

# One UI

## Design Guidelines

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# Overview

# Overview

## Introduction

You can apply One UI's user experience to your app more easily, as well as optimize your app for Samsung mobile devices, by following One UI's design guidelines.

With One UI applied to your app, you can offer a user experience that is consistent with other apps installed on a device, allowing its user to adapt to new apps more naturally and easily.

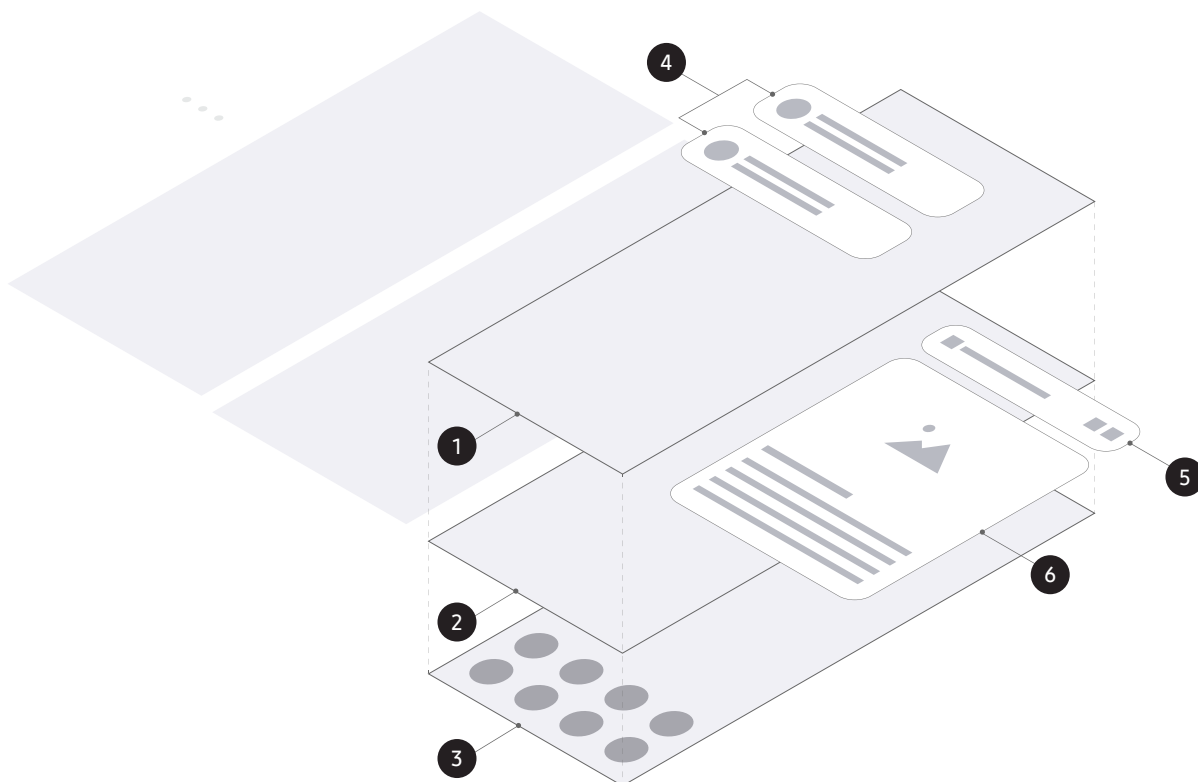
One UI aims to ensure a consistent user experience within a single device and also a unified user experience among different mobile devices. Even if the user's new device runs on a different platform, they can be provided with the user experience optimized for the device, without having to learn how to use the new platform.

# Architecture

# 01. Structure

One UI Design Guidelines defines matters relating to One UI's distinctive usability and user experience. Design principles have been applied to One UI to help users control their devices more intuitively and concentrate on the important content more easily.

For the structure, hierarchy and interaction of the main screens and components comply with the Android design principles.



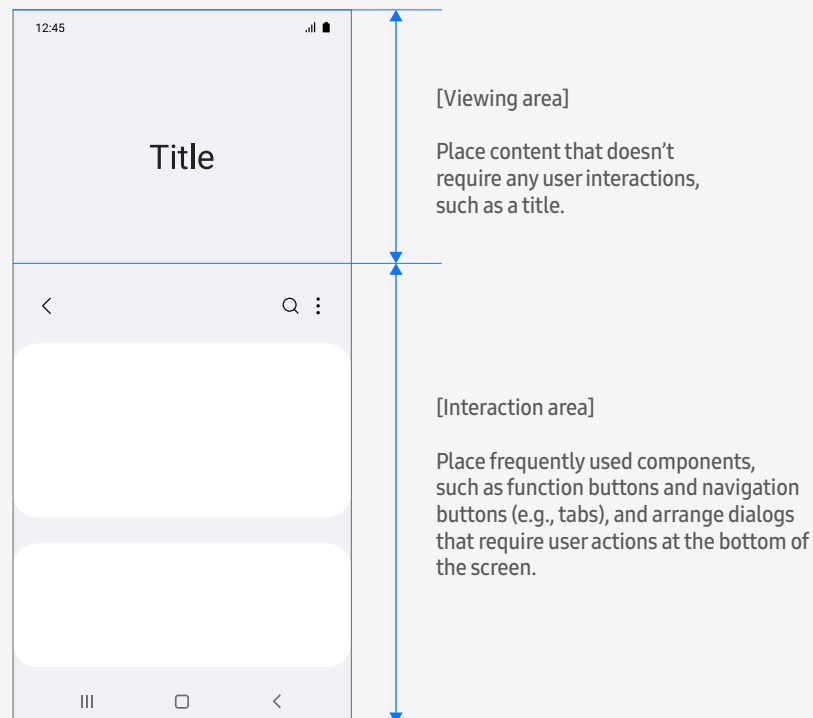
## Structure of Android screens and main components

- ① Lock screen
- ② Application screen
- ③ Home screen
- ④ Notification
- ⑤ App bar
- ⑥ Dialog

# 01. Structure

## Divide the screen into the Viewing area and Interaction area

One UI has been designed to help the user easily control the on-screen components on their handheld device. Based on the height that a person's finger can most easily reach on the screen, the area above this point is defined as the Viewing area, and the area below it is defined as the Interaction area.



