**Mobile Application Testing and Reporting**

**Test Plan**

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**Project: Android Messaging Application**

1. **Introduction**
   * **Overview**: The primary purpose of this test plan is the automated testing of the **Android** **Messaging App** using Appium. The goal is to ensure that the app functions correctly under normal and edge case conditions.
   * **Scope of Testing**: The plan is to test core functionalities Sending, receiving, and deleting messages. UI/UX responsiveness with screen orientation changes, and Performance testing under low battery conditions.
   * **Out Of Scope Testing**: This testing phase is limited to Native application testing only. Web View testing is out of scope (Like login in Messaging app), Cross-platform (iOS) testing, and Backend API testing.
   * **Team**: Developers, QA Testers, Project Manager, and Stakeholders.
2. **Objective**

The objective of this test effort is to ensure that all interactive features within the Android Messaging Application function as intended providing users with a reliable and consistent experience. In addition, the testing will evaluate the app's performance under various conditions such as low battery levels to verify its stability and reliability. The user interface will also be tested for responsiveness during dynamic changes, like switching between portrait and landscape modes, to ensure the layout remains smooth and adaptable across different device orientations.

1. **Test Environment**
   * **Hardware Requirements:**

Operating System: MacOS Catalina or later

Memory: Minimum 8 GB RAM

Storage: Minimum 20 GB free space

* + **Software Requirements:**

Application: Messaging app (Android Emulator)

Automation Tool: Android Studio, Appium GUI Server, and Appium Inspector

Text Editor/IDE: Visual Studio Code

Framework: JavaScript and Appium

1. **Test Cases**
   * 1. **Test Case ID: 001**
     2. **Objective:** Sending a Message (Functional Test)
     3. **Steps:** Launch Messaging app 🡪 Select “Using as a guest” on pop-up 🡪 Tap Start Chat 🡪 Enter Phone Number: +15673459876” 🡪 Select the number from list 🡪 Then Enter Message: “Hi, How are you?” 🡪 Tap Send button.
     4. **Expected Result:** User should be able to send message successfully.
     5. **Pass/Fail Criteria:** Pass: “Message sent successfully!”

Fail: “Unable to send Message -Test Failed!”

* + - 1. **Test Case ID: 002**
      2. **Objective:** Receiving a Message (Functional Test)
      3. **Steps:** Use emulator command to send test message 🡪 Launch Messaging app 🡪 Check for incoming message in message list: “Test message from emulator”.
      4. **Expected Result:** Message should appear in conversation list.
      5. **Pass/Fail Criteria:** Pass: “Message found in conversation list!”

Fail: “Message not found in UI”

* + - * 1. **Test Case ID: 003**
        2. **Objective:** Screen Orientation Handling (UI/UX Test)
        3. **Steps:** Launch Messaging App 🡪 Select “Using as a guest” on pop-up 🡪 Rotate screen to Landscape through emulator 🡪 Observe UI layout 🡪 Rotate back to Portrait 🡪 Observe UI layout again.
        4. **Expected Result:** UI layout should work with both orientations properly.
        5. **Pass/Fail Criteria:** Pass: “Current Orientation changed to Landscape and then changed to Portrait mode”

Fail: “Unable to rotate screen”

1. **Test Case ID: 004**
2. **Objective:** Mark as unread on Low Battery (Performance Test)
3. **Steps:** Change Battery percentage to 4% through emulator 🡪 Launch Messaging App 🡪 Select “Using as a guest” on pop-up 🡪 Long Press first Message 🡪 Tap More Options 🡪 Select “Mark as unread”.
4. **Expected Result:** User should be able to mark message as unread.
5. **Pass/Fail Criteria:** Pass: “Message successfully marked as unread”

Fail: “Unable to mark message as unread”

1. **Test Case ID: 005**
2. **Objective:** Deleting Messages (Functional Test)
3. **Steps:** Launch Messaging app 🡪 Select “Using as a guest” on pop-up 🡪 Long Press first Message 🡪 Select second message 🡪 Click on delete button 🡪 Check updated message list.
4. **Expected Result:** User should be able to delete selected messages.
5. **Pass/Fail Criteria:** Pass: “Messages deleted successfully!”

Fail: “Selected messages not deleted”