functional breakdown

1. User Interface (UI)

Login Screen

- **Test Scenario 1:** Verify UI elements (buttons, text fields, etc.) are visible and properly aligned.
- **Test Scenario 2:** Ensure user can log in using correct username/email and password.
- **Test Scenario 3:** Check that the "Forgot Password" link works and redirects correctly.
- **Test Scenario 4:** Test multi-factor authentication (SMS, authenticator app).

Main Dashboard

- **Test Scenario 1:** Verify the visibility and functionality of navigation bar (Home, Friends, Servers, Settings).
- **Test Scenario 2:** Test that the channel list updates correctly when switching between servers and channels.
- **Test Scenario 3:** Ensure message box and send button are functional, including the ability to send and receive messages.

Voice & Video Call Interface

- **Test Scenario 1:** Ensure microphone, camera, and speaker buttons are visible and functional.
- **Test Scenario 2:** Check that the video feed appears and updates during a call.
- **Test Scenario 3:** Verify functionality of call controls (mute, unmute, hang up).

Server and Channel Navigation

- **Test Scenario 1:** <mark>Verify server list visibility and navigation between servers.</mark>
- **Test Scenario 2:** Ensure channels are categorized properly (text vs. voice).
- **Test Scenario 3:** Test user role-based UI elements for Admin, Moderator.

2. Account & User Management

Sign Up / Sign In

- **Test Scenario 1:** Ensure email/password validation works (both valid and invalid inputs).
- **Test Scenario 2:** Verify two-factor authentication process if enabled.

Profile Management

- **Test Scenario 1:** Test username, profile picture, bio, and status updates.
- **Test Scenario 2:** Verify changes reflect immediately on the profile.

Friends and Block List

- **Test Scenario 1:** Add and remove friends correctly.
- **Test Scenario 2:** Block/unblock users and verify changes.
- **Test Scenario 3:** Ensure notifications for friend requests are received.

Privacy and Security Settings

- **Test Scenario 1:** Test password change functionality.
- **Test Scenario 2:** Verify privacy settings allow users to control who can message them or see their status.
- **Test Scenario 3:** Test setup of two-factor authentication.

3. Chat and Messaging

Text Messaging

- **Test Scenario 1:** Send and receive messages in both one-on-one and group chats.
- **Test Scenario 2:** Verify emoticons, gifs, and file attachments are sent and received properly.
- **Test Scenario 3:** Test @mentions, replies, and threaded messages functionality.
- **Test Scenario 4:** Ensure message notifications (sound, popup) trigger on new messages.

Voice Messaging

- **Test Scenario 1:** Test push-to-talk functionality for voice messages.
- **Test Scenario 2:** Verify continuous voice chat functionality (no interruptions).
- **Test Scenario 3:** Test voice message recording and playback.

File Sharing

- **Test Scenario 1:** Ensure file upload and download work (images, documents).
- **Test Scenario 2:** Verify file size limits.
- **Test Scenario 3:** Test file preview functionality.

4. Voice and Video Calls

Voice Call Features

- **Test Scenario 1:** Verify starting/receiving voice calls functionality.

- **Test Scenario 2:** Ensure mute/unmute microphone functionality works.
- **Test Scenario 3:** Verify the ability to select the correct speaker.
- **Test Scenario 4:** Test call quality (latency, distortion).

Video Call Features

- **Test Scenario 1:** Test starting/receiving video calls.
- **Test Scenario 2:** Verify enabling/disabling video feed works.
- **Test Scenario 3:** Test screen sharing functionality during video calls.
- **Test Scenario 4:** Check video call quality and latency.

Group Calls

- **Test Scenario 1:** Ensure multi-user support for group calls.
- **Test Scenario 2:** Verify speaker view for large group calls.
- **Test Scenario 3:** Test video quality during group calls.