# 01. Structure

## Emphasize content using focus blocks

One UI supports a card-type container called a ‘focus block’ which is used to draw the user’s eyes to the content that needs to be emphasized on the screen.

A focus block’s big rounded corners can capture the user’s attention visually with its shape. You can make your content stand out even more by creating a high contrast between the focus block’s background color and blank space behind them.

You can include different content types, such as text, images, or videos, in focus blocks. You can place a single content item or a combination of content items in a single focus block. Focus blocks can be applied to the Android components that have content in them, such as cards, lists including images and texts.





## 02. Theme

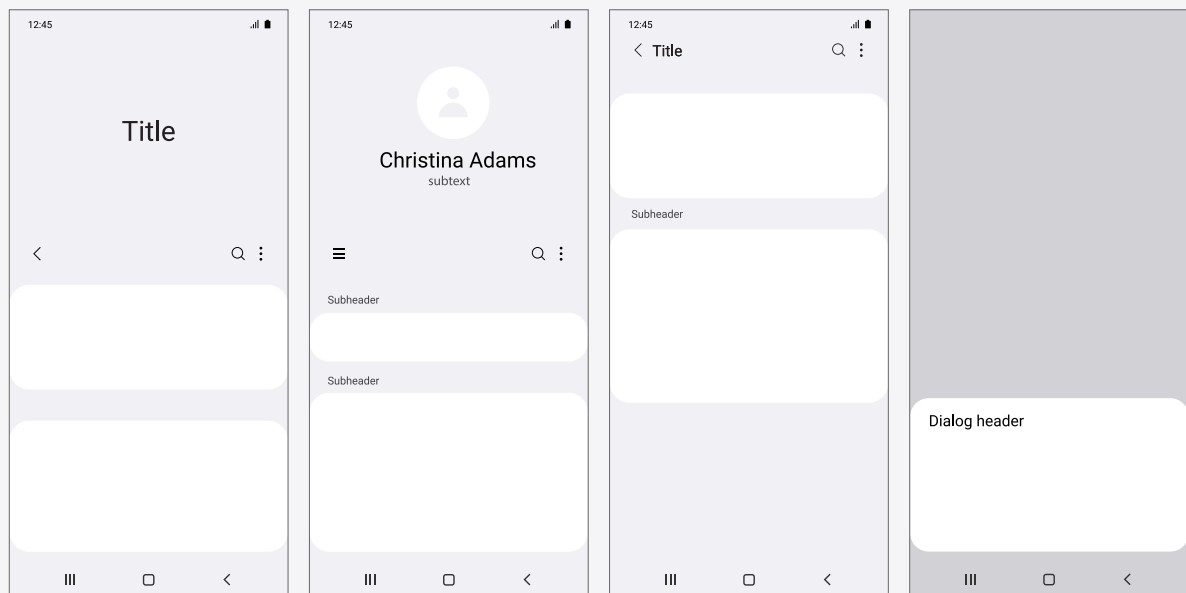
One UI provides default themes and a dark mode.

It's recommended that you provide a dark mode so that the user can use their smartphone comfortably, even in a dark environment.

### Default themes

Using the default themes, you can apply a different color to the background according to the app's characteristics.

A lighter background can deliver a more comfortable visual experience because it reduces the contrast of the screen in general. It also helps improve the legibility of on-screen text.



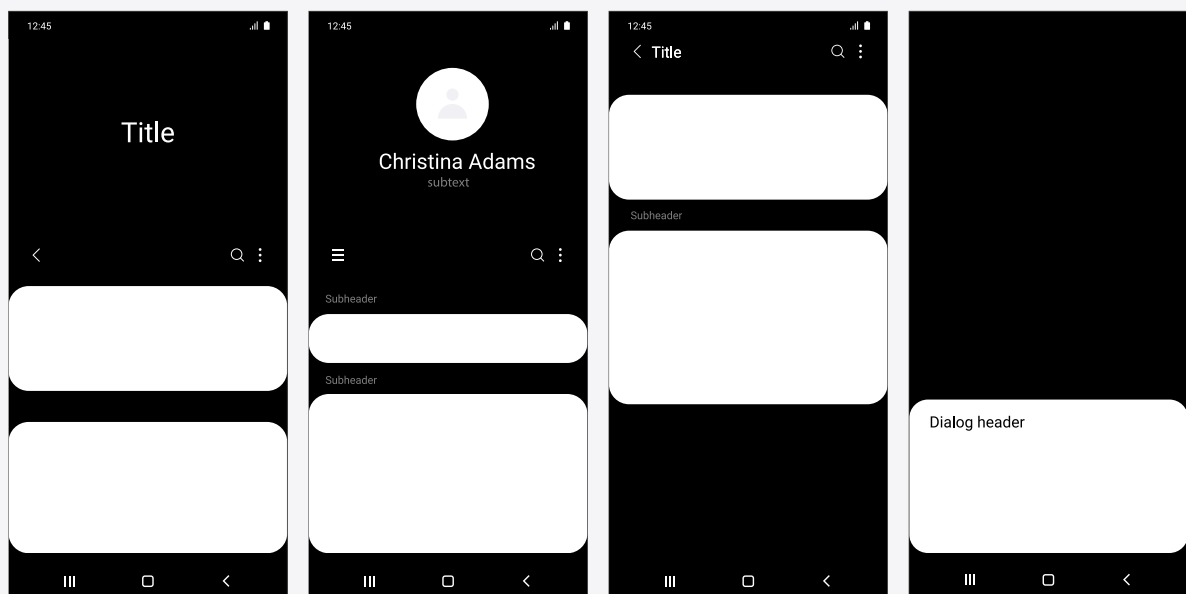
Light theme

## 02. Theme

### Default themes

A darker background can make a content item or dialog inside a focus block visually stand out more.

In particular, if you use a black background on the screen when the device's bezel is also black, the boundary between the bezel and screen becomes merged, making the screen appear more visually expanded. This also reduces visual interference that the boundary between the bezel and screen may create.



