planned tests have been executed.  • All identified defects have been addressed. |
| Special Considerations: | Identify or describe those items or issues (internal or external) that impact the implementation and execution of function test |

### UI/UX testing:

To ensure that the AUT meets all the requirements related to UI that are needed to fulfill the standards. The heart of any application is its UI because it’s the first thing that the user interacts with so the most important thing is that the UI of the android and iOS applications should be attractive and user friendly. The user should not face any difficulty or get irritated while using the app. The color code, theme, design, font color, font size and all the other attributes related to UI should be proper and should meet standards. Our goal is to satisfy the users with an attractive and user friendly UI.

### API Testing:

To ensure that all the APIs included in the project are working fine and as per requirement. We’ll use **“Postman”** as a tool for API testing.

### Load/Performance testing:

To ensure that the application is capable of handling multiple users at a same time. If a large number of users or data comes on the application than we need to test that whether the application can handle this load or not, to ensure this we’ll perform load/performance testing. We’ll use **“J-meter”** as a tool for performance testing.

### Security testing:

To ensure that there are no vulnerabilities and security threats in the AUT. We’ll use “Zed Attack Proxy (ZAP)” as a tool for security testing.

### Compatibility testing:

To ensure that the AUT meets all the functional & non-functional requirements on different devices and android, iOS versions.

### Integration Testing

|  |  |
| --- | --- |
| Test Objective: | Ensure proper target-of-test functionality, including navigation, data entry, processing, and retrieval. |
| Technique: | Execute each use case, use-case flow, or function, using valid and invalid data, to verify the following:  • The expected results occur when valid data is used.  • The appropriate error or warning messages are displayed when invalid data is used.  • Each business rule is properly applied. |
| Completion Criteria: | • All planned tests have been executed.  • All identified defects have been addressed. |
| Special Considerations: | Identify or describe those items or issues (internal or external) that impact the implementation and execution of function test |

## Testing Flow



## Testing Cycles

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test Cycle No.** | **Testing Type Applied** | **Estimate Start Date** | **Actual Start Date** | **Built Version** | **Requirements Covered** |
| 1. | Functional | 15-9-2020 |  | 0.1 | All functional requirements |
| 2. | UI/UX | 21-9-2020 |  | 0.1 | All requirements related to UI |
| 3. | Compatibility testing | 23-9-2020 |  | 0.1 | The app should meet all functional and non-functional requirements and all test cases must be executed successfully on different devices |

## Testing Sequence

|  |  |  |
| --- | --- | --- |
| **Resource** | **Module** | **Sequence of Testing** |
| 1)Tecno Camon 12 Air  2) iphone 7 plus  3) Moto e4 | Sign up, sign in | 1. Smoke & Sanity testing 2. App launching 3. Sign up 4. Sign in |
| 1) Tecno Camon 12 Air  2) iphone 7 plus  3) Moto e4 | Home screen, Blood, Chemist, Diagnostic Lab, Equipment, Fitness, Home care & Nursing | 1. Home screen 2. Blood 3. Chemist 4. Equipment 5. Diagnostic Lab 6. Home care & Nursing 7. Fitness |
| 1)Tecno Camon 12 Air  2) iphone 7 plus  3) Moto e4 | General Physician | 1. G-segment home screen 2. Doctor’s booking 3. Specialities section 4. Doctor search 5. Doctor sort filter 6. Doctors list 7. Recommended doctors list 8. Patient details screen 9. Doctor’s rating |
| 1)Tecno Camon 12 Air  2) iphone 7 plus  3) Moto e4 | Drawer options | 1. Contact Us 2. Our partners 3. Share 4. Doctor Advice 5. Invite 6. Privacy Policy 7. Terms & Conditions 8. Feedback 9. About |
| 1)Tecno Camon 12 Air  2) iphone 7 plus  3) Moto e4 | Wallet | 1. Wallet home screen 2. Adding amount in wallet 3. Credit card gateway |
| 1)Tecno Camon 12 Air  2) iphone 7 plus  3) Moto e4 | Profile | 1. Profile main screen 2. Change password |
| 1)Tecno Camon 12 Air  2) iphone 7 plus  3) Moto e4 | Forgot Password | - |
| 1)Tecno Camon 12 Air  2) iphone 7 plus  3) Moto e4 | Notifications | 1. Notifications display 2. Notification count 3. Notification deletion |
| 1)Tecno Camon 12 Air  2) iphone 7 plus  3) Moto e4 | Sign out | - |

## Testing Levels

Testing of an application can be broken down into three primary categories and several sub-levels. The three primary categories include tests conducted every build (Build Tests), tests conducted every major milestone (Milestone Tests), and tests conducted at least once every project release cycle (Release Tests). The test categories and test levels are defined below:

### Level 1 - Build Acceptance Tests

Build Acceptance Tests should take less than 2-3 hours to complete (15 minutes is typical). These test cases simply ensure that the application can be built and installed successfully. Other related test cases ensure that EngITechTesting Department received the proper Development Release Document plus other build related information (drop point, etc.). The objective is to determine if further testing is possible. If any Level 1 test case fails, the build is returned to developers un-tested.

