



INTERNAL PROJECT

Software Requirements Specification

SASA CHAT

Version: 0.1

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Status: Draft

www.skyconnect.co.tz

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1 Document Information

Field	Value
Project Name	SASA CHAT
Version	0.1
Date	2025-08-18
Project Manager	TBD
Tech Lead	TBD
Qa Lead	Tester
Platforms	['Android', 'iOS']
Document Status	Draft



2 Project Overview

2.1 What Are We Building

2.1.1 System Function

A real-time messaging application for users to communicate with agents and each other through one-on-one chats, groups, and communities.

2.1.2 Users

- User / Customer
- Sasa Chat Agent

2.1.3 Problem Solved

The application is intended to facilitate communication but is critically unstable, with a 44% pass rate. It fails to perform essential functions like multimedia sharing, voice notes, calls, and user blocking. Platform-specific issues, such as app crashes on iOS when handling files, make it unreliable for its core purpose.

2.1.4 Key Success Metric

Increase the Overall System Quality Pass Rate from 44% to over 95% by fixing all major and critical defects.

2.2 Scope

2.2.1 In Scope

- Real-time text messaging
- Multimedia sharing (images, videos, files)
- Use of special characters and emojis
- Hyperlinks & URL previews
- Message Status & Receipts (sent, delivered, read)
- Offline messaging

- User and Agent profile management
- Blocking/Unblocking users
- Group and Community chats
- Voice and Video Calls (individual and group)

2.2.2 Out Of Scope

- Sharing user location
- A dedicated Help and Support section
- Linking multiple devices to one account
- Custom wallpaper editing
- Deleting read messages



3 User Requirements

3.1 Authentication User Management

Feature Code	I Want To	So That I Can	Priority	Notes
FT-BLOCK-USER	Block a user	Prevent them from sending me inappropriate messages.	Must	CRITICAL FAILURE: The agent is unable to block a user.

3.2 Core Business Features

Feature Code	I Want To	So That I Can	Priority	Notes
FT-COMMS-CALL	Make individual and group video calls	Communicate face-to-face with other users.	Must	CRITICAL FAILURE: Group video calls do not work; participants cannot be seen (Bug ID 006). The app also lacks camera and microphone settings to enable calls (Bug ID 009).
FT-COMMS-VOICE	Send a voice note	Quickly send an audio message instead of typing.	Must	CRITICAL FAILURE: Users are unable to send voice notes (Bug ID 008).
FT-MEDIA-SHARE	Send and receive multimedia files (images, PDFs,	Share rich content without	Must	CRITICAL FAILURE on iOS: iPhone

Feature Code	I Want To	So That I Can	Priority	Notes
	videos) on all devices	the app crashing.		users cannot view files; the app crashes automatically. Videos are incorrectly appearing as files.
FT-MSG-STATUS	See message statuses	Confirm if my message was sent, delivered, and read.	Must	CRITICAL FAILURE: The user's side of the chat does not show 'sent,' 'delivered,' and 'read' statuses.
FT-MSG-SPECIAL	Send messages with emojis and special characters	Express myself fully.	Must	FAILED: The system cannot send messages that contain emojis.
FT-AGENT-COLLAB	See which agent is currently typing or last responded	Collaborate with other agents without sending duplicate responses.	Should	FAILED: This indicator is not shown in multi-agent chats.

3.3 Additional Features

Feature Code	I Want To	So That I Can	Priority	Notes
FT-GROUP-JOIN	Join a public group	Participate in the community discussion.	Should	Major Failure: There is no option to join a public group (Bug ID 017).
FT-UI-LEGAL	View the Terms of Use	Understand the rules of the service.	Should	Major Failure: The Terms of Use page shows

Feature Code	I Want To	So That I Can	Priority	Notes
				a 404 error (Bug ID 003).
FT-UI-STABILITY	Use the app without it disappearing or losing data	Have a reliable communication experience.	Must	Major Failure: Created communities disappear over time (Bug ID 014).



4 Detailed Feature Requirements

4.1 Ft Media Share

4.1.1 Priority

Must Have

4.1.2 User Story

As an iPhone user, I want to receive and open files (like images, PDFs, videos) without the application crashing.

4.1.3 Preconditions

A user sends a multimedia file to an iPhone user.

4.1.4 Postconditions

The iPhone user can see and open the file. The app remains stable. Videos are rendered as playable videos, not generic files.

4.1.5 Test Cases

Id	Description	Weight
MEDIA-TC-001	Verify that sending an image, PDF, and video to an iPhone user is successful and does not cause a crash.	High

4.2 Ft Comms Call

4.2.1 Priority

Must Have

4.2.2 User Story

As a user, I want to access camera and microphone settings within the app so that I can grant permissions and make calls.