Dark theme

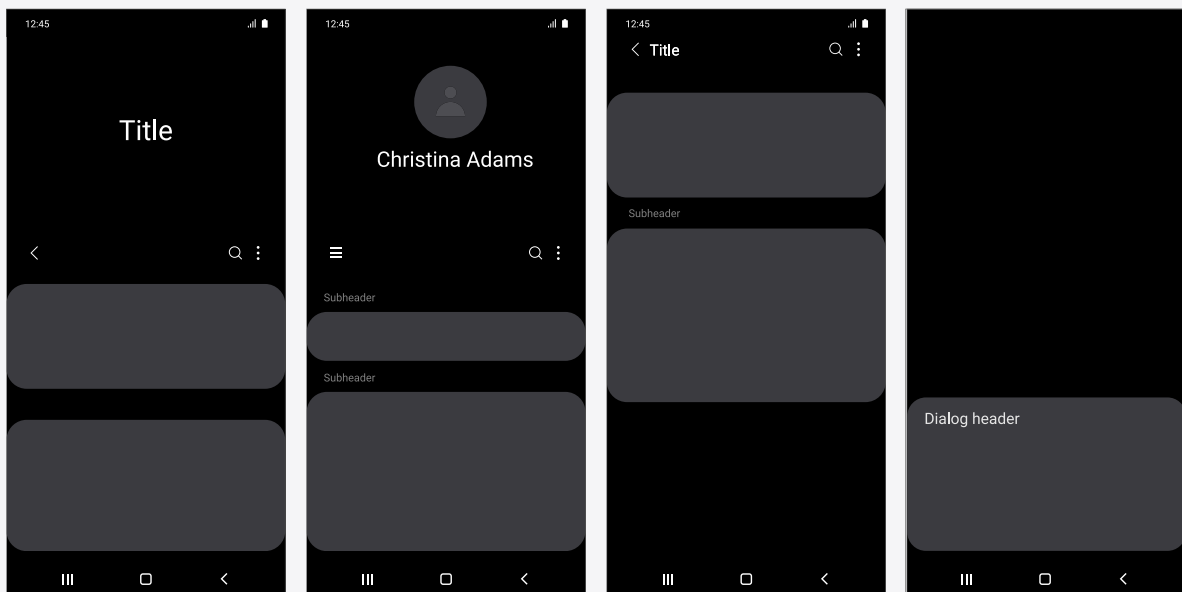
## 02. Theme

### Dark mode

Dark mode is a theme (mode) that enables the screen to turn darker to help reduce glare and eye strain at night or in a dark environment.

Place dark colored focus blocks, dialogs, content and control components to keep the entire screen darker.

One UI recommends that all apps allow the user to switch to Dark mode at the desired or set time.



Dark mode

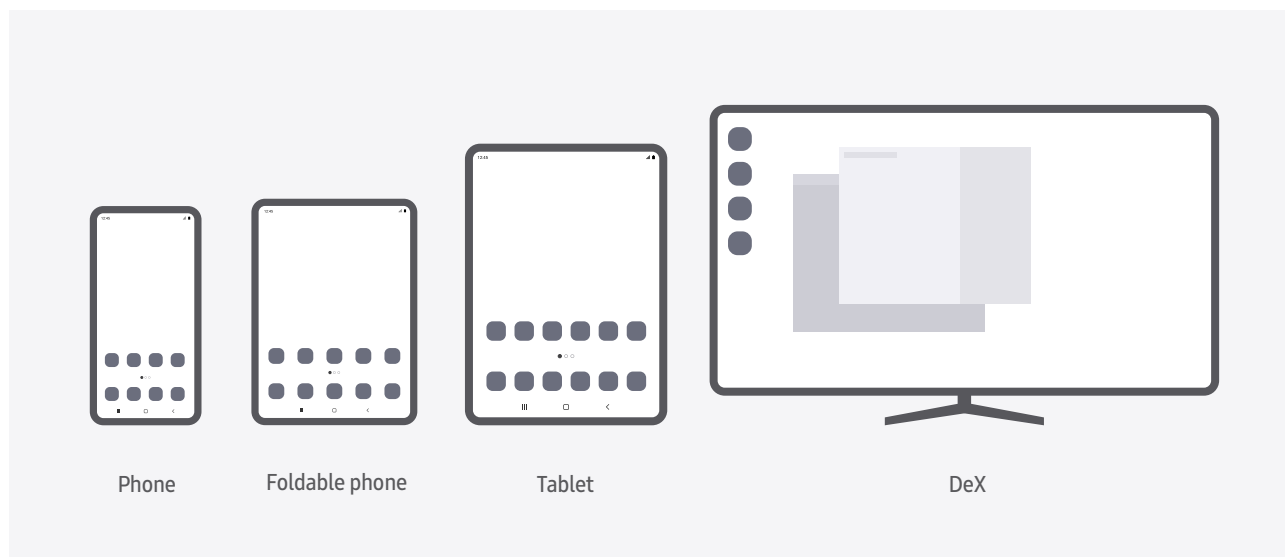
## 03. Responsive UI

One UI supports a diverse range of devices, including smartphones, tablets, and foldable phones, different screen sizes, as well as several aspect ratios. It also supports Samsung DeX.

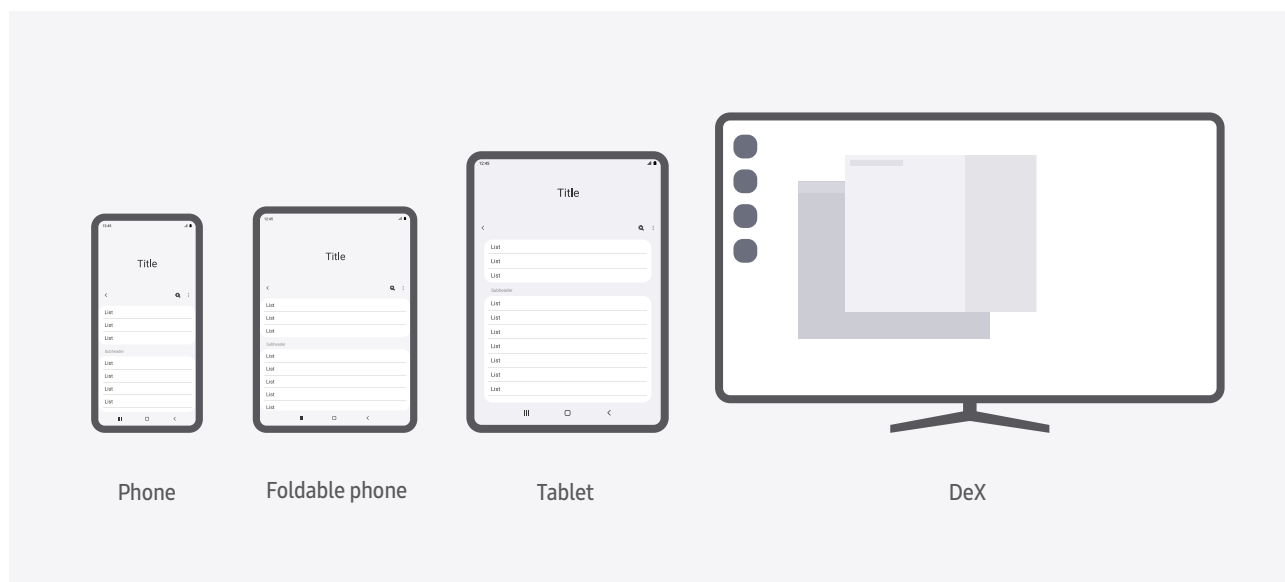
Different components on the screen and the screen layout should be adaptable to different screen sizes, orientations, resolutions, and aspect ratios.

