|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Mobile app testing peculiarities checklist | | | | |
| Cross-platform testing | | | | |
| No | Description | Passed/Failed | Comment |
|  | The app behaves as designed/desired on different operating systems: |  | Selected based on the mobile operating system market share worldwide dated 18 September 2023 ([link](https://gs.statcounter.com/os-market-share/mobile/worldwide)) |
| Android |  |  |
| iOS |  |  |
|  | The app behaves as designed/desired on different operating systems’ versions: |  |  |
| Android: |  | Selected based on the mobile & tablet Android version market share worldwide dated 18 September 2023 ([link](https://gs.statcounter.com/os-version-market-share/android/mobile-tablet/worldwide)) |
| 13.0 |  |  |
| 12.0 |  |  |
| 11.0 |  |  |
| 10.0 |  |  |
| 9.0 Pie |  |  |
| 8.0 Oreo |  |  |
| iOS: |  | Selected based on the iOS version market share worldwide dated 18 September 2023 ([link](https://gs.statcounter.com/ios-version-market-share)) |
|  | iOS 16.6 |  |  |
| iOS 16.5 |  |  |
| iOS 16.3 |  |  |
| iOS 16.1 |  |  |
| iOS 15.7 |  |  |
| iOS 16.2 |  |  |
|  | The app behaves as designed/desired on different screen resolution stats: |  | Selected based on the mobile screen resolution stats share worldwide dated 18 September 2023 ([link](https://gs.statcounter.com/screen-resolution-stats/mobile/worldwide)) |
| 360 x 800 |  |  |
| 390 x 844 |  |  |
| 414 x 896 |  |  |
| 393 x 873 |  |  |
| 412 x 915 |  |  |
| 36 x 780 |  |  |
|  | The app behaves as designed/desired on different types of iOS devices: |  | Selected based on the global top 10 best performing iOS devices in August 2023 ([link](https://www.antutu.com/en/doc/130213.htm)) |
| iPhone 14 Pro |  |  |
| iPhone 14 Pro Max |  |  |
| iPhone 14 Plus |  |  |
| iPhone 13 Pro Max |  |  |
| iPhone 13 Pro |  |  |
|  | The app behaves as designed/desired on different types of Android devices: |  | Selected based on the global top 10 best performing Android devices in August 2023 ([link](https://www.antutu.com/en/doc/130214.htm)) |
| Nubia Red Magic 8 Pro |  |  |
| Asus ROG Phone 7 |  |  |
| Xiaomi 13 |  |  |
| Samsung Galaxy S 23+ |  |  |
| Xiaomi 13 Pro |  |  |
|  | The app behaves as designed/desired if the device is tilted (landscape/portrait mode) |  |  |
| Interrupt testing | | | |
|  | The app behaves as designed/desired if there is an incoming call |  |  |
|  | The app behaves as designed/desired if there is an outcoming call |  |  |
|  | The app behaves as designed/desired if there is an incoming SMS |  |  |
|  | The app behaves as designed/desired if there is an outcoming SMS |  |  |
|  | The app behaves as designed/desired if there is an incoming MMS |  |  |
|  | The app behaves as designed/desired if there is an outcoming MMS |  |  |
|  | The app behaves as designed/desired if the charger is connected |  |  |
|  | The app behaves as designed/desired if the charger is disconnected |  |  |
|  | The app behaves as designed/desired if the USB cable is connected |  |  |
|  | The app behaves as designed/desired if the USB cable is disconnected |  |  |
|  | The app behaves as designed/desired if the SD card is connected |  |  |
|  | The app behaves as designed/desired if the SD card is disconnected |  |  |
|  | The app behaves as designed/desired if the player is turned on |  |  |
|  | The app behaves as designed/desired if the player is turned off |  |  |
|  | The app behaves as designed/desired if the device goes to sleeping mode |  |  |
|  | The app behaves as designed/desired if the device resumes from sleeping mode |  |  |
|  | The app behaves as designed/desired if a local message is coming from another app (think of: calendar reminders, to-do task etc.) |  |  |
|  | The app behaves as designed/desired if a push message is coming from another app (twitter mentions, whatsapp/Telegram/Viber/Facebook message) |  |  |
|  | The app behaves as designed/desired if the “Battery low” message is pushed |  |  |
|  | The app behaves as designed/desired if external devices (headphones, Apple Watch, etc.) are connected |  |  |
|  | The app behaves as designed/desired if external devices (headphones, Apple Watch, etc.) are disconnected |  |  |
|  | The app behaves as designed/desired if the device resumes from lock screen |  |  |
|  | The app behaves as designed/desired if the sound on the device is turned off |  |  |
|  | The app behaves as designed/desired if the device is in airplane mode |  |  |
| Connectivity testing | | | |
|  | The app behaves as designed/desired if connected to the internet through Wi-Fi |  |  |
|  | The app behaves as designed/desired if connected to the internet through mobile data |  |  |
|  | The app behaves as designed/desired if connected to the internet through Personal Hotspot |  |  |