4.2.3 Preconditions

User attempts to initiate a voice or video call.

4.2.4 Postconditions

The user is prompted to grant camera/microphone permissions, or can access these settings, and can successfully start a call.

4.2.5 Test Cases

Id	Description	Weight
CALL-TC-001	Verify that camera and microphone settings are available and functional to allow calls.	High
CALL-TC-002	Verify that in a group video call, all participants are visible to each other.	High

4.3 Ft Msg Status

4.3.1 Priority

Must Have

4.3.2 User Story

As a user, I want to see visual indicators next to my sent messages to know if they have been sent, delivered to the recipient, and read by them.

4.3.3 Preconditions

User has sent a message.

4.3.4 Postconditions

The message displays a 'sent' status immediately, a 'delivered' status when it reaches the recipient's device, and a 'read' status when they open the chat.

4.3.5 Test Cases

Id	Description	Weight
MSG-TC-001	Verify that 'sent,' 'delivered,' and 'read' statuses are displayed correctly and in a timely manner.	High



5 Technical Requirements

5.1 Performance Standards

Requirement	Target	How To Test
Image load time	< 2 seconds for preview	Measure time from message receipt to image thumbnail display. Addresses Bug ID 005.
App Stability on iOS	Zero crashes during file handling operations.	Repeatedly send and open various file types on test iPhone devices.

5.2 Platform Requirements

Platform	Minimum Version	Target Version	Notes
Android	Android 11 (API 30)	API 34	Testing was performed on pixel4a.
iOS	iOS 14	iOS 17	Testing was performed on iPhone 11 and iPhone 11 Pro Max.

5.3 Security Privacy

Requirement	Must Have	Implementation
User data encryption	True	End-to-end encryption for all messages and calls.

6 External Dependencies

6.1 Third Party Services

Service	What It Does	Criticality	Backup Plan
Push Notification Service (FCM/ APNS)	Delivers notifications for new messages and missed calls.	Critical	Ensure robust implementation and error handling for token registration and message delivery.
Cloud Storage Provider	Stores all multimedia files (images, videos, documents).	Critical	Use a provider with high availability and data redundancy, like AWS S3 or Google Cloud Storage.



7 Release Planning

7.1 Development Phases

Phase	Features Included	Timeline	Success Criteria
Phase 1 (Core Functionality Restoration)	['FT-MEDIA-SHARE (iOS crash fix)', 'FT-COMMS-CALL (implement settings, fix group calls)', 'FT-COMMS-VOICE (fix sending)', 'FT-MSG-STATUS (implement UI)', 'FT-MSG-SPECIAL (fix emojis)', 'FT-BLOCK-USER (implement logic)']	6 weeks	All 'Must' priority features are functional. All major bugs (001-010, 013, 014, 017) are resolved. Pass rate > 90%.

7.2 Release Checklist

- All Must-Haves complete
- No critical or major bugs remain
- iOS app no longer crashes when handling files
- Voice notes and video calls are fully functional on all test devices
- Message status indicators are working correctly

8 Risks Assumptions

8.1 Risks

Risk	Probability	Impact	Mitigation
The platform instability, especially on iOS, is systemic and requires a major architectural refactor, delaying fixes.	Medium	High	Conduct a root cause analysis of the iOS crash immediately. Allocate senior iOS developers to investigate and fix.
Failure to deliver basic communication features (voice notes, calls, read receipts) will cause users to abandon the app for more mature competitors.	High	High	Strictly prioritize the development backlog according to Phase 1 of the release plan.

8.2 Assumptions

- The backend infrastructure for messaging, calls, and user management is in place, but the client-side implementation is flawed.
- The user base expects feature parity with other modern messaging applications.

9 Market Specific Considerations

9.1 Primary Market

- General Communication

9.2 Target Demographics

- Users seeking a real-time chat solution

9.3 Competition

- WhatsApp, Telegram, Signal, Messenger



10 Sign Off

10.1 Approval

Role	Name	Signature	Date

10.2 Document History

Version	Date	Changes Made	Changed By
0.1	2025-08-18	Initial draft based on 'SASA CHAT' testing report.	Gemini System Designer



11 Additional Context

11.1 Success Metrics

11.1.1 Customer Acquisition

Reduce user churn rate by 50% after Phase 1 release.

11.1.2 Partner Signups

N/A

11.1.3 Daily Orders

N/A

11.1.4 Customer Satisfaction

Achieve a >95% pass rate in the next regression testing cycle.

11.1.5 Order Success Rate

N/A

11.1.6 Average Delivery Time

N/A

