Mobile Accessibility: Building & Testing Accessible Mobile Sites and Native Apps continued

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4. Test mobile-specific issues

Categories in Step 4

- Alternatives
- Display
- Actionable items
- Navigational aids
- Audio and video
- Forms

- Mobile / desktop interaction (mobile sites only)

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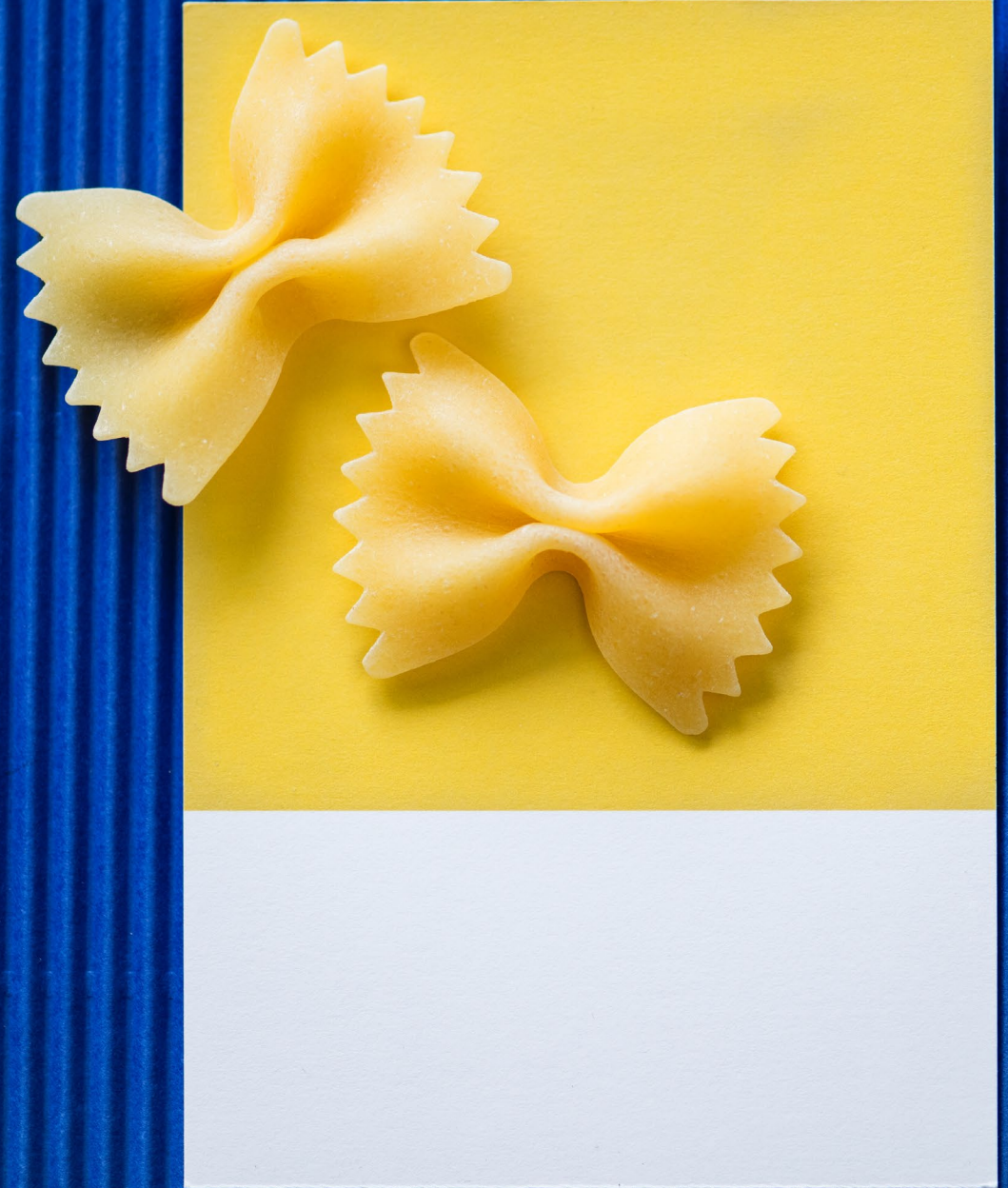
Alternatives

Alternatives

- 2.1: Motion, interaction and gesture
- 2.2: Touch gestures
- 2.3: Geolocation
- 2.4: Change of state

- 2.5: Audio cues
- 2.6: Status messages
- 2.7: Abbreviations
- 2.8: Summary of content
- 2.9: Ambiguous text

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Let's see an example from the document

Touch gestures

Any touch gesture must have an alternative, accessible, actionable item (for more information see SC 2.5.1: Pointer Gestures).

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Examples of touch gestures

- Swiping up and down or left and right

- Dragging up and down or left and right

- Double-tapping

- Tap and hold

- Tap and swipe

- Two pinch zoom

- Press and long hold

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Examples of alternative, accessible gestures

- A link

- A button

- A dropdown

- A separate page with the same functionality

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About this requirement

This requirement is particularly important for screen reader users. For example, if you require your user to swipe right to complete a purchase, when the screen reader is on, the swipe right gesture moves you to the next focusable item and doesn't complete the purchase. You must be able to perform the same action, by using a link, an up or down swipe, or some other gesture.

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About this requirement

Please note that this requirement is similar to the Exit Trap requirement. A failure of the Exit Trap requirement is that a user cannot escape from content or a page. A failure of the Touch Gestures requirement is that the user cannot choose content or a page (i.e. they are not trapped).
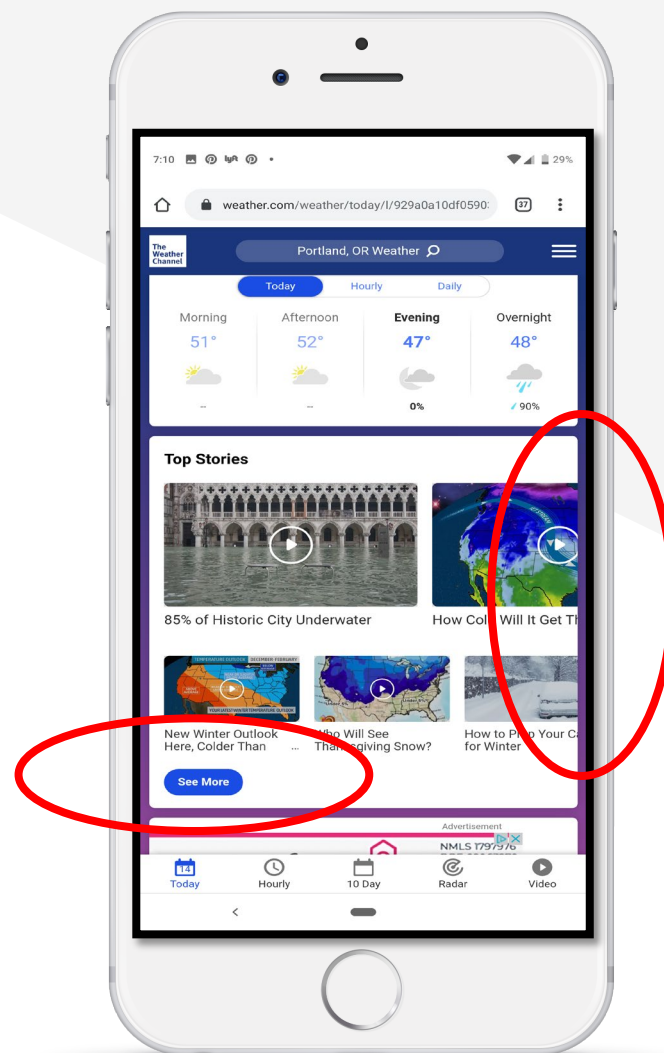
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How to test