|  | The app behaves as designed/desired if the app is out of network reach NOTE: also test on point of break for Wi-Fi and Personal Hotspot connection |  |  |
|  | The app resumes working when it gets back into network reach from outside reach of the network |  |  |
|  | Update transactions are processed correctly after re-establishing connection |  |  |
|  | The app behaves as designed/desired when the internet connection is off and network connectivity is low |  |  |
|  | The app behaves as designed/desired when the internet connection keeps fluctuating |  |  |
|  | The app still works correctly when tethering or otherwise connected to another device |  |  |
|  | The app behaves as designed/desired if the app switches between networks (Wi-Fi, 5G, 4G, 3G, 2G) |  |  |
| Security testing | | | |
|  | The app behaves as designed/desired if permissions (access to camera/microphone/gallery/etc.) are used |  |  |
|  | If the app is stopped at an unexpected time, user data should be saved locally and available at start-up |  |  |
|  | The app has proper rules and mechanisms in place to authenticate users on the platform |  |  |
|  | User data (personal data and photos, passwords) are not transmitted in the clear |  |  |
|  | The confidential data of the user is not accessible to other users on the platform |  |  |
|  | In the fields where an user enters a password and confirms the password, the data is hidden by asterisks |  |  |
|  | The app has a proper mechanism in place to recover forgotten passwords |  |  |
|  | The deactivated users and users entering old passwords are not allowed to log in |  |  |
|  | The app can fight against brute force attacks, SQL injection attacks |  |  |
|  | Face identity or fingerprint verification behaves as designed/desired |  |  |
| Performance testing | | | |
|  | The app behaves as designed/desired when the device is charging |  |  |
|  | The app behaves as designed/desired when the battery is low |  |  |
|  | The app behaves as designed/desired the battery is fully charged |  |  |
|  | The app behaves as designed/desired when multiple users are logged in at the same time |  |  |
|  | The app behaves as designed/desired when the user tries to enter multiple characters continuously |  |  |
|  | The app behaves as designed/desired when the user tries to click on multiple buttons/icons at the same time |  |  |
|  | The app behaves as designed/desired when the user is in a moving condition i.e. either in a vehicle or walking |  |  |
|  | The app behaves as designed/desired in the event of a system crash or when the app is stopped abruptly |  |  |
|  | The launch time of the app is as designed/desired |  |  |
|  | The app behaves as designed/desired if it is collapsed |  |  |
|  | The app behaves as designed/desired if it is expanded |  |  |
|  | The app limits or cleans the amount of cached data |  |  |
| Stress-testing | | | |
|  | The app behaves as designed/desired if CPU is highly loaded |  |  |
|  | The app behaves as designed/desired in case of out of memory |  |  |
|  | The app behaves as designed/desired in case of low network bandwidth |  |  |
|  | The app can switch to different apps on the device through multitasking as designed/desired |  |  |
|  | The app behaves as designed/desired if the device is shaken |  |  |
| Compatibility testing | | | |
|  | A geo displays relevant location |  |  |
|  | Various payment methods (Google Pay, Apple Pay) can be applied |  |  |
|  | The app behaves as designed/desired when using sensors (light, device temperature, gyroscope, etc.) |  |  |
|  | The app connects correctly to the different social networks (Twitter, Facebook, etc) |  |  |
|  | The app does not interfere with other apps when in background/multitasking mode (using GPS, playing music, etc.) |  |  |
| Update testing | | | |
|  | The app can be installed on the device using Wi-Fi |  |  |
|  | The app can be installed on the device using 3G |  |  |
|  | The app can be de-installed from the device |  |  |
|  | The app behaves as designed/desired after re-installation |  |  |
|  | The app can be found in the App store/Market Play? (to be checked after go-live) |  |  |
|  | The app can be updated using 3G |  |  |
|  | The app can be updated using Wi-Fi |  |  |
| UI/UX testing | | | |
|  | The functionality of all the buttons or keys on the device are defined for this app |  |  |
|  | In case there’s a true “home” button available on the device, the home button gets the user back to the home screen of the device |  |  |
|  | Most common gestures are available to control the app |  |  |
|  | The text on the app is visible and does not cut off from the side |  |  |
|  | The popups, and alert notification appear correctly and at the right time |  |  |
