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Accessibility

Contents

Flutter is committed to supporting developers who want to make their apps more accessible: usable by as many people as possil
including those with disabilities such as blindness or motor impairment.

Flutter supports three components for accessibility support:

Large fonts
Render text widgets with user-specified font sizes

Screen readers
Communicate spoken feedback about UI contents

Sufficient contrast
Render widgets with colors that have sufficient contrast

Inspecting accessibility support

Details of these are discussed below. In addition to testing for these specific topics, we recommend using automated accessibilit
scanners:

- For Android:
  1. Install the Accessibility Scanner for Android
  2. Enable the Accessibility Scanner from **Android Settings > Accessibility > Accessibility Scanner > On**
  3. Navigate to the Accessibility Scanner 'checkbox' icon button to initiate a scan
- For iOS:
  1. Open the `ios` folder of your Flutter app in Xcode
  2. Select a Simulator as the target, and click **Run** button
  3. In Xcode, select **Xcode > Open Developer Tools > Accessibility Inspector**
  4. In the Accessibility Inspector, select **Inspection > Enable Point to Inspect**, and then select the various user interface elements in running Flutter app to inspect their accessibility attributes
  5. In the Accessibility Inspector, select **Audit** in the toolbar, and then select **Run Audio** to get a report of potential issues

Large fonts

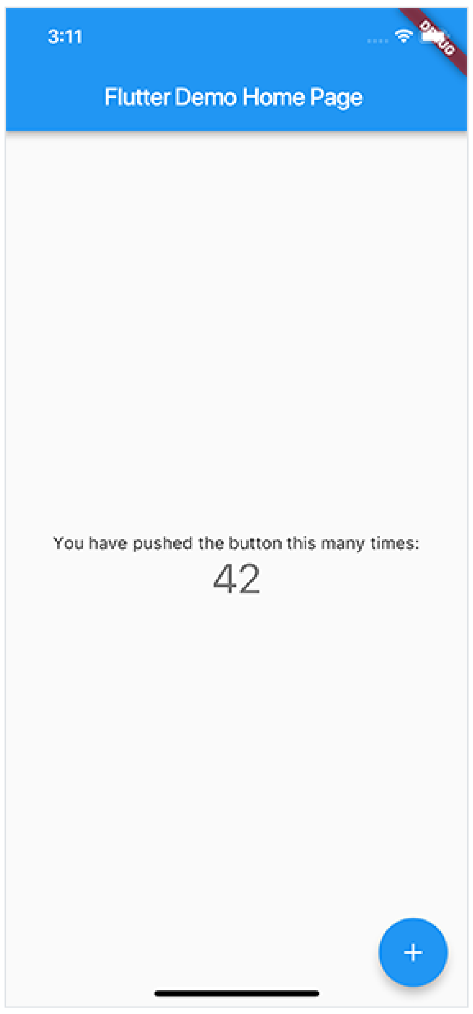
Both Android and iOS contain system settings to configure the desired font sizes used by apps. Flutter text widgets respect this (
setting when determining font sizes.

Tips for developers

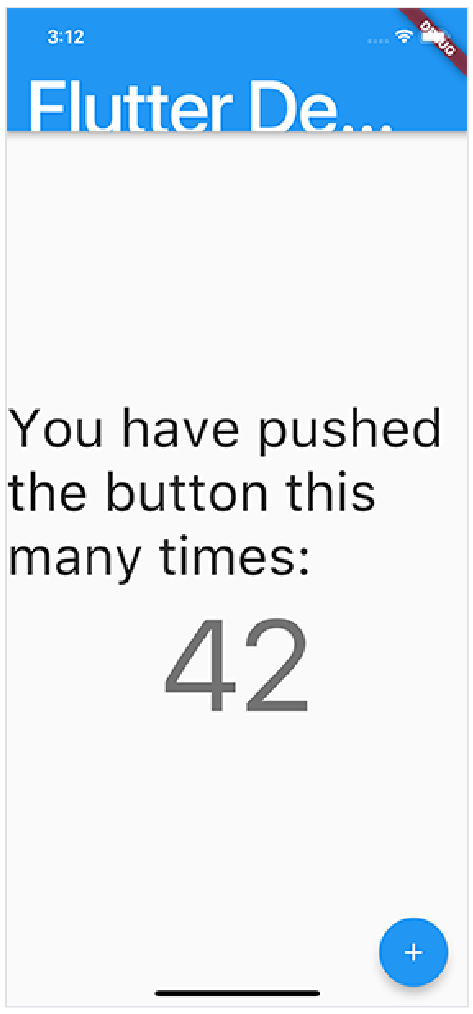
Font sizes are calculated automatically by Flutter based on the OS setting. However, as a developer you should make sure your la
has enough room to render all its contents when the font sizes are increased. For example, you can test all parts of your app on a
small-screen device configured to use the largest font setting.

Example

The following two screenshots show the standard Flutter app template rendered with the default iOS font setting, and with the
largest font setting selected in iOS accessibility settings.



Default font setting



Largest accessibility font setting

Screen readers

Screen readers (TalkBack, VoiceOver) enable visually impaired users to get spoken feedback about the contents of the screen.

Tips for developers

Turn on VoiceOver or TalkBack on your device and navigate around your app. If you run into any issues, use the `Semantics widge`
customize the accessibility experience of your app.

Sufficient contrast

Sufficient color contrast makes text and images easier to read. Along with benefitting users with various visual impairments, sufficient color contrast helps all users when viewing an interface on devices in extreme lighting conditions, such as when expos
to direct sunlight or on a display with low brightness.

The W3C recommends:

- At least 4.5:1 for small text (below 18 point regular or 14 point bold)
- At least 3.0:1 for large text (18 point and above regular or 14 point and above bold)

Tips for developers

Make sure any images you include have sufficient contrast.

When specifying colors on widgets, make sure sufficient contrast is used between foreground and background color selections.

More information

For more information, particularly about how to configure the semantics tree, see the following articles written by community members:

- A deep dive into Flutter's accessibility widgets
- Semantics in Flutter