Identify any site controls. If they require any of the following gestures, is there an accessible actionable item provided as an alternative?

- Swiping up and down or left and right or dragging up and down or left and right

- Double-tapping or two-pinch zoom

- Tap and hold or tap and swipe

- Press and long hold

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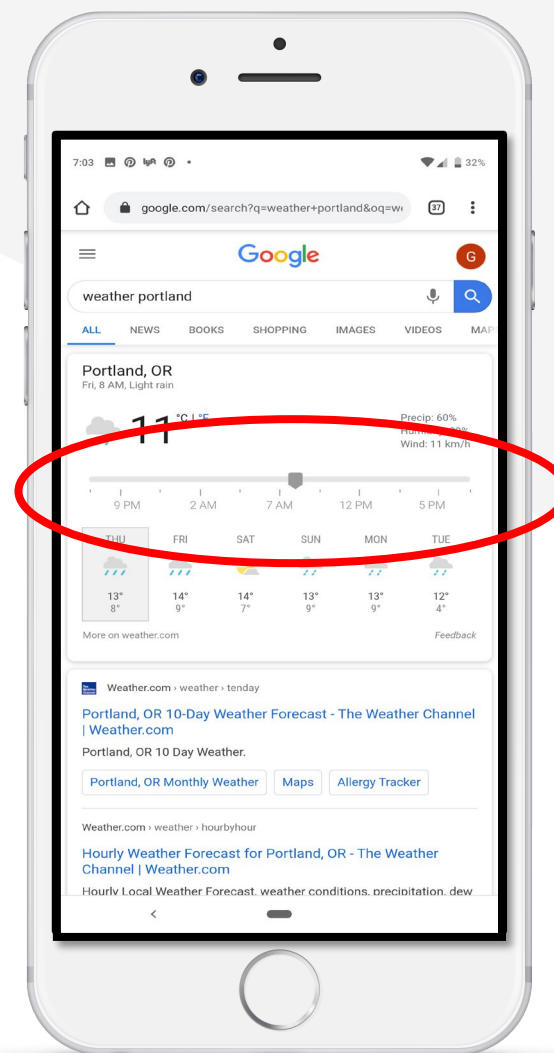# Pass Example

Alternative is provided on another page

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Pass Example

Tap alternative is provided instead of drag gesture

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Display

Display

- 3.1: Three flashes
- 3.2: Change on request
- 3.3: Target size
- 3.4: Inactive space
- 3.5: Fixed size containers
- 3.6: Justified text
- 3.7: Colour contrast
- 3.8: Orientation
- 3.9: Animation

3.3: Target size

Size of touch targets is at least 44 by 44 CSS pixels (approximately 7 to 10 millimeters). For more information see [WCAG2.1 SC 2.5.5: Target Size](#). Please note that this differs from WCAG2.1 as SC 2.5.5 is a Level AAA requirement, but in this methodology, it is a mandatory requirement.

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3.3: Target size

Fail – Touch target size is not sufficient
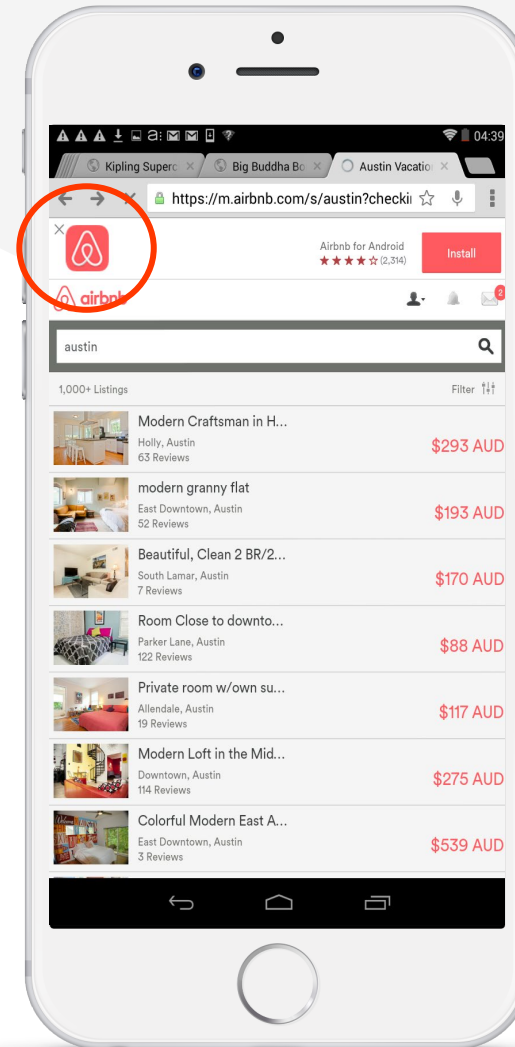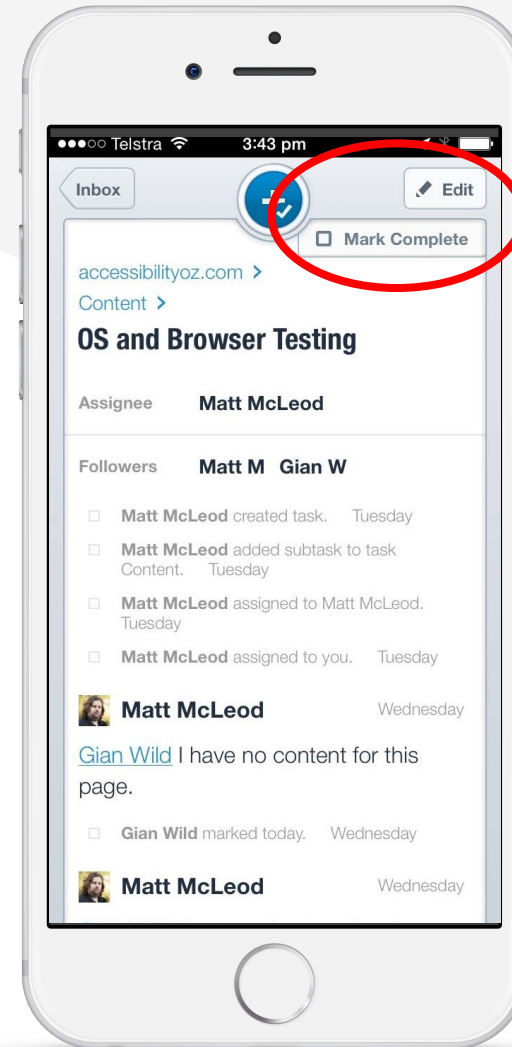