|  | Navigation through the menu is seamless and swipe functions are working as designed/desired |  |  |
|  | The page load duration: if the page takes a longer time to load, there is a progress bar that allows the user to get an idea about the delay |  |  |
|  | The company logo and image size are as designed/desired |  |  |
|  | There is no any lag in the content while the user scrolls up and down |  |  |
|  | If the screen has editing option without saving, there is the message with a popup to save the details before shifting to another screen |  |  |
|  | The data does not get deleted pushing the app to the background while carrying out other function on the phone |  |  |
| Usability testing | | | |
|  | The design of the app is not dark so that users cannot read the content |  |  |
|  | Navigational elements: a user does not get lost in the app |  |  |
|  | Gestures in the app correspond to a standard meaning (example: swiping from top to bottom enables the notification center) |  |  |
|  | It is possible for users to go back to a previous screen for instance by adding a back or cancel button |  |  |
|  | If there is a long list of data to scroll through, there is a search option above the list |  |  |
|  | In case of ‘live’ filtering of data while the user enters his search query, it works as designed/desired |  |  |
|  | The appearance of buttons that perform standard actions are not altered in the app (for instance: refresh, organize, trash, Reply, back, etc.) |  |  |
|  | Tapable elements have the right size and are suitable to big fingers |  |  |
|  | Buttons locate in the same place of the screen to avoid confusion |  |  |
|  | Buttons that have the same function have the same color |  |  |
|  | Contextual menus are not overloaded |  |  |
|  | Help info is easily available |  |  |
|  | Keyboard adjusts to expected input (for instance numbers/letters when expected) |  |  |
|  | Inactive buttons are clearly distinguished from active buttons |  |  |
| Conformance testing | | | |
| App Store Review Guidelines ([link](https://developer.apple.com/app-store/review/guidelines/)) | | | |
|  | The app does not include content that is offensive, insensitive, upsetting, intended to disgust, in exceptionally poor taste, or just plain creepy |  |  |
|  | The app with user-generated content or social networking services includes: |  |  |
| A method for filtering objectionable material from being posted to the app |  |  |
| A mechanism to report offensive content and timely responses to concerns |  |  |
| The ability to block abusive users from the service |  |  |
| Published contact information so users can easily reach the app’s contact person |  |  |
|  | Kids Category apps: | | |
| There is no links out of the app, purchasing opportunities, or other distractions to kids unless reserved for a designated area behind a parental gate |  |  |
| The app may not send personally identifiable information or device information to third parties |  | Exceptions may apply |
|  | Medical apps: | | |
| The app clearly discloses data and methodology to support accuracy claims relating to health measurements |  |  |
| App reminds users to check with a doctor in addition to using the app and before making medical decisions |  |  |
|  | Drug dosage calculators: | | |
| The app comes from the drug manufacturer, a hospital, university, health insurance company, pharmacy or other approved entity, or receives approval by the FDA or one of its international counterparts |  |  |
| The app will be supported and updated over the long term |  |  |
|  | The app and its Support URL include an easy way to contact the app’s contact person |  |  |
|  | The app implements appropriate security measures to ensure proper handling of user information collected pursuant to the Apple Developer Program License Agreement and the App Store Review Guidelines and prevent its unauthorized use, disclosure, or access by third parties |  |  |
|  | The app’s functionality is clear |  |  |
|  | If the app includes in-app purchases, the app description, screenshots, and previews clearly indicate whether any featured items, levels, subscriptions, etc. require additional purchases |  |  |
|  | The app name is limited to 30 characters |  |  |
|  | Metadata such as app names, subtitles, screenshots, and previews do not include prices, terms, or descriptions that are not specific to the metadata type |  |  |
|  | The app clearly describes new features and product changes in their “What’s New” text |  | Simple bug fixes, security updates, and performance improvements may rely on a generic description, but more significant changes must be listed in the notes |
|  | The iPhone app runs on iPad |  | Whenever possible |
|  | The app does not rapidly drain battery, generate excessive heat, or put unnecessary strain on device resources |  |  |
