# TEST PLAN <TP-WA-BB-01>

# BLACK BOX TESTING WHATSAPP

## DERAY TEAM - STQA 2025


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**TEKNIK INFORMATIKA**
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**TABLE OF CONTENT**

## 1. TEST PLAN IDENTIFIER

ID: TP-WA-BB-01

The identifier TP-WA-BB-01 is a unique code assigned to this Test Plan document. It is structured to provide meaningful insight into the document's purpose, target application, methodology, and version.

| Component | Description |
|---|---|
| TP | Test Plan– indicates the type of document |
| WA | WhatsApp – the target application under test |
| BB | Black Box – the testing methodology applied |
| 01 | Version number – this is the initial (first) version |

If future revisions are made, the version number should be incremented accordingly (e.g., TP-WA-BB-02 for the second iteration)

## 2. INTRODUCTION

### 2.1. Test Plan Objective

WhatsApp is a cross-platform messaging and VoIP service used by millions globally. This test plan describes the detailed approach to testing WhatsApp's core functionalities, including messaging, voice and video calling, media sharing, and status updates. This test plan is designed to validate both the mobile applications (Android/iOS) and the web application (WhatsApp Web). The testing will be conducted using black box testing techniques, focusing on evaluating the application from the end-user's perspective without any knowledge of the internal codebase. The testing approach will include a combination of manual and automated testing using Selenium (for WhatsApp Web). The primary objective of this plan is to identify any functional, usability, and compatibility issues that may affect user experience, ensuring the application delivers a reliable and consistent performance across platforms. This document outlines the scope, objectives, test environment, test items, deliverables, and responsibilities associated with the testing process.

## 3. SCOPE

The scope of testing for WhatsApp defines what features will be tested (In-Scope) and what features are excluded (Out-of-Scope) during the QA process. In-scope items include core functionalities like text messaging, media sharing, voice/video calls, group chats, status updates, notifications, backup & restore, UI/UX, and security features. These are tested to ensure proper performance and user experience. Out-of-scope items include server infrastructure, backend systems, legal compliance, and beta features, as they are outside the control or focus of the testing team. This clear scope helps ensure effective, focused, and efficient testing.

In the Test Plan for WhatsApp Application, it is divided into two main parts:

### 3.1. In Scope

In scope WhatsApp is all things, features, and functions that are included in the scope of WhatsApp services. For example, sending text messages, making voice or video calls, sharing files, creating chat groups, and keeping messages secure with encryption. All of these activities are part of what WhatsApp provides and its responsibility to be carried out properly.

| No | Feature | Test Description |
|---|---|---|
| 1 | Text Messaging | Send/receive messages, checkmarks, edit & delete messages, offline message handling. |
| 2 | Media Sharing | Send/receive images, videos, documents, audio files; compression testing; multiple files. |
| 3 | Voice & Video Calling | One-on-one/group calls, poor network quality, mute, camera switch, auto-reconnect. |
| 4 | Stories | Upload text/photo/video status, view others' statuses, privacy settings, early deletion. |
| 5 | Group Chat | Create group, add/remove members, admin rights, message reactions, mentions, polls, broadcast. |

| | | |
|---|---|---|
| 6 | WhatsApp Web/Desktop | QR login, real-time sync, messaging, notifications, multi-device security. |
| 7 | Security (End-to-End Encryption) | Encrypt messages/media, security fingerprint, 2FA, biometric app lock. |
| 8 | Backup & Restore | Auto-backup, restore after reinstall, cross-platform migration, media restore. |
| 9 | Notifications | Push notifications, quick reply, background alerts, mute, chat archiving. |
| 10 | Performance & UI/UX | UI responsiveness, dark/light mode, tab navigation, screen size compatibility. |

### 3.2. Out Scope

Out scope WhatsApp is things or features that are not included in the official WhatsApp service or function, such as illegal application modifications, use for activities outside WhatsApp policies, or features that are not supported by WhatsApp. So, these things are not the responsibility or part of WhatsApp services.

| No | Area/Features | Reason for Exclusion |
|---|---|---|
| 1 | Server Infrastructure | Outside QA access, managed internally by Meta. |
| 2 | Data Analytics & AI Detection | Backend-only, not part of user interface testing. |
| 3 | Legal Compliance | Handled by legal team, not a QA technical function. |
| 4 | Integration with Meta Products (IG/FB) | Does not directly impact WhatsApp core features. |

| | | |
|---|---|---|
| 5 | Closed Beta Features | Not yet released to public, excluded from stable testing. |
| 6 | Backend/Developer-side Bugs | Internal backend issues not part of user-facing QA scope. |

## 4. TESTING TASKS

Testing tasks are a series of activities or tasks performed during the software testing process to ensure that the product performs as expected. Examples include creating a test plan, writing test cases, setting up a test environment, running tests, recording results, and reporting any bugs or issues found. All of these tasks help the team to evaluate the overall quality and functionality of the software.

