

Test Case 1: Verify Smartphone Power On/Off

- **Objective:** Ensure the smartphone powers on and off correctly.
- **Preconditions:** Smartphone fully charged.
- **Test Steps:**
 1. Press and hold the power button to turn on the smartphone.
 2. Wait for the device to boot up.
 3. Press and hold the power button again to access the power off menu.
 4. Select the "Power Off" option.
- **Expected Result:** The smartphone should turn on, boot into the home screen without issues, and turn off when prompted.

Test Case 2: Verify Screen Touch Sensitivity

- **Objective:** Ensure the touchscreen responds accurately to user input.
- **Preconditions:** Smartphone powered on.
- **Test Steps:**
 1. Tap various areas of the screen, including the edges and corners.
 2. Perform swipe gestures (up, down, left, right) across the screen.
 3. Pinch to zoom in and out on an image or webpage.
- **Expected Result:** The screen should accurately register taps, swipes, and pinch gestures without lag or missed touches.

Test Case 3: Verify Call Functionality

- **Objective:** Ensure the smartphone can make and receive calls.
- **Preconditions:** SIM card inserted, smartphone powered on.
- **Test Steps:**
 1. Open the dialer app and dial a valid phone number.
 2. Place a call and verify the connection.
 3. Test the call quality by speaking with the other party.
 4. Receive an incoming call and answer it.
- **Expected Result:** The smartphone should successfully make and receive calls with clear audio quality on both ends.

Test Case 4: Verify Network Connectivity (Wi-Fi, 4G/5G)

- **Objective:** Ensure the smartphone connects to Wi-Fi and mobile networks correctly.
- **Preconditions:** SIM card inserted, Wi-Fi network available.
- **Test Steps:**
 1. Turn on Wi-Fi and connect to a network.
 2. Browse the internet to test connectivity.
 3. Turn off Wi-Fi and switch to mobile data (4G/5G).

4. Browse the internet using mobile data.
- **Expected Result:** The smartphone should connect to both Wi-Fi and mobile networks, allowing for seamless internet browsing.

Test Case 5: Verify Camera Functionality

- **Objective:** Ensure the camera captures photos and videos correctly.
- **Preconditions:** Smartphone powered on, camera app accessible.
- **Test Steps:**
 1. Open the camera app and take a photo in both normal and portrait modes.
 2. Switch to video mode and record a short video.
 3. Test the front-facing camera by taking a selfie.
 4. Review the captured photos and videos for clarity and quality.
- **Expected Result:** The camera should capture clear, high-quality photos and videos in all tested modes.

Test Case 6: Verify Battery Performance

- **Objective:** Ensure the smartphone's battery performs as expected under different usage conditions.
- **Preconditions:** Fully charged smartphone.
- **Test Steps:**
 1. Use the smartphone intensively for 1 hour (e.g., streaming videos, playing games).
 2. Note the battery percentage before and after the test.
 3. Let the phone idle for 1 hour and observe the battery drain.
 4. Charge the phone from 0% to 100% and record the charging time.
- **Expected Result:** The battery should drain at a reasonable rate during intensive use and idle slowly, charging fully within the expected time frame.

Test Case 7: Verify Fingerprint/Face Recognition

- **Objective:** Ensure the fingerprint scanner or face recognition unlocks the smartphone correctly.
- **Preconditions:** Fingerprint or face data registered on the smartphone.
- **Test Steps:**
 1. Lock the smartphone screen.
 2. Attempt to unlock the smartphone using the registered fingerprint or face.
 3. Test unlocking under different conditions (e.g., low light for face recognition, wet finger for fingerprint).
 4. Try to unlock the phone using an unregistered fingerprint or face.
- **Expected Result:** The smartphone should unlock quickly and accurately with the registered fingerprint or face, and deny access with unregistered attempts.

Test Case 8: Verify Audio Quality (Speakers & Headphones)

- **Objective:** Ensure the smartphone's audio quality is clear and loud enough through speakers and headphones.
- **Preconditions:** Smartphone powered on, headphones available.
- **Test Steps:**
 1. Play music or a video on the smartphone's built-in speakers.
 2. Adjust the volume and listen for any distortion or audio issues.
 3. Plug in headphones and play the same audio.
 4. Test the headphone's volume control and check for clear audio.
- **Expected Result:** The audio should be clear and free from distortion at all volume levels, both through speakers and headphones.

Test Case 9: Verify App Performance

- **Objective:** Ensure installed apps open quickly and function without issues.
- **Preconditions:** Smartphone with several apps installed.
- **Test Steps:**
 1. Open a variety of apps (e.g., social media, games, productivity).
 2. Use each app for a few minutes, navigating through its features.
 3. Switch between multiple apps using the multitasking feature.
 4. Observe for any crashes, freezes, or lag.
- **Expected Result:** All apps should open quickly, function smoothly, and switch without lag or crashes.

Test Case 10: Verify Storage and Memory Management

- **Objective:** Ensure the smartphone effectively manages storage and memory.
- **Preconditions:** Smartphone with some storage already in use.
- **Test Steps:**
 1. Download and install a large app or file.
 2. Check the available storage before and after the installation.
 3. Open several apps to test memory management and switching.
 4. Monitor the smartphone's performance (e.g., speed, responsiveness) while running multiple apps.
- **Expected Result:** The smartphone should accurately report available storage, handle large files efficiently, and manage memory effectively without slowing down.