|  | The Apple TV app can be used without the need for hardware inputs beyond the Siri remote or third-party game controllers |  | If a game controller is required, that is clearly explained in app’s metadata |
|  | The app never suggests or requires a restart of the device or modifications to system settings unrelated to the core functionality of the app |  |  |
|  | The app requests explicit user consent and provides a clear visual and/or audible indication when recording, logging, or otherwise making a record of user activity |  |  |
|  | The app that enables users to view and select files includes items from the Files app and the user’s iCloud documents. |  |  |
|  | The app does not contain empty ad banners or test advertisements |  |  |
|  | Display advertising is limited to your main app binary, and is not included in extensions, App Clips, widgets, notifications, keyboards, watchOS apps, etc. |  |  |
|  | Ads displayed in the app is appropriate for the app’s age rating, allows the user to see all information used to target them for that ad (without requiring the user to leave the app), and is not engaged in targeted or behavioral advertising based on sensitive user data such as health/medical data (e.g. from the HealthKit APIs), school and classroom data (e.g. from ClassKit), or from kids (e.g. from apps in the Kids Category), etc. |  |  |
|  | Interstitial ads or ads that interrupt or block the user experience clearly indicate that they are an ad, do not manipulate or trick users into tapping into them, and provide easily accessible and visible close/skip buttons large enough for people to easily dismiss the ad |  |  |
|  | The app that contains ads includes the ability for users to report any inappropriate or age-inappropriate ads |  |  |
|  | App subscriptions work on all of the user’s devices where the app is available |  |  |
|  | The app works on its own without requiring installation of another app to function |  |  |
|  | If the app needs to download additional resources in order to function on initial launch, the size of the download is disclosed and users are prompted before doing so |  |  |
|  | The app that uses a third-party or social login service (such as Facebook Login, Google Sign-In, Sign in with Twitter, Sign In with LinkedIn, Login with Amazon, or WeChat Login) to set up or authenticate the user’s primary account with the app also offers Sign in with Apple as an equivalent option |  |  |
|  | The app includes a link to its privacy policy in the App Store Connect metadata field and within the app in an easily accessible manner |  |  |
|  | The app that collects user or usage data secures user consent for the collection, even if such data is considered to be anonymous at the time of or immediately following collection. Paid functionality is not dependent on or requires a user to grant access to this data. The app also provides the customer with an easily accessible and understandable way to withdraw consent. The purpose strings clearly and completely describe use of the data |  |  |
|  | The app requests access to data relevant to the core functionality of the app and only collects and uses data that is required to accomplish the relevant task |  |  |
|  | If the app supports account creation, account deletion within the app is offered |  |  |
|  | If the core app functionality is not related to a specific social network (e.g. Facebook, WeChat, Weibo, Twitter, etc.), access without a login or via another mechanism is provided |  |  |
|  | The app includes a mechanism to revoke social network credentials and disable data access between the app and social network from within the app |  |  |
|  | The app only includes content that you created or that you have a license to use |  |  |
| Apple Human Interface Guidelines  ([link](https://developer.apple.com/design/human-interface-guidelines/)) | | | |
| Accessibility | | | |
|  | The app supports familiar, consistent interactions that make complex tasks simple and straightforward to perform |  |  |
|  | All app’s content can be perceived whether people are using sight, hearing, or touch |  |  |
|  | The app supports personalization, i.e. when using standard components to implement app, interface, text and controls automatically adapt to several accessibility settings, such as Bold Text, Larger Text, Invert Colors, and Increase Contrast |  |  |
| Interactions | | | |
|  | The app supports gestures that target system features |  |  |
|  | The app supports alternative ways to perform gesture-based actions |  |  |
|  | App’s core functionality is accessible through more than one type of physical interaction |  | When possible |
|  | If custom gestures are defined, assistive technologies that give people alternative ways to interact with the app are supported |  |  |