It needs to be designed to display a large number of contents for tablets or foldable phone with a larger screen. Also the multi-layering structure and various window sizes need to be considered.

### Home screen



### Contents screen



# 04. Margins and keylines

One UI defines margins and keylines by considering devices that have screens with rounded corners or edge displays. One UI recommends to allow at minimum 24dp margins on each side and keep placing components to display information within safe area if touch input is required.

## Definition

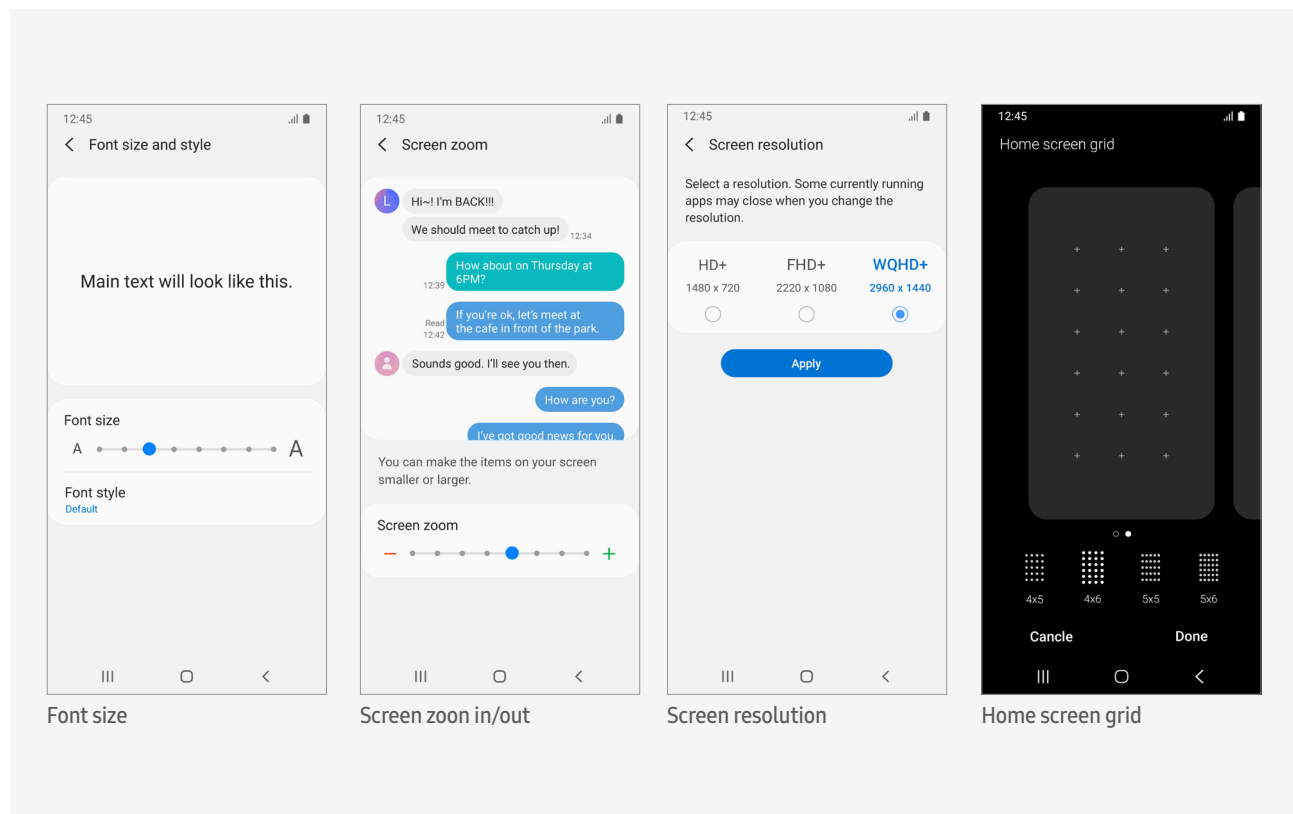
Safe area is being provided in order to prevent undesired input from happening by holding a device. In particular, in a layout where the user is required to press sparsely placed buttons, such as a dialer, allow sufficient margins at the sides of the screen. For edge displays, place on-screen elements before the start of the curved surface to prevent the user's finger from slipping off when touching an on-screen element. For screens with rounded corners, place on-screen elements before the start of the curve so that the on-screen elements are not obscured.



# 05. Screen optimization

The sizes of various components can be optimized based on user's preference.