### Level 2 - Smoke Tests

Smoke Tests take less than 2-3 hours (20 minutes is typical). These tests cases verify the major functionality a high level. The objective is to determine if further testing is possible. These test cases should emphasize breadth more than depth. All components should be touched, and every major feature should be tested briefly by the Smoke Test. If any Level 2 test case fails, the build is returned to developers un-tested

### Level 2a - Bug Regression Testing

Every bug that was “Open” during the previous build, but marked as “Fixed, Needs Re-Testing” for the current build under test, will need to be regressed, or re-tested. Once the smoke test is completed, all resolved bugs need to be regressed. It should take between 5 minutes to 1 hour to regress most bugs.

# Test Management and Procedures

This section describes the methodology and approach used to test the HealthSolutions android and iOS applications (0.1) developed by EngITech Services LLC

## Test Suspension Criteria

Any test failure that prevents testing of other functions will cause the suspension of general product testing. However, if any functions can be tested effectively in spite of the failure, tests will continue on those functions to the extent possible.

## Test Resumption Criteria

A patch or, if appropriates, a new release that corrects the failure must be provided before the test process can be resumed. Before the test cycle is resumed, regression testing will be performed to verify that the patch or new release does not adversely affect existing functionality.

## Test Cycle Exit Criteria

The exit criteria for the test phase are:

All planned test cycles have been executed

No identified bugs are open

## Build Acceptance Criteria

1. Major components / modules are working.
2. 75% of the Re-Open defects have been fixed. (*Those that have not been fixed and will be fixed later should be marked as pending*)
3. Action should have been taken on at least 50% of the defects reported.
4. Any documents that need to be provided to ST for testing purpose should have been provided atleast 1 week prior to the build release date.

## Test Completeness

Testing will be considered complete when the following conditions have been met:

### Standard Conditions:

1. When EngITechTesting Department and EngITech Development agrees that testing is complete, the application is stable, and agrees that the application meets functional requirements.
2. Script executions of all test cases in all areas have passed.
3. Automated test cases have in all areas have passed.
4. All priority 0, 1 and 2 bugs have been resolved and closed.
5. Each test area has been signed off as completed by the Test Lead.
6. 50% of all resolved severity 1 and 2 bugs have been successfully re-regressed as final validation
7. Ad hoc testing in all areas has been completed

# Testing Deliverables

Testing will provide specific deliverables during the project. These deliverables fall into three basic categories: Documents, Test Cases and Reports. Here is a table indicating the dependencies of the various deliverables:

|  |  |  |
| --- | --- | --- |
| **Deliverable Name** | **Dependencies** | **Baseline Phase** |
| Test plan | SRS document, BRS, Prototype, Project scope, Resources, System architecture | Developed by “Test Lead” at the very initial stage of the project |
| Test case document | SRS, Project scope | It will be developed by testing team after getting “SRS document” and “Project scope” from the Project Manager |
| Test execution document | Test case document, SRS | All the developed test cases related to each module will be executed after development of that module by the development team and when the test build with release notes is given to the “Testing team” |
| Bug Report | Test case document, test execution report | After test cases execution, all the failed test cases with priority will be reported to the development team in a “Bug Report” and this bug report will be sent to the “Development” team after each test cycle. |
| Test closure/ Sign off | Test execution report, Bug report | The bug reporting will be continued till all the bugs have been fixed by the development team and re-testing and regression testing have been successful. Once all the bugs have been fixed and acknowledged by “Test Lead” then the testing phase is signed off and the project is taken for “Beta testing”. |

## Deliverables Matrix

This matrix should be updated routinely throughout the project development cycle in you project specific Test Plan.

|  |  |  |  |
| --- | --- | --- | --- |
| **Deliverables** | **Milestone** | **Start Date** | **Finish Date** |
| TestStrategy | Planning | 7/9/2020 | 15/9/2020 |
| Test Case Document | All |  |  |
| Test Cases Results | All |  |  |
| Test Execution Checklist | All |  |  |
| Bugs and Regression Results | All |  |  |
| Weekly Status Reports | All |  |  |
| Test Cycle Completion Report | All |  |  |
| Testing Sign-OffDocument | Stabilization |  |  |

## Deliverables Reports

The Test Lead will be responsible for writing and disseminating the following reports to appropriate EngITech project personnel as required.

### Weekly Status Reports

A weekly status report will be provided **by** the Test Lead to project manager.This report will summarize weekly testing activities, issues, risks, bug counts, test case coverage, and other relevant metrics.

### Test Final Report - Sign-Off

A Final Test Report will be issued by the Test Lead. It will certify as to the extent to which testing has actually completed (test case coverage report suggested), and an assessment of the product’s readiness for Release to Production.