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3.4: Inactive space

Actionable items have sufficient inactive space between them (Inactive space of at least 10 pixels should be provided around active elements).

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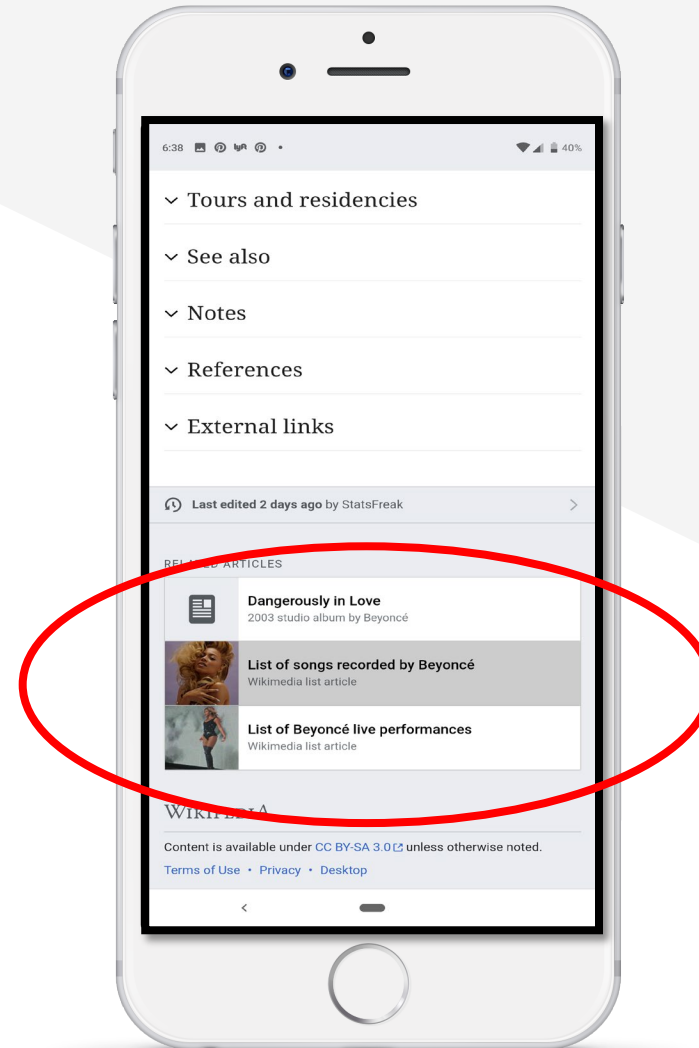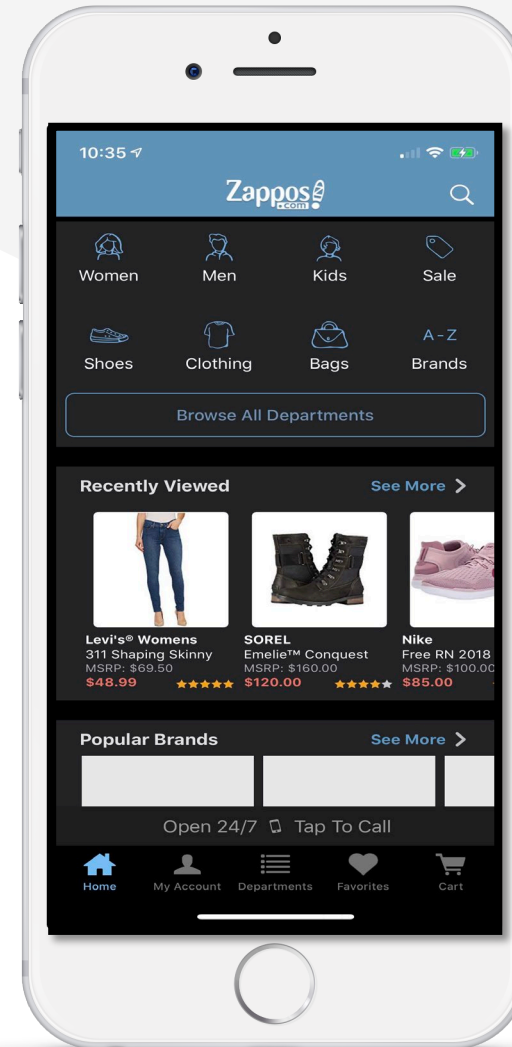# 3.4: Inactive space

Fail – Be careful what you select...

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3.4: Inactive space

Fail – No inactive space

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3.4: Inactive space

Pass – Sufficient inactive space

Actionable items

Actionable items

- 4.1: Content on hover, focus or input
- 4.2: Native UI
- 4.3: Descriptive text links
- 4.4: Non-keyboard options
- 4.5: Infinite scrolling
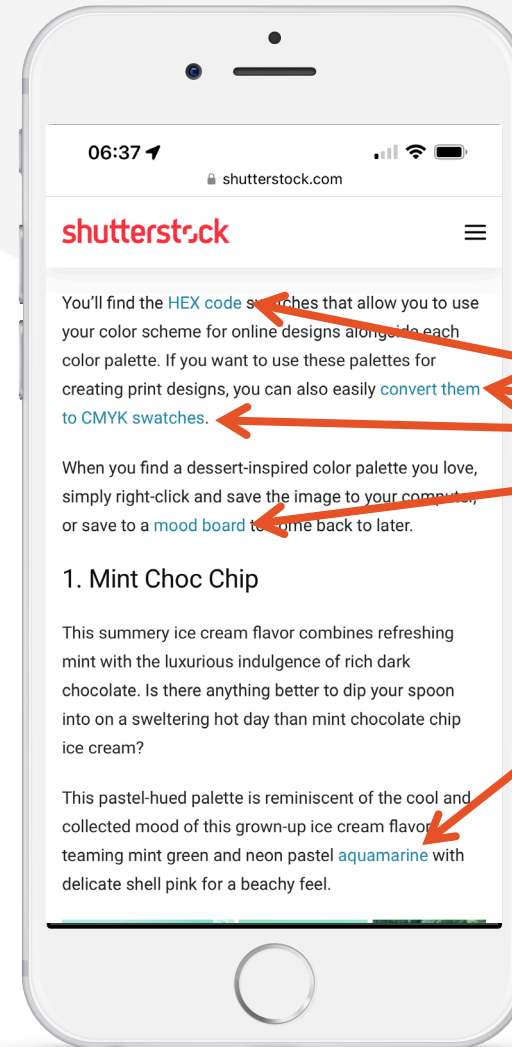- 4.6: Colour alone
- 4.7: Removal of touch