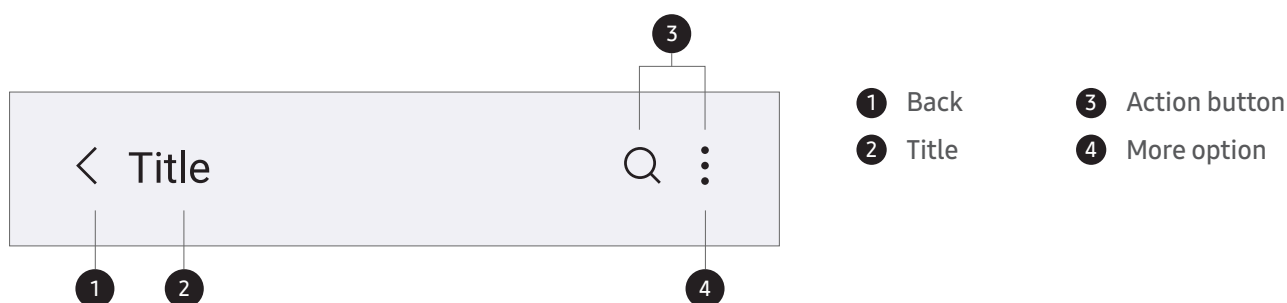
Modifying font sizes or magnifications are feasible for better legibility as well as screen resolutions and Home screen grid.



# Components

# 01. App bar

An app bar is used to provide information about the current screen and action buttons.



## Title

A title can be an app title, page title, or page filter.

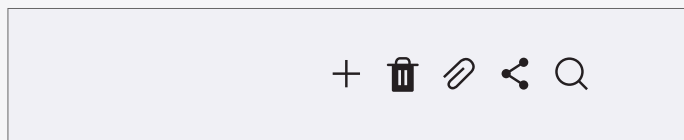
If the entire title cannot be displayed due to the length, action buttons from the far-right can be placed under more options buttons as a dropdown menu.

The displayed action buttons may be shown or hidden, depending on the screen settings (e.g., multi-language/font styles). However, the action buttons should still be displayed in accordance with the rules above.

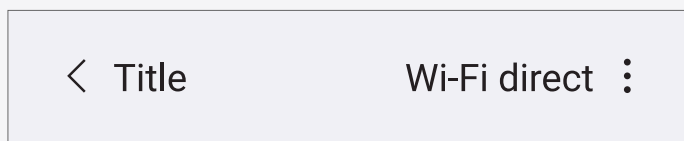
## Action buttons

It's recommended that you use icons for action buttons. However, you may use text buttons for menus that you find difficult to express using icons.

It's also recommended that you display three or fewer action buttons, including the title. If there are no actions available on the current screen, then don't display any buttons.



Icons



Text button

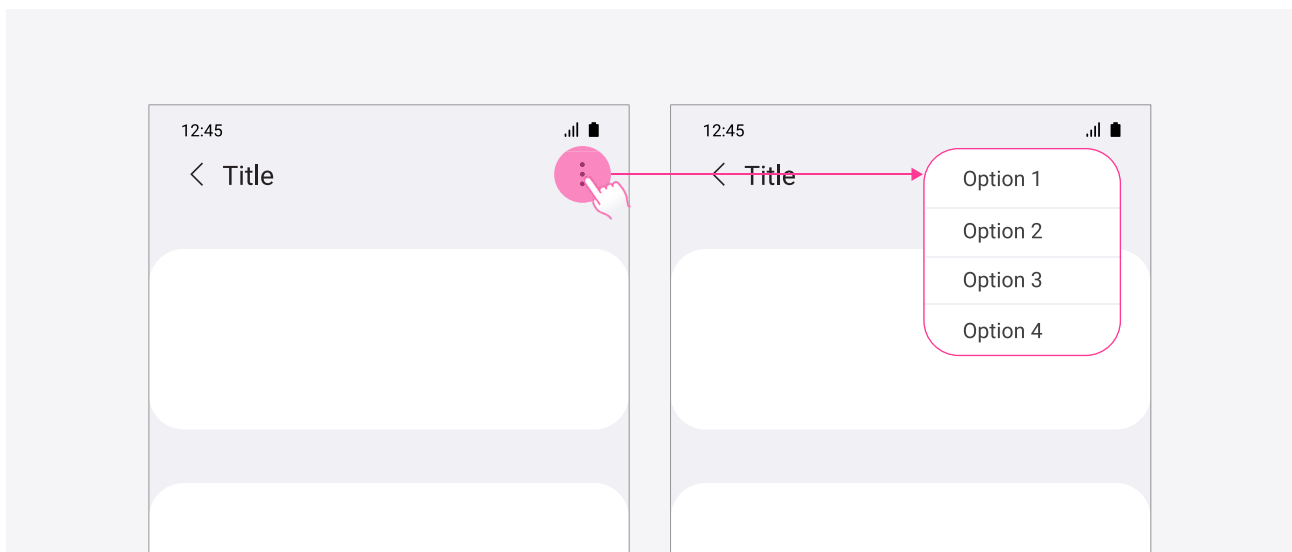


# 01. App bar

## More options

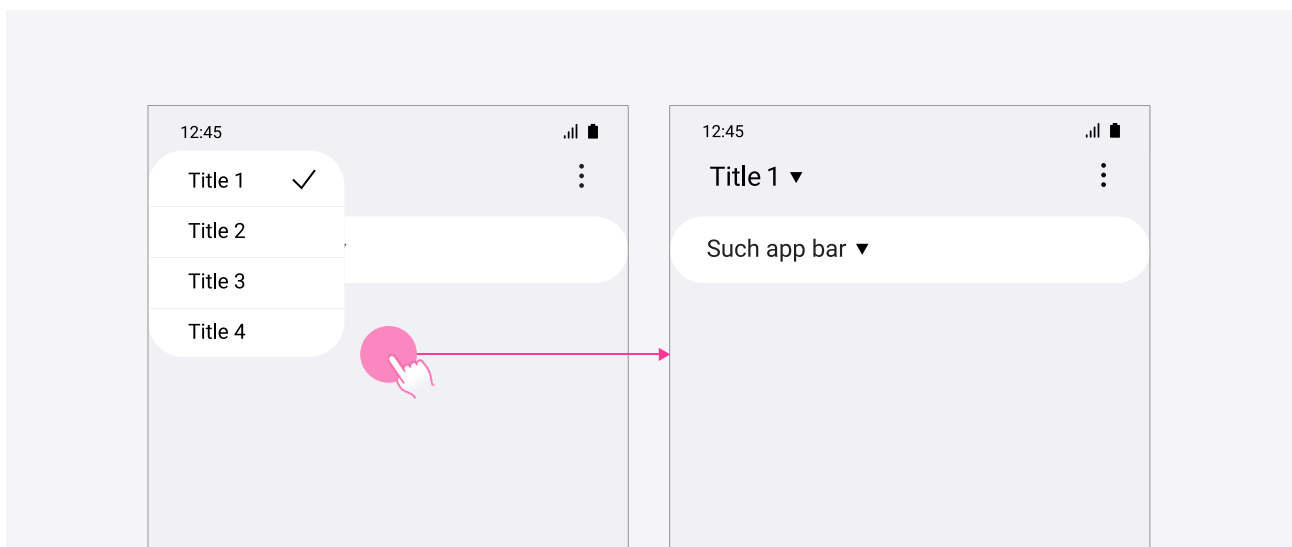
Each menu shown after tapping the More options button is an option that can affect the app that is currently running or the component chosen on the screen. For an option that requires the user to turn on/off or toggle, a checkbox can be provided.

