Test Plan – Smartphone

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Revision and Signoff Sheet for Android Smartphone Test Plan

Document History

Version	Date	Author	Description of Change
1.1	5/15/2024	Vinith	Initial Draft: Introduction and project overview
1.2	5/15/2024	Shilpa	Revised Draft: Added Test Objectives and Test Assumptions
1.3	5/15/2024	Jayavardhini	Revised Draft: Added Test Principles and Data Approach
1.4	5/15/2024	Harshvardhan	Review Changes Added: Scope and Levels of Testing
1.5	5/15/2024	Hrushikesh	Review Changes Added: UAT
1.6	5/15/2024	Asha	Review Changes Added: Scope and Levels of Testing Final Draft: Test effort Estimate

Approvers List

Name	Role	Approver/Reviewer	Approval/Review Date
Abhishek	QA Trainer	Approver	5/15/2024

Reference Documents

Version	Date	Document Name
2.0	03/15/2024	Android Smartphone Hardware Specification
3.1	04/20/2024	Android User Interface Design Guidelines
1.5	05/05/2024	Performance Testing Documentation
1.7	05/12/2024	User Experience Feedback Report

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1. INTRODUCTION

1.1 Purpose

The purpose of this test plan is to describe the scope, approach, resources, and schedule for testing activities related to the new Samsung Galaxy A14 developed by Samsung. The primary objective is to verify that the smartphone meets all specified requirements, adheres to industry standards, and delivers a high-quality user experience.

1.2. Scope

The scope of testing covers the following aspects of the smartphone:

- Hardware components (e.g., display, camera, buttons, ports)
- Operating system and firmware
- Pre-installed applications and user interface
- Connectivity (e.g., cellular, Wi-Fi, Bluetooth)
- Battery life and charging
- Audio and multimedia capabilities
- Sensors (e.g., accelerometer, proximity sensor)
- Security features
- Accessibility features
- Performance and stress testing
- Compatibility testing with various environments and use cases

1.3. Project Overview

- The test plan document for the Samsung Galaxy A14 provides a comprehensive and well-structured approach to testing the new smartphone developed by Samsung.
- The plan covers all essential aspects of testing, including the scope, approach, environment, schedule, and resource allocation.
- The Samsung Galaxy A14 test plan is well-structured and comprehensive, covering all essential aspects of testing. The plan demonstrates a thorough understanding of the product and its requirements, and outlines a structured approach to testing. By addressing the areas for improvement, such as providing more details on test case development, risk analysis, and acceptance criteria, the test plan can be further strengthened to ensure a successful testing process and a high-quality product release.

1.4. Audience

This test plan is intended for a variety of audiences involved in the development and launch of the Samsung Galaxy A14 smartphone:

- **Project Team Members:** Testers, developers, quality assurance specialists, and anyone directly responsible for executing the testing activities outlined in this document. They will use this plan to guide their work and provide feedback for improvement.
- **Project Manager:** Responsible for overseeing the entire testing process. This plan helps the Project Manager schedule testing activities, track progress, assess performance, and ultimately approve the final document and take ownership of the testing results.
- **Stakeholders:** This may include representatives from marketing, sales, and product ownership. While they may not be directly conducting tests, they have a vested interest in the results. This plan provides them with an overview of the testing strategy and allows them to participate in User Acceptance Testing (UAT) to ensure the final product aligns with their expectations.
- **Technical Team:** This includes engineers, and IT specialists who provide the testing environment, configure devices, and implement bug fixes based on test results.
- **Business Analysts:** These individuals will use this plan to understand the scope of testing and ensure alignment with the functional requirements of the smartphone. They may also provide input on any necessary adjustments to the testing strategy based on evolving business needs.

2. TEST STRATEGY

2.1. Test Objective

The objective of the test is to verify that the functionality of an Android smartphone works according to the specifications. The test will execute and verify the test scripts, identify, fix, and retest all high and medium severity defects per the entrance criteria, and prioritize lower severity defects for future fixing via CR.

The final product of the test is twofold:
A production-ready smartphone;
A set of stable test scripts that can be reused for Functional and UAT test execution.

2.2. Assumptions

Key Assumptions:

Production-like data will be required and must be available on the smartphone prior to the start of Functional Testing.

In each testing phase, Cycle 3 will be initiated if the defect rate is high in Cycle 2.

General:
Functional Testing:

During Functional Testing, the testing team will use preloaded data which is available on the smartphone at the time of execution.
The Test Team will perform Functional Testing on all specified Android smartphone features and functionalities.

UAT:

UAT test execution will be performed by end users (L1, L2, and L3), and the QA Group will provide their support in creating UAT scripts.