4.6: Colour alone

Colour alone should not be used to indicate actionable items (if not underlined). A secondary method, such as underline or bold should be used, in addition to colour.
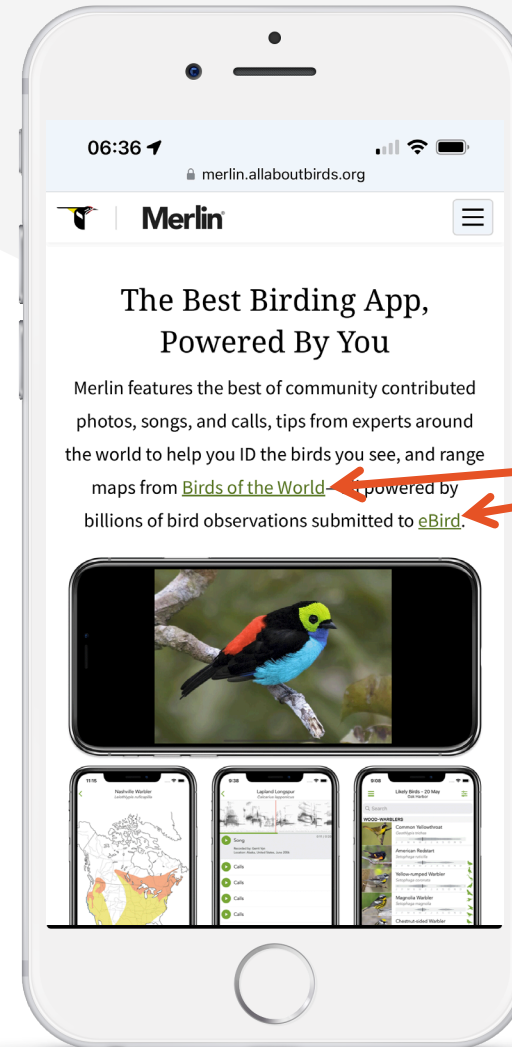
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Non-underlined links

Fail – Colour alone

4.6: Colour alone

Pass – Link text is indicated with colour and an underline

Navigational aids

Navigational aids

- 5.1: Visual indicators
- 5.2: Character key shortcuts
- 5.3: Descriptive headings

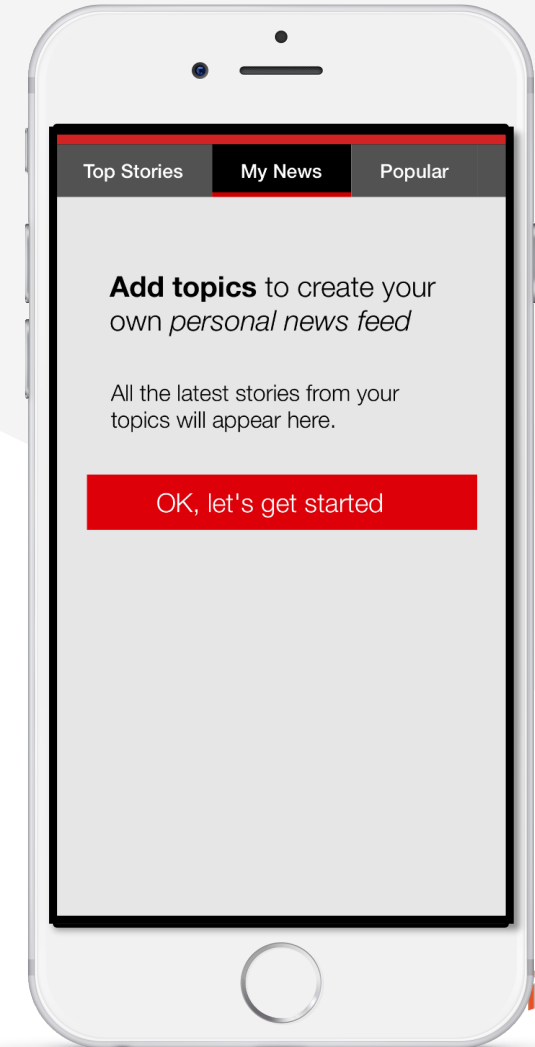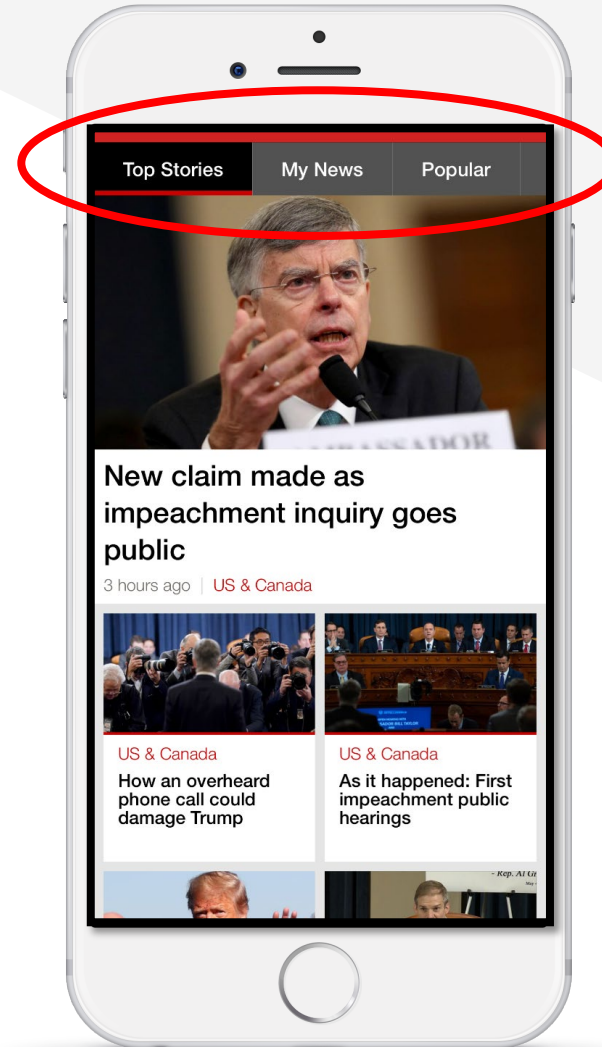- 5.4: Inactivity timeout
- 5.5: Navigation features

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5.1: Visual indicators

Visual indicators, (such as arrows, next and previous buttons) have been used to indicate swipe or scroll areas or additional functionality (for more information see [WCAG2.1 SC 2.5.1: Pointer Gestures](#)).