Notifications for Calls

- **Test Scenario 1:** Verify incoming call notifications appear correctly.
- **Test Scenario 2:** Ensure call rejection options are available.
- **Test Scenario 3:** Check call history for recent calls.

5. Server and Channel Management

Server Creation and Management

- **Test Scenario 1:** Verify server creation process (name, region, settings).
- **Test Scenario 2:** Test assigning and managing roles (Admin, Moderator, Member).
- **Test Scenario 3:** Ensure permissions are set correctly for roles and channels.

Channel Creation and Management

- **Test Scenario 1:** Verify text and voice channel creation.
- **Test Scenario 2:** Test channel permissions (public vs. private).
- **Test Scenario 3:** Verify channel visibility for users.

Server Settings

- **Test Scenario 1:** Test modifying server settings (name, region).
- **Test Scenario 2:** Test managing server roles and permissions.
- **Test Scenario 3:** Ensure integration with third-party apps and bots is functional.

6. Bot and Integration Testing

Bot Interaction

- **Test Scenario 1:** Add/remove bots to servers.
- **Test Scenario 2:** Test bot commands and responses.
- **Test Scenario 3:** Verify bot permissions work correctly.

Third-party Integrations

- **Test Scenario 1:** Test integration with external apps like Spotify, YouTube.
- **Test Scenario 2:** Verify in-app functionality for these integrations (e.g., music sharing, video links).

7. Notifications

Push Notifications

- **Test Scenario 1:** Verify notification delivery for messages, calls, mentions.
- **Test Scenario 2:** Test notification customization (muting channels, changing preferences).

Email Notifications

- **Test Scenario 1:** Verify email notifications for account updates and invites.
- **Test Scenario 2:** Test email unsubscribe functionality.

8. Performance and Load Testing

App Startup Time

- **Test Scenario 1:** Measure the time it takes for the app to load and reach the dashboard.

Message Delivery Time

- **Test Scenario 1:** Measure the time it takes to send and receive messages.

Voice Call Latency

- **Test Scenario 1:** Measure voice call delays and test call quality under load.

Concurrent Users

- **Test Scenario 1:** Test app performance under high user traffic.

9. Cross-platform Testing

Mobile (iOS and Android)

- **Test Scenario 1:** Test app functionality (messaging, voice/video calls) on both platforms.

Web App

- **Test Scenario 1:** Verify browser compatibility across Chrome, Firefox, Safari.

- **Test Scenario 2:** Test all features (messaging, calls) work correctly on the web app.

Desktop App (Windows, Mac)

- **Test Scenario 1:** Verify installation and functionality on Windows and Mac.
- **Test Scenario 2:** Test voice and video calls on desktop.
- **Test Scenario 3:** Check for app stability (no crashes, memory leaks).

10. Accessibility Testing

Keyboard Navigation

- **Test Scenario 1:** Verify the app can be navigated using only the keyboard (tab navigation, shortcuts).

Screen Reader Compatibility

- **Test Scenario 1:** Test app compatibility with screen readers (VoiceOver, TalkBack).

Color Contrast and Font Size

- **Test Scenario 1:** Ensure UI is accessible for visually impaired users (proper contrast, readable font sizes).

11. Error Handling and Edge Cases

Network Interruptions

- **Test Scenario 1:** Test app behavior with poor or lost internet connection (message retries, call re-establishment).

Error Messaging

- **Test Scenario 1:** Verify correct error messages are displayed for invalid actions (incorrect login, failed file upload).

Unexpected Inputs

- **Test Scenario 1:** Test the app's response to invalid inputs (wrong file type, overly long messages).

12. Updates and Version Control

App Update

- **Test Scenario 1:** Test automatic updates and installation process.
- **Test Scenario 2:** Verify the app continues to function correctly after an update.

Backward Compatibility

- **Test Scenario 1:** Ensure older versions of the app work correctly with newer versions of Discord.

Data Retention

- **Test Scenario 1:** Verify user data is not lost during an update.