The rest of the menus not provided as floating action buttons or action buttons are being included in the more options button.



## Spinner

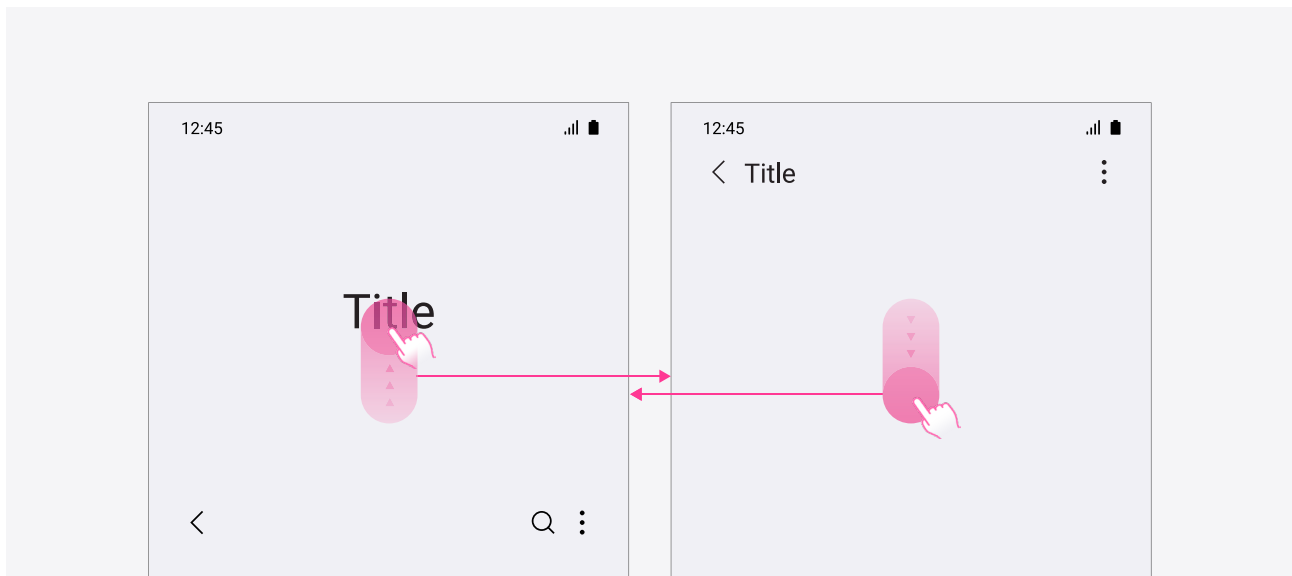
In the default state, a spinner displays the current chosen value. When the user taps the spinner, a dropdown menu opens, showing all available values. When the user taps outside the dropdown menu, the spinner closes.



## 02. Expandable app bar

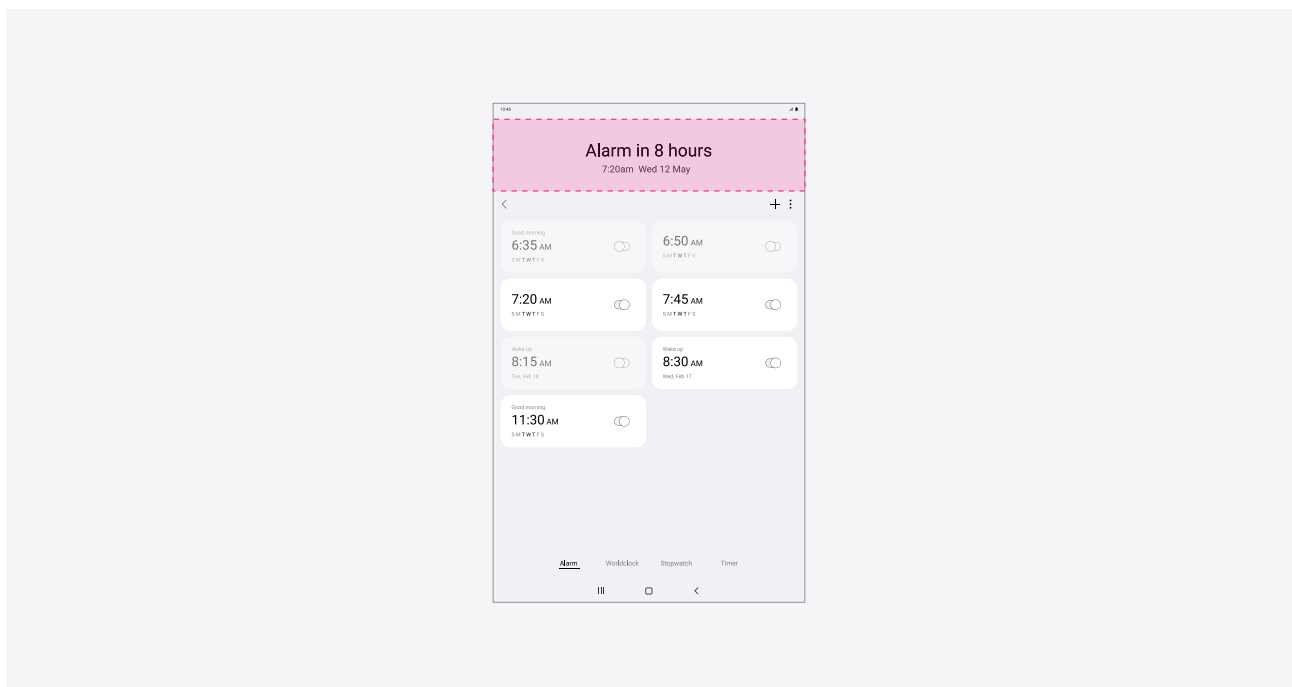
An expandable app bar can be in an expanded state or collapsed state; there is no state in-between these two. If the user scrolls up while the app bar is expanded, then it collapses; if the user scrolls down while the app bar is collapsed, then it expands. If you want to show the content in full screen, you can hide the app bar.