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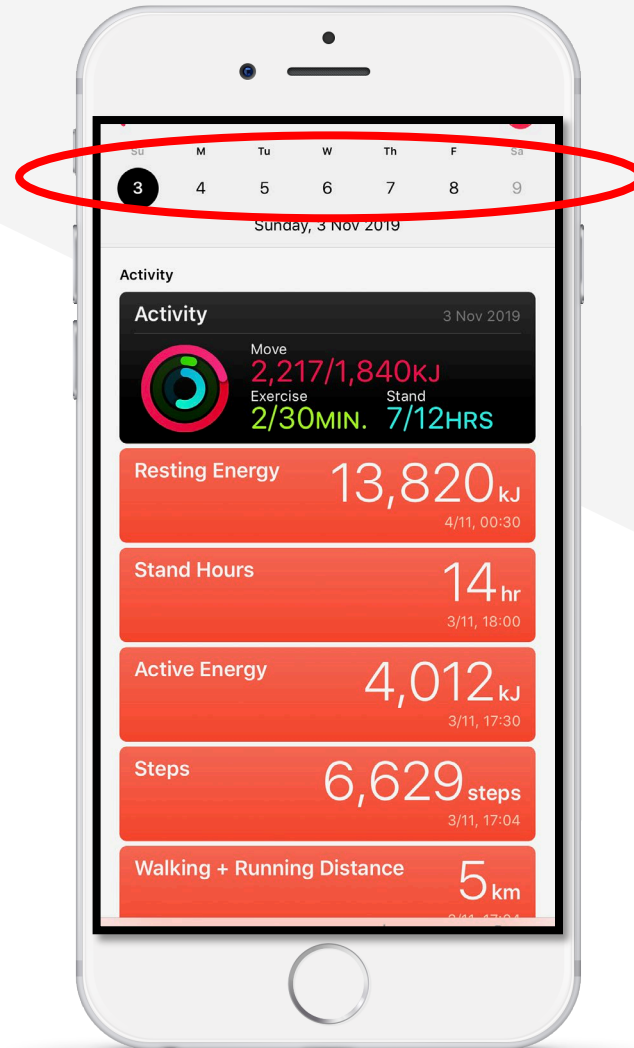# 5.1: Visual indicators

Fail – No indicator of horizonal swipe

5.1: Visual indicators

Fail – Swipe to move
to next week

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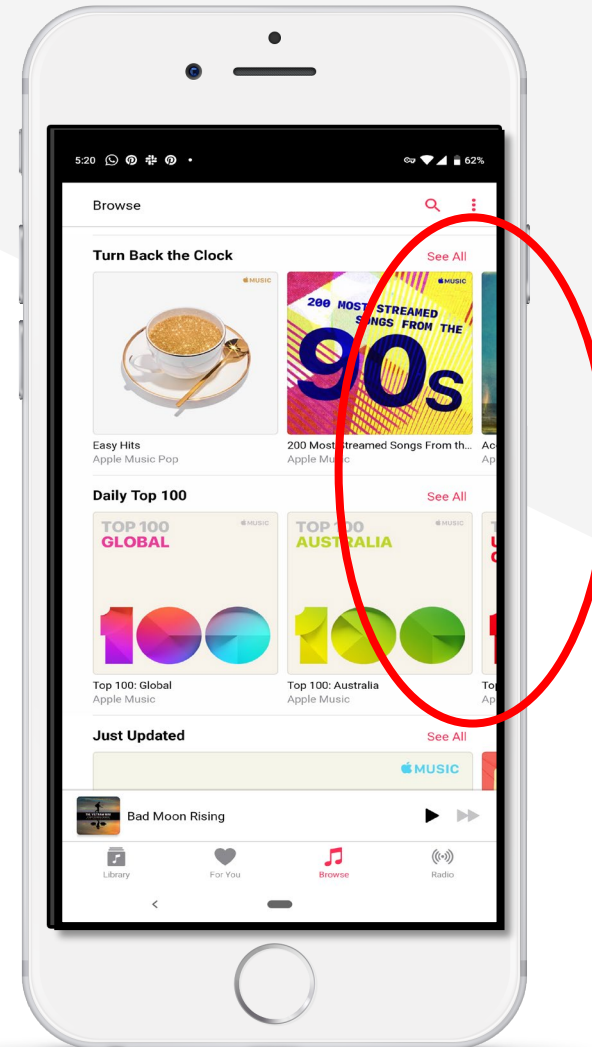AccessibilityOz

5.1: Visual indicators

Pass – Visual indicator of horizontal swipe

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Audio and video

Audio and video

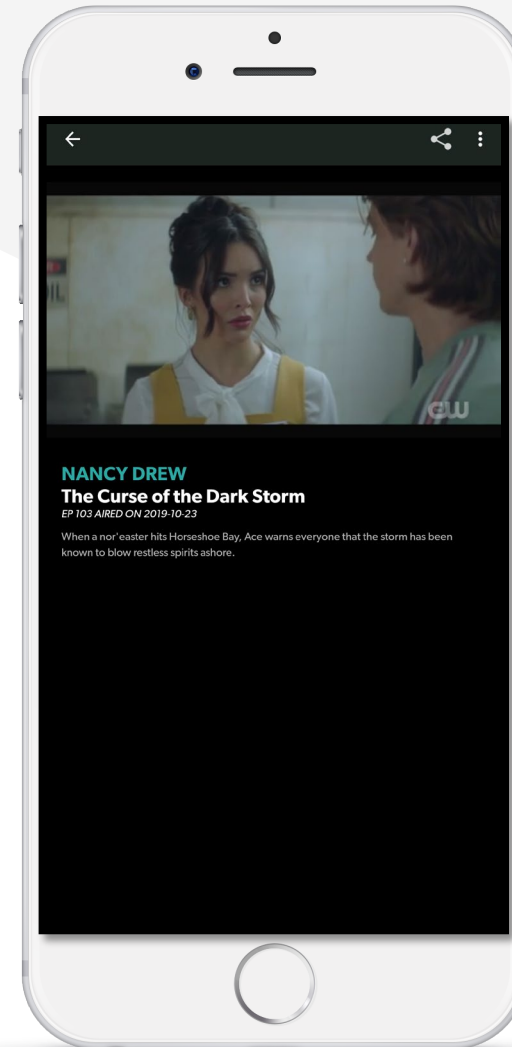- 6.1: Transcript

- 6.2: Captions

- 6.3: Live audio and video

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6.1: Transcript

All video and audio have an accessible transcript.