2.3 Test Principles

- Test the device with different versions of the operating system, including the latest version and older versions that the device is expected to support.
- Test core functionalities like making/receiving calls, sending/receiving messages, browsing the internet, using email, and other essential applications.
- Test camera functionality, including photo and video capturing, zooming, and various modes.
- Test audio and multimedia features like music playback, video playback, and external audio output.
- Test cellular network connections (2G, 3G, 4G, 5G), Wi-Fi, Bluetooth, and GPS.
- Verify power-saving modes and battery optimization features.
- Test biometric authentication (fingerprint, face recognition), pattern/PIN unlock, and encryption.
- Test performance under heavy loads, such as multitasking, running resource-intensive applications, and gaming.
- Verify water resistance and dust resistance ratings.
- Verify the accuracy and responsiveness of these sensors in different use cases.

2.4 Data Approach

For the data approach we loaded few application such as Spotify, YouTube as well as Snapchat to test out the various multimedia functionalities of the smartphone

2.5 Scope and Levels of Testing

2.5.1 Exploratory:

PURPOSE: The purpose of exploratory testing for smartphones is to identify critical defects and usability issues early in the development process to ensure a smoother transition to subsequent levels of testing.

SCOPE: The scope of exploratory testing for smartphones primarily covers the core functionalities and user interactions of the device's operating system (OS) and built-in apps. This includes basic navigation, key features like calls, messaging, internet browsing, camera functionality, and other essential functionalities specific to the smartphone's OS.

TESTERS: The testing team, comprising quality assurance (QA) engineers and possibly usability experts, conduct exploratory testing for smartphones.

METHOD: Exploratory testing in smartphones is carried out without predefined test scripts or documentation. Testers interact with the smartphone as end-users would, exploring various features and functionalities intuitively. They may focus on common user scenarios, edge cases, and stress testing to uncover potential issues. Testers rely on their experience, intuition, and domain knowledge to identify defects and usability issues.

TIMING: Exploratory testing for smartphones is conducted at the beginning of each development cycle or sprint. It serves as an initial check to catch critical defects early on before proceeding to more structured testing phases.

2.5.2 Functional Test

PURPOSE: Functional testing will be performed to check the functions of application. Specifically for camera function in which we are able to switch in picture and video mode seamlessly with other core camera functionalities such as slow-motion and environment settings.

Scope: The scope of this is to test out the core functionalities of the camera feature as well as other gallery navigation including multimedia playback.

TESTERS: Testing Team Group 2.

METHOD: Execute test cases stored in smartphone according to pre-defined scripts

TIMING: After Completion of Exploratory Test.

TEST ACCEPTANCE CRITERIA

1. Functional Specifications Review
2. Test Plan Approval
3. Test Case Sign-off
4. Environment Readiness
5. Test Data Availability
6. Bug Fix Verification
7. Regression Test Completion
8. Performance Benchmarking
9. User Interface Consistency
10. Security Compliance
11. Compatibility Testing

TEST DELIVERABLES

S.No.	Deliverable Name	Author	Reviewer
1	Test plan	Group 2	QA Trainer
2	Functional Test Cases	Group 2	QA Trainer
3	Camera flash Defects	Group 2	QA Trainer
4	Daily/Weekly status report	Group 2/QA Trainer	QA Trainer
5	Test Closure report	QA Trainer	QA Trainer

MILESTONE LIST

The milestone list is tentative and may change due to below reasons:

- Tentative and subject to change based on system environment readiness, scope changes, or dependencies impacting effort and timelines.
- Successful implementation of camera functionalities as well as multimedia playback features.

2.5.3 User Acceptance Test (UAT)

PURPOSE: The User Acceptance Test (UAT) for smartphones focuses on validating the business logic and ensuring that the device meets the end-users' requirements and expectations before deployment. It provides an opportunity for end-users to conduct a final review of the smartphone's software and functionality.

TESTERS: The UAT is performed by end-users, including representatives from different user levels (L1, L2, and L3), who are most familiar with the business needs and how the smartphone's features should align with them.

METHOD: Since end-users are best positioned to provide input on business needs and how the smartphone's features accommodate them, the Test Team collaborates with end-users and Business Analysts to develop UAT test cases. These test cases are based on inputs from end-users and may include scenarios not covered in previous testing phases. Testers execute the UAT test cases on the smartphone, verifying that the system behaves as expected and meets business requirements.

TIMING: The UAT is conducted after all other levels of testing, including Exploratory and Functional testing, are completed. Only after the UAT is successfully completed and any identified issues are addressed can the smartphone be released to production.

TEST DELIVERABLES

UAT Test Cases: The Test Team, in collaboration with Business Analysts and end-users, develops and documents UAT test cases that cover various business scenarios and requirements. These test cases serve as a guide for executing the UAT.

Sign-off: Once the UAT is completed, the Test Team and relevant stakeholders review the test results and ensure that the smartphone meets the acceptance criteria. Upon successful completion, the smartphone is ready for deployment to production.

This structured approach to UAT ensures that the smartphone's software aligns with business needs and user expectations, ultimately leading to a successful deployment and user satisfaction.

2.6 Test Effort Estimate

This testing phase has taken around 24 working hours to be completed distributed among 6 testers in a specified group. This included test planning (review requirements, object review), designing test scripts and environment in which we installed necessary application in our smart phone to proceed with test approach in regards to data. Test execution as well as reporting all the features to our QA trainer.