### Phone



### Tablet

The titles displayed in the expanded state and collapsed state don't need to match. When the app bar is expanded, useful information about the relevant screen can be displayed in a larger area.



# 02. Expandable app bar

Smartphone users can't use an expandable app bar while in the landscape mode of the full-screen view. In case of a multi-window view, foldable phones, and Samsung DeX, the expandable app bar is supported for both landscape and portrait mode when the height of the screen is above 580 dp.

Full screen	Phone		Tablet	
	Portrait	Landscape	Portrait	Landscape
Expandable app bar	Applicable	Not applicable	Applicable	Applicable

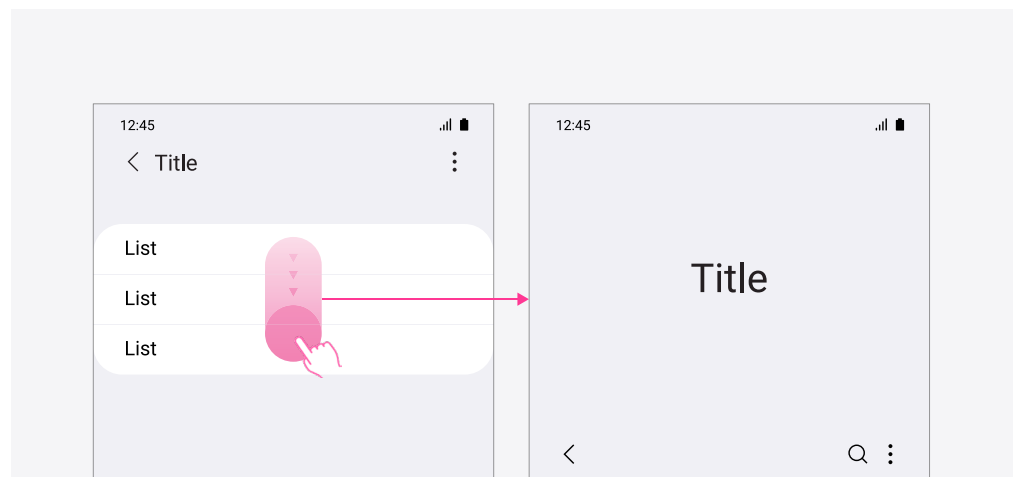
## 02. Expandable app bar

### When an expandable app bar is supported

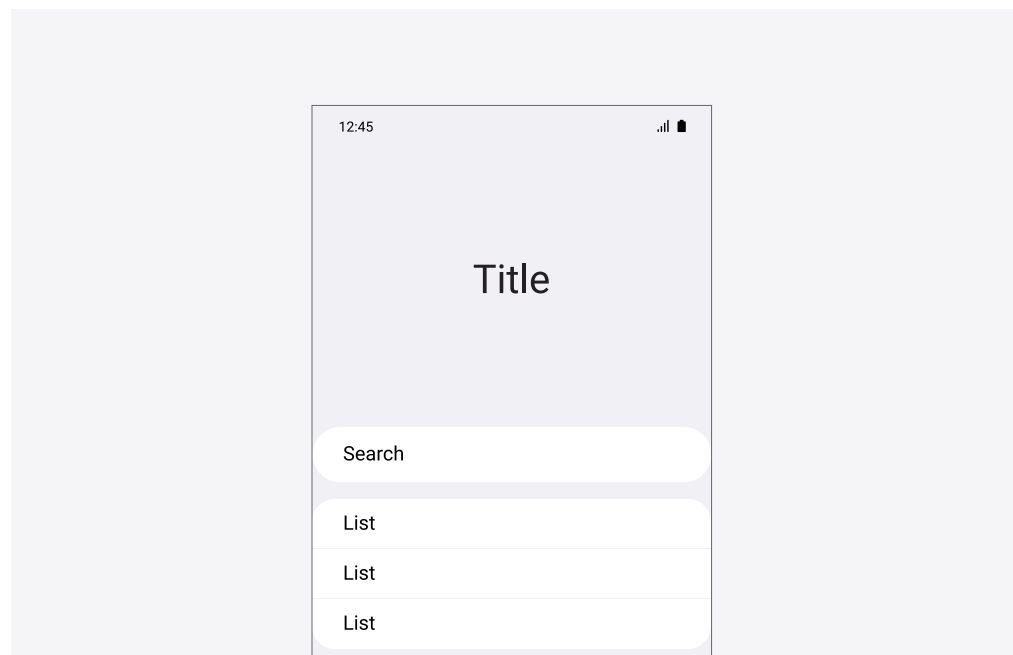
The user can resize the app bar area by scrolling it up or down, whether its default state is expanded or collapsed.

#### [First depth screen (list/grid scrollable view)]

Support an expandable app bar on the screen that has a tab, search bar, and default collapsed app bar.