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6.1: Transcript

Fail – There is no text transcript alternative to the video or audio file

On screen (phone):

NANCY DREW

The Curse of the Dark Storm

EP 103 AIRED ON 2019-10-23

When a nor'easter hits Horseshoe Bay, Ace warns everyone that the storm has been known to blow restless spirits ashore.
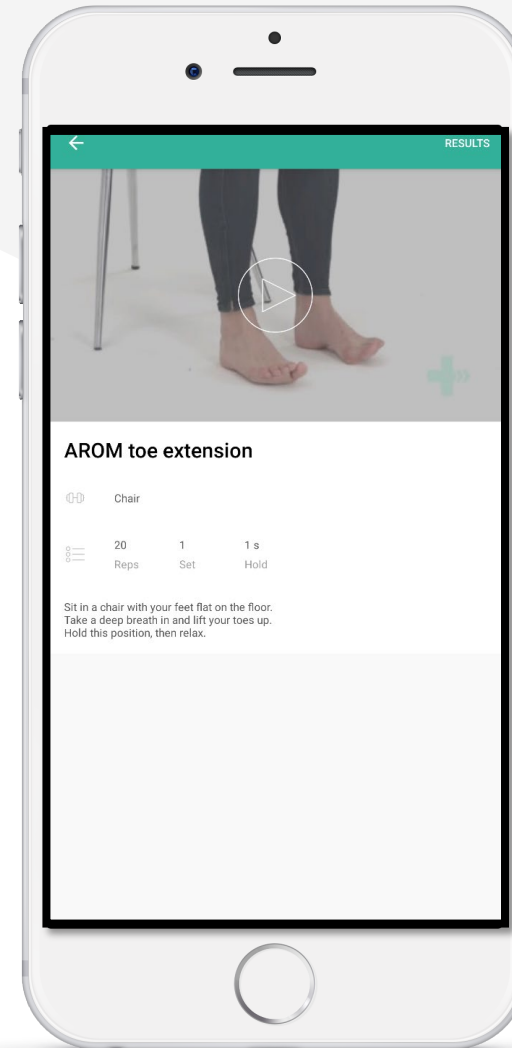
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6.1: Transcript

Fail – The transcript is a direct transcription of the captions only

Transcript ×

01:58	but these four things are common to all computers.
02:02	And that's what makes a computer a computer.
02:07	- [Nat] The earliest computers were made out of
02:09	wood and metal with mechanical levers and gears.
02:13	By the 20th century though,
02:14	computers started using electrical components.
02:17	These early computers were really large and really slow.
02:20	A computer the size of a room might take

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6.1: Transcript

Pass – Transcript is available and accurate

Forms

Forms

- 7.1: CAPTCHAs
- 7.2: Context-sensitive help
- 7.3: Error prevention
- 7.4: Positioned field labels
- 7.5: Visible field labels
- 7.6: Accessible name
- 7.7: Form and keyboard interaction

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7.4: Positioned field labels

Field labels are positioned adjacent to their input field and appear closest to their respective input field in relation to other field labels and other input fields.

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7.4: Positioned field labels

Fail – Input fields
equidistant to field labels

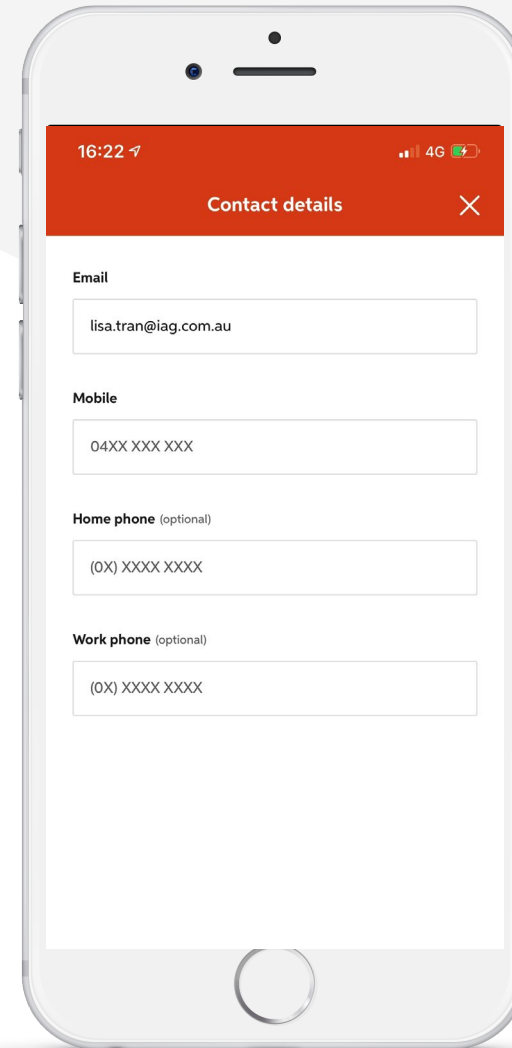AccessibilityOz

7.4: Positioned field labels

Pass – Input fields are located close to their field labels

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Mobile and desktop interaction

Mobile and desktop interaction

- 8.1: Consistency
- 8.2: Linking between types of a site

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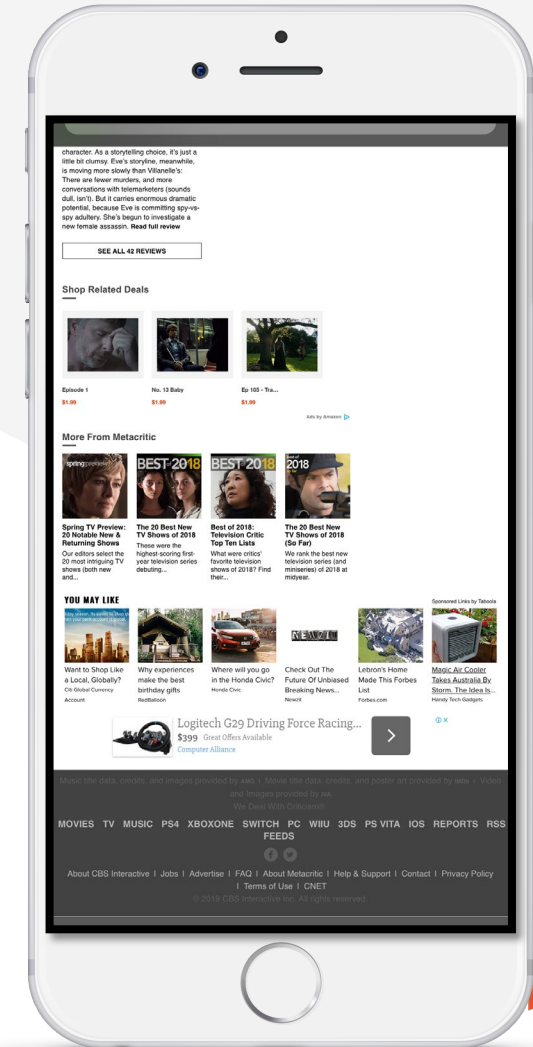# 8.2 Linking between types of a site

Links between different types of a site (desktop, m.dot and/or responsive) have been provided, where the site is not solely a responsive site.