Here are the Testing Tasks in bullet point format :

| Testing Task | Description |
|---|---|
| Functional Testing | Verify core features such as sending/receiving messages, making voice/video calls, and sharing media work as expected. |
| UI/UX Testing | Check user interface layout and navigation across different modes (dark/light), screen sizes, and devices. |
| Performance Testing | Evaluate message delivery speed, app responsiveness, and behavior under poor network conditions. |
| Security Testing | Ensure end-to-end encryption works and that user data is protected during communication. |
| Compatibility Testing | Verify the app works correctly across different devices and operating systems (Android, iOS, Web, Desktop). |

| | |
|---|---|
| Regression Testing | Re-test application features after updates or bug fixes to ensure nothing is broken. |
| Notification Testing | Check that push notifications and quick replies function properly in locked screen and background states. |

## 5. ENVIRONMENT REQUIREMENTS

Environment Requirements are technical specifications and environmental conditions required for the testing process to be carried out effectively and accurately. This section includes all hardware, software, networks, and system configurations that must be prepared before testing begins. For applications such as WhatsApp, environment requirements include the type and version of the device (for example, Android and iOS smartphones with certain OS versions), the version of the WhatsApp application to be tested, internet connections with various network conditions (Wi-Fi, 4G, 5G), and additional devices such as computers for WhatsApp Web or Desktop testing. In addition, supporting tools for performance monitoring, debugging, and network simulation are also included in the environment requirements. Determining the right environment is very important to ensure that test results reflect real user conditions and ensure application compatibility and stability in various situations.

### 5.1. Data Entry Workstations

Data Entry Workstations are computers or terminals set up specifically for efficiently and accurately entering large amounts of data. They usually have ergonomic keyboards, clear monitors, and software tools that help users input data quickly and reduce errors. These workstations often connect to networks to send data to central servers or databases. They are essential for tasks that require fast, repeated data input.

- Android and IOS mobile devices (various versions)

  Android and iOS mobile devices (various versions) are smartphone and tablet devices running different versions of the Android and iOS operating systems. Because each OS version has different features, behaviors, and limitations, it is important to test your app on these different versions to ensure that your app runs smoothly and is compatible across devices. For example, some features or UI

may look different on Android 10 versus Android 13, or between iOS 14 and iOS 16.

Examples:

- Android devices: Samsung Galaxy S10 (Android 10), Google Pixel 6 (Android 12), Xiaomi Redmi Note 11 (Android 11)
- iOS devices: iPhone 8 (iOS 14), iPhone 12 (iOS 15), iPhone 14 Pro (iOS 16)

  Testing is done on these devices to ensure that WhatsApp or other applications can run properly on different versions of the operating system.

- Whatsapp Web and Desktop App

  WhatsApp Web and Desktop App are extensions of the WhatsApp application that allow users to access WhatsApp messages and features directly from their computer via a web browser (WhatsApp Web) or a dedicated application installed on the Windows or macOS operating system (Desktop App). Both work by synchronizing messages and data in real-time from the main WhatsApp application on the user's phone, so users can send messages, manage chats, and receive notifications without having to open the phone directly. Testing on this platform includes compatibility with various browsers, accurate data synchronization, connection security, and desktop application performance.

  Example:

  - WhatsApp Web: Accessed through a browser such as Google Chrome, Mozilla Firefox, or Microsoft Edge by opening https://web.whatsapp.com and scanning the QR code using the WhatsApp application on the phone.
  - WhatsApp Desktop App: An application that is downloaded and installed on a Windows or macOS computer, for example the latest version of WhatsApp Desktop downloaded from the official WhatsApp website.

## 6. TEST SCHEDULE

| Phase | Timeline |
|---|---|
| Test Preparation | 26 May 2025 |
| Test Execution | 27 May 2025 - 28 May 2025 |
| Regression Testing | 29 May 2025 - 30 May 2025 |
| User Acceptance Testing | 31 May 2025 - 1 June 2025 |
| Final Review | 2 June 2025 |

## 7. CONTROL PROCEDURES

### 7.1. Reviews

All test cases and documents will be reviewed before execution.

### 7.2. Bug Reviews Meetings

Daily bug triage meetings during the test execution period.

### 7.3. Change Request

Any changes must be logged and approved.

### 7.4. Defect Reporting

Defects will be documented with clear steps.