|  | All controls and interactive elements have a hit target that’s large enough |  |  |
|  | A consistent style hierarchy is used to communicate the relative importance of buttons |  |  |
|  | The system-provided switch component is preferred |  |  |
|  | A visual indicator in addition to color, such as an underline, is given to links |  |  |
|  | Input information by speaking instead of typing or gesturing is available |  |  |
|  | Siri or Shortcuts for performing important tasks by voice alone are supported |  |  |
|  | Selecting plain text is allowed |  | When possible |
|  | The system-defined haptics are supported |  | Where available |
| VoiceOver | | | |
|  | Alternative descriptions are provided for all images that convey meaning |  |  |
|  | Infographics are fully accessible. A concise description of the infographic that explains what it conveys is provided |  |  |
|  | Images that are purely decorative and aren’t intended to communicate anything important, are hidden from assistive technologies |  |  |
|  | Each page is given an unique title and is provides headings that identify sections in app's information hierarchy |  |  |
|  | Closed captions, audio descriptions, and transcripts are provided for audio and video content |  |  |
|  | VoiceOver users are able to navigate to every element |  |  |
|  | The VoiceOver rotor is supported |  | When necessary |
|  | The keyboard can be used to navigate and interact with all components of the app |  |  |
| Text display | | | |
|  | App’s layout is adapted to all font sizes |  |  |
|  | As font size increases, text truncation is kept to a minimum |  |  |
|  | Layout is adjusted at large font sizes |  |  |
|  | The size of meaningful interface icons is increased as font size increases |  |  |
|  | A consistent information hierarchy is maintained regardless of the current font size |  |  |
|  | Regular or heavy font weights is used in the app |  | Regular, Medium, Semibold, or Bold font weights are preferred, because they are easier to see. Ultralight, Thin, and Light font weights, which can be more difficult to see, are avoided |
|  | The app responds correctly and looks good when bold text is turned on |  |  |
|  | Custom fonts are legible |  |  |
|  | Full text justification is avoided |  |  |
|  | Using italics or all caps for long passages of text is avoided |  |  |
| Color and effects | | | |
|  | If color to convey information is used, text labels or glyph shapes are provided to help everyone perceive it |  |  |
|  | Using color combinations as the only way to distinguish between two states or values are avoided |  |  |
|  | Views respond correctly to Invert Colors |  |  |
|  | The app’s colors work well in both light and dark modes |  |  |
| Motion | | | |
|  | Tightened animations are played when Reduce Motion is on |  |  |
|  | Autoplaying video or effects without also providing a button or other way to control them is avoided |  |  |
|  | Using movement and blinking as the only way to convey information is avoided |  |  |
| App icons | | | |
|  | If the app or game runs on more than one platform, similar images and color palettes are used in all icons while rendering them in the style that’s appropriate for each platform |  |  |
|  | The app icon is optimized for the specific sizes the system displays in places like Spotlight search results, Settings, and notifications |  | If applicable |
| Color | | | |
|  | The app’s colors work well in both light and dark modes |  |  |
| Google Play Core app quality  ([link](https://developer.android.com/docs/quality-guidelines/core-app-quality)) | | | |
| Visual experience | | | |
|  | The app supports standard Back button navigation and does not make use of any custom, on-screen "Back button" prompts |  |  |
|  | The app supports gesture navigation for going back / going to the home screen |  |  |
|  | The app correctly preserves and restores user or app state |  |  |
|  | The app preserves user or app state when leaving the foreground and prevents accidental data loss due to back-navigation and other state changes |  |  |
|  | Notifications are not used for cross-promotion or advertising another product |  |  |
|  | The app supports landscape and portrait orientations and folded and unfolded device states |  |  |
|  | App fills the app window in both orientations and is not letterboxed because of configuration changes, including device folding and unfolding |  |  |
|  | The app correctly handles rapid transitions between display orientations and device folding and unfolding without display rendering problems and without losing state |  |  |
|  | The app displays graphics, text, images, and other UI elements without noticeable distortion, blurring, or pixelation |  |  |