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8.2 Linking between types of a site

Fail – can link from mobile site to desktop site but not back again
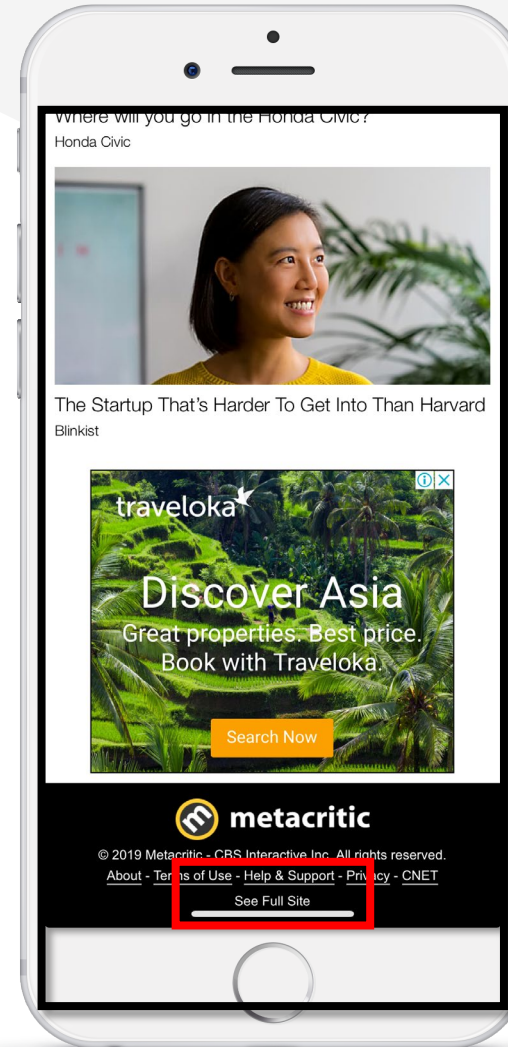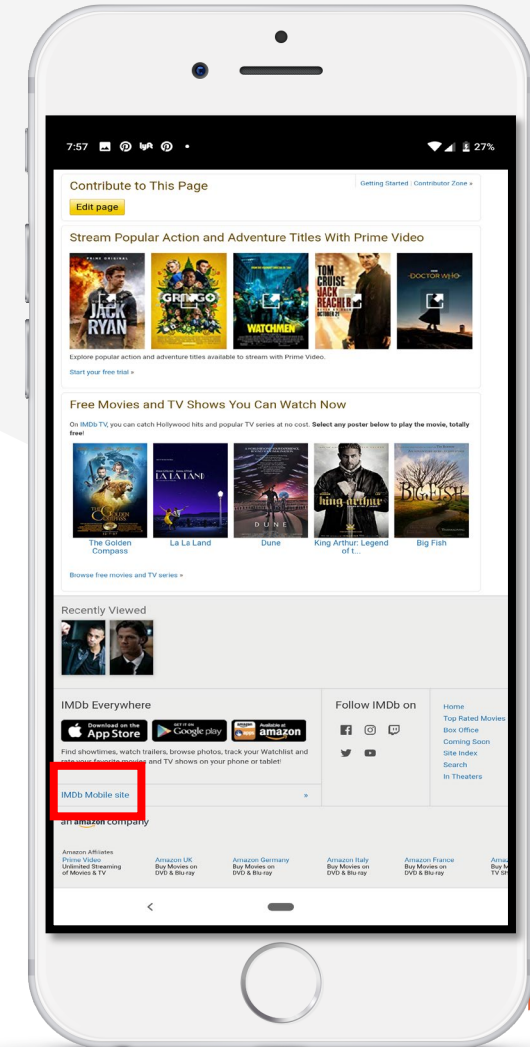
8.2 Linking between types of a site

Fail – can link from mobile site to desktop site and back again
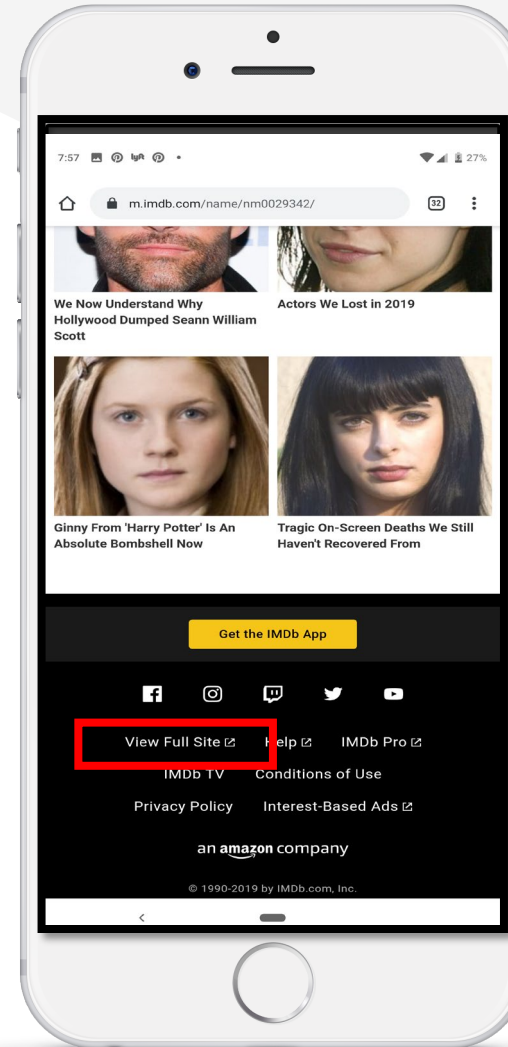
Test mobile assistive technology and feature support

Test mobile assistive technology and features

All actionable items and content can be accessed and activated by the following assistive technologies (or when the following feature is enabled)

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Android assistive technologies and features

- TalkBack
- Keyboard
- Keyboard and switch
- Magnification
- Remove animations
- Color Inversion
- Grayscale

- Color Correction
- Increase display size
- Increase font size
- Increase text size (with Chrome)
- Simplified view (mobile sites only)

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iPhone assistive technologies and features

- VoiceOver
- Keyboard
- Keyboard and switch
- Zoom
- Reduce Motion
- Invert colours
- Grayscale

- Larger text (native app only)
- Reader view (mobile site only)
- Reader view and increase text size (mobile site only)

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iPad assistive technologies and features

- VoiceOver
- Keyboard
- Keyboard and switch
- Zoom
- Reduce Motion
- Invert colours
- Grayscale

- Larger text (native app only)
- Reader view (mobile site only)
- Reader view and increase text size (mobile site only)

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VoiceOver and TalkBack

VoiceOver (iOS)

All actionable items and content can be accessed and activated by VoiceOver on iOS.