## 8. FEATURES TO BE TESTED

- Login & verification using OTP or QR code
- One-on-one voice and video calls
- Status updates: upload and view
- Notifications and quick reply functionality
- Multi-device syncing on WhatsApp Web/Desktop
- Text messaging & media sharing
- Group chat creation and messaging
- End-to-end encryption validation
- File sending with compression or large media
- Tab navigation and responsive UI design

## 9. RESOURCE AND RESPONSIBILITIES

### 9.1. Resources

- QA Engineer
- Test Lead
- Development Manager
- Project Manager

### 9.2. Responsibilities

- QA Engineers: Test case execution
- Test Lead: Test planning, coordination, and reporting
- Developers: Bug fixing and technical support

## 10. DELIVERABLES

These are the documents and artifacts that will be produced during the testing process:

- **Test Plan Document:** Outlines the overall testing strategy.
- **Test Case Document:** Lists the scenarios to be tested with expected results.
- **Test Execution Report:** Records the outcomes of executed test cases.
- **Bug/Defect Report:** Logs issues or failures found during testing.
- **Test Summary Report:** Summarizes testing efforts and results.
- **Screenshots or Recordings:** Visual evidence of bugs or successful tests.

## 11. SUSPENSION/ EXIT CRITERIA

Defines when testing should be paused or stopped:

- **Suspension Criteria:**
  - Critical bugs (Severity 1) block major features (e.g., can't send message or log in)
  - Test environment becomes unstable (e.g., server down)
  - Automation framework fails to execute consistently

- **Exit Criteria:**

  Testing will be considered complete when:
  - All major and critical test cases are executed.
  - All high-priority bugs are fixed and verified.
  - All planned deliverables have been produced and reviewed.

## 12. RESUMPTION CRITERIA

- Blocking bugs are resolved and verified
- Environment is restored and stable
- Automated tests are debugged and able to run reliably

## 13. DEPENDENCIES

### 13.1. Personal

- QA Engineer (You): Executes and reports tests.
- QA Supervisor: Reviews deliverables.
- Additional tester (optional): Helps test features like voice/video call.

### 13.2. Software

- WhatsApp (Android, iOS, and Web versions)
- Selenium WebDriver with Python bindings
- Browser: Chrome (primary), Firefox (secondary)
- Google Sheets / Microsoft Excel for documentation
- Bug tracking tool (optional): Jira or manual documentation

### 13.3. Hardware

- Android smartphones and iPhones for mobile testing
- Laptop/Desktop for WhatsApp Web and automated tests

### 13.4. Test Data & Database

- Two active WhatsApp accounts
- Test contacts
- Sample images or files for attachment testing
- Pre-loaded conversations for delete/edit scenarios

## 14. RISK

### 14.1. Schedule

- Issue: Limited time due to academic responsibilities
- Mitigation: Allocate specific test time slots, use a checklist for efficiency.

### 14.2. Technical

- Issue: Emulator crashes or device incompatibility
- Mitigation: Use real device or alternative emulator.

### 14.3. Management

- Issue: App updates in the middle of testing may change features.
- Mitigation: Fix the app version during testing; avoid updating until testing is done.

### 14.4. Personnel

- Issue: Not enough testers for two-way features like calls
- Mitigation: Use a secondary device or collaborate with a peer.

### 14.5. Requirements

- Issue: Lack of official documentation since WhatsApp is closed-source
- Mitigation: Apply black-box testing based on known app behavior and UI.

## 15. TOOLS

15.1 Manual Testing: Functional and exploratory testing by QA on Android, iOS, and web platforms using test cases.

- **Google Sheets / Excel:** For writing and tracking test cases, logging results.
- **Screenshot Tools:** Such as Snipping Tool (Windows), Lightshot, or device-native screenshot functions, to document bugs or test results visually.

15.2 Automated Testing (Selenium): UI test automation for WhatsApp Web login, messaging, and media sharing workflows.

- Selenium WebDriver
- ChromeDriver / GeckoDriver
- TestNG / PyTest / JUnit (depending on language)
- Reporting: Allure / ExtentReports (optional)

## 16. APPROVALS

| Approval By | Name | Approval (Signature/checklist) |
|---|---|---|
| QA Engineer | Aditya Johansah | Approve |

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|---|---|---|
| QA Engineer | Den M. Wyzdan Alfarizi | Approve |
| QA Engineer | Eric Rizky Febrian | Approve |
| QA Engineer | Yosi Arjunita Putri | Approve |
| Test Lead | Rey Gavrila Naibaho | Approve |
| Development Manager | Whatsapp team | Pending |
| Product Owner | Whatsapp team | Pending |
| Project Manager | Aditya Johansah | Approve |