|  | The app displays text and text blocks in an acceptable manner for each of the app’s supported languages: |  |  |
| Composition is acceptable in all supported form factors |  |  |
| No cut-off letters or words are visible |  |  |
| No improper word wraps within buttons or icons are visible |  |  |
| There is sufficient spacing between text and surrounding elements |  |  |
|  | The app’s content, and all web contents referred to by the app, support dark theme |  |  |
|  | Touch targets are at least 48dp in size |  |  |
|  | The app’s text and foreground content should maintain a high enough color contrast ratio with its background:   * 3.0:1 for large text / graphics * 4.5:1 for small text (text smaller than 18pt, or if the text is bold and smaller than 14pt) |  |  |
| Performance and stability | | | |
|  | The app does not crash or block the UI thread causing ANR (Android Not Responding”) errors |  |  |
|  | The app loads quickly or provides onscreen feedback to the user (a progress indicator or similar cue) if the app takes longer than two seconds to load |  |  |
|  | The app runs on the latest public version of the Android platform without crashing or severely impacting core functionality |  |  |
|  | The app properly supports the power management features that were introduced in Android 6.0 (Doze and App Standby) |  |  |
| Privacy and security | | | |
|  | The app requests only the absolute minimum number of permissions that it needs to support its use case at hand |  |  |
|  | The app requests permission to access sensitive data (such as SMS, Call Log, or Location) or services that cost money (such as Dialer or SMS) only when directly related to the core use cases of the apps. Implications related to these permissions should be prominently disclosed to the user |  |  |
|  | The app requests runtime permissions in context, when the functionality is requested, rather than upfront during app startup |  |  |
|  | The app clearly conveys why certain permissions are needed or follow the recommended flow to explain why it needs a permission |  |  |
|  | The app should gracefully degrade when users deny or revoke a permission. The app should not prevent the user from accessing the app altogether |  |  |
|  | All sensitive data is stored in the app's internal storage |  |  |
|  | No personal or sensitive user data is logged to the system log or an app-specific log |  |  |
|  | The app does not use any non-resettable hardware IDs, such as the IMEI, for identification purposes |  |  |
|  | The app provides hints to autofill account credentials and other sensitive information, such as credit card info, physical address, and phone number |  |  |
|  | The app supports biometric authentication to protect financial transactions or sensitive information, such as important user documents |  |  |
|  | The app listing includes a high-quality feature graphic |  |  |
|  | The feature graphic does not contain device images, screenshots, or small text that will be illegible when scaled down and displayed on the smallest screen size that your app is targeting |  |  |
|  | The feature graphic does not resemble an advertisement |  |  |
|  | The app’s screenshots and videos do not show or reference non-Android devices |  |  |
|  | The app’s screenshots or videos do not represent the content and experience of your app in a misleading way |  |  |
| Accessibility | | | |
|  | The app's content is as legible as possible (color contrast and text sizing to be checked, components are visually comprehensible and easy to discern from each other) |  |  |
|  | Font size is specified in scalable pixels (sp) and can be adjusted by users |  |  |
|  | The body size is not smaller than 12 sp |  |  |
|  | The contrast between background and text is at least 4.5:1 |  |  |
|  | A 3:1 ratio between surfaces and non-text elements is used |  |  |
|  | More than one visual affordance is used for actions like links |  |  |
|  | UI elements are described in app’s code |  | Required for TalkBack purposes |
|  | Additional textual description of icons and images are provided |  |
|  | Decorative item descriptions are set to null |  |
|  | UI granularity is considered and UI elements are grouped to allow skipping between blocks of actions and content |  |
|  | The app supports the Voice Access |  |  |
|  | The app supports the Switch Access |  |  |
| Android app Material Design  ([link](https://m3.material.io)) | | | |
|  | App’s elements are clearly visible |  |  |
|  | App elements’ contrast and size are sufficient |  |  |
|  | App elements’ hierarchy of importance is clear |  |  |
|  | Key information is discernable at a glance |  |  |
|  | Important actions are placed at the top or bottom of the screen |  |  |
|  | Related items of a similar hierarchy are placed next to each other |  |  |