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VoiceOver (iOS)

Fail – Link not identified properly

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TalkBack (Android)

Fail – Activation does not move focus to next logical item
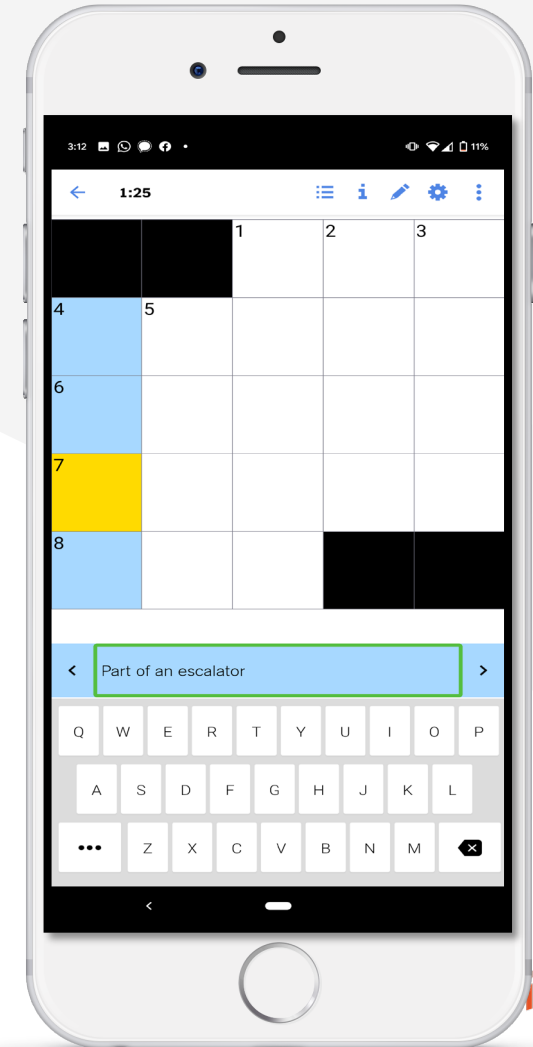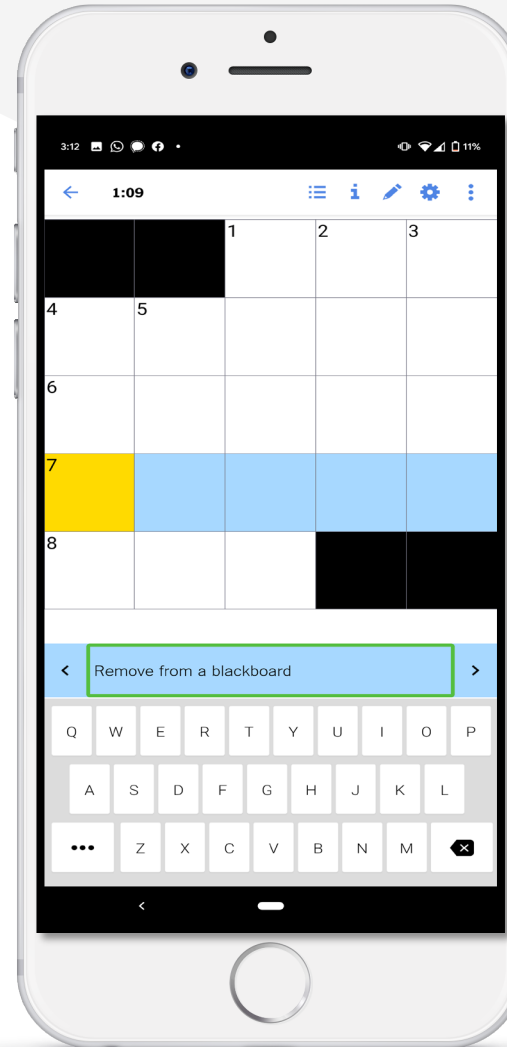
What's next?

Updates from WCAG2.2

Updates from WCAG2.2

The two additional **Level A** success criteria are (my description):

- 3.2.6: Consistent help – providing consistent help mechanisms
- 3.3.9: Redundant Entry - Information previously entered is auto-populated

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Updates from WCAG2.2

The four additional **Level AA** success criteria are (my description):

- 2.4.12: Focus Not Obscured – the current keyboard focus is not hidden
- 2.5.7: Dragging Movements – dragging has an accessible alternative
- 2.5.8: Target Size (Minimum) – targets have an adequate size
- 3.3.7: Accessible Authentication – providing easy methods of authentication

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Updates from WCAG2.2

The three additional **Level AAA** success criteria is (my description):

- 2.4.12: Focus Not Obscured (Enhanced) – the entire keyboard focus is visible

- 2.4.13: Focus Appearance – ensuring the keyboard focus indicator is visible to all

- 3.3.8: Accessible Authentication (Enhanced) – providing easy methods of authentication

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Additional assistive technologies / mobile features

Additional assistive technologies / mobile features

Some additional assistive technologies / mobile features

- Voice Control
- Increasing text size / font color from Reader View
- Testing with a mouse

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Review of existing test cases

Review of existing test cases

Some test cases need review, for example:

- Text-to-Speech traps were only in the Native App methodology, however they have begun to occur on Mobile Sites
- Mobile and desktop consistency is great, but we need consistency between web sites (whether they are mobile or not) and native apps too.

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Removal of some assistive technologies / mobile features

Removal of some assistive technologies / mobile features

Certain types of tests tend to generate the same results and need to be removed:

- Grayscale (in iOS and Android), Color Correction (Android), Color Inversion (in Android), and Invert Colors (in iOS) always fail together or pass together

- Reduce Motion (iOS) and Remove Animations (in Android) always fail together or pass together

- Classic Invert doesn't provide any additional testing information to Smart Invert

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Creation of online resource

Creation of online resource

Currently these are Word documents, but it would be better to be a web site which is:

- Searchable
- Easily updated
- More likely to be used

AND

- More accessible!

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Get involved!

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