Default collapsed app bar



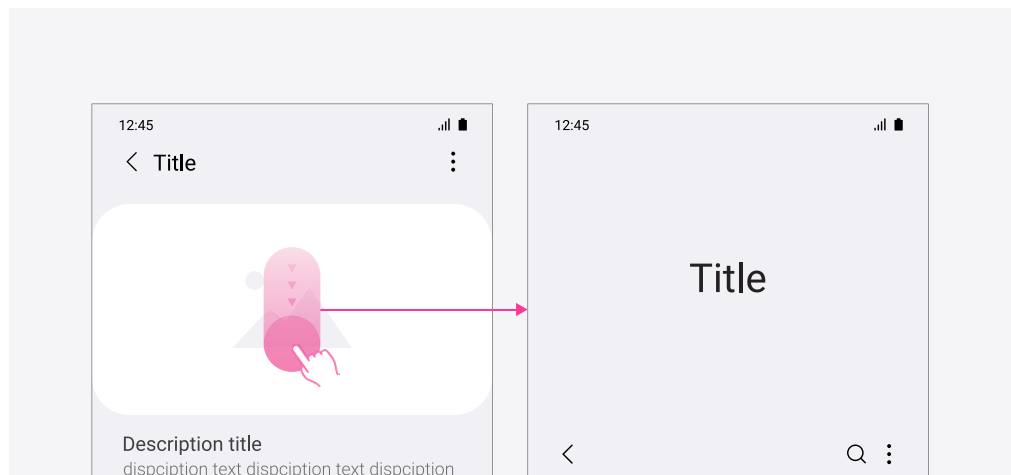
App bar with a search field

## 02. Expandable app bar

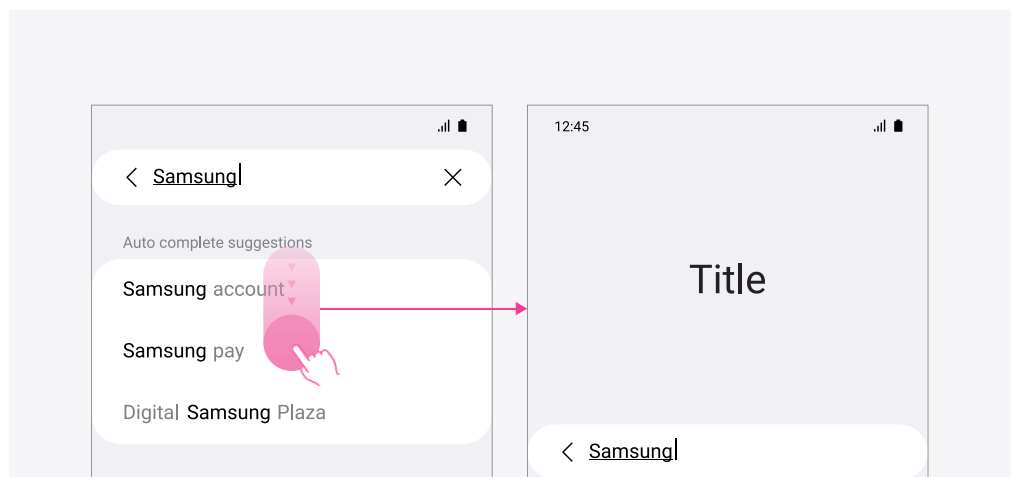
### When an expandable app bar is supported

#### [Second and later depth screens]

For the second depth and later depths, display a default collapsed app bar, but allow it to be expandable. It should also be expandable in list/grid view, detail view, search view, and multiselect view.



Detail view

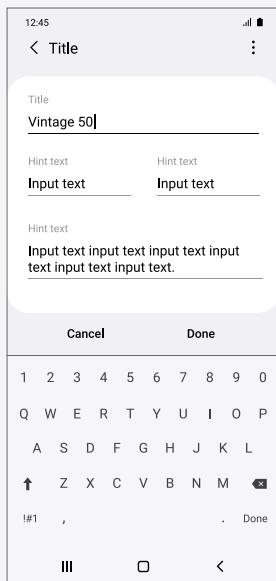


Search view

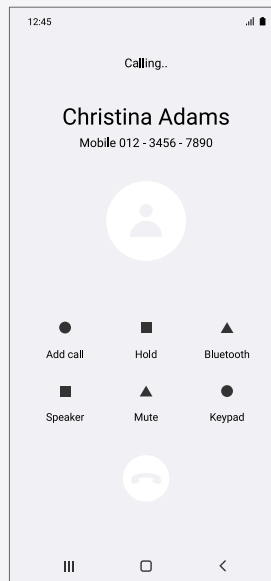
## 02. Expandable app bar

### When an expandable app bar is not supported

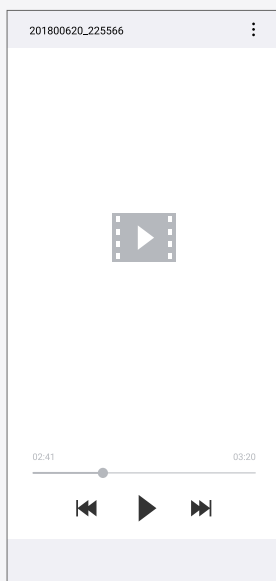
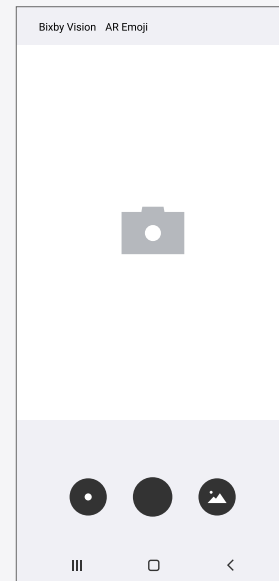
An expandable app bar is not supported in the following cases:



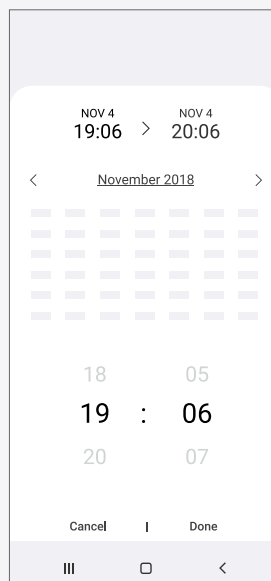
When a screen is created by using keyboard (But, it is expandable if inputting simple texts)



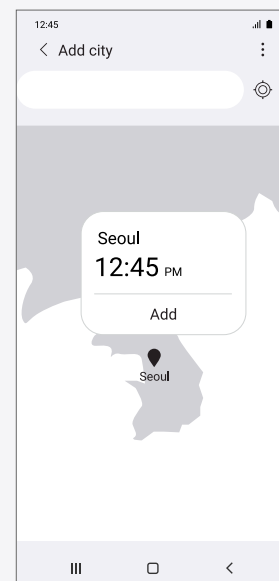
When a single screen needs to be completely filled with a controller, etc.



When the user's content, such as an image or video, might be cut off by the expandable app bar



When the screen contains additional component that need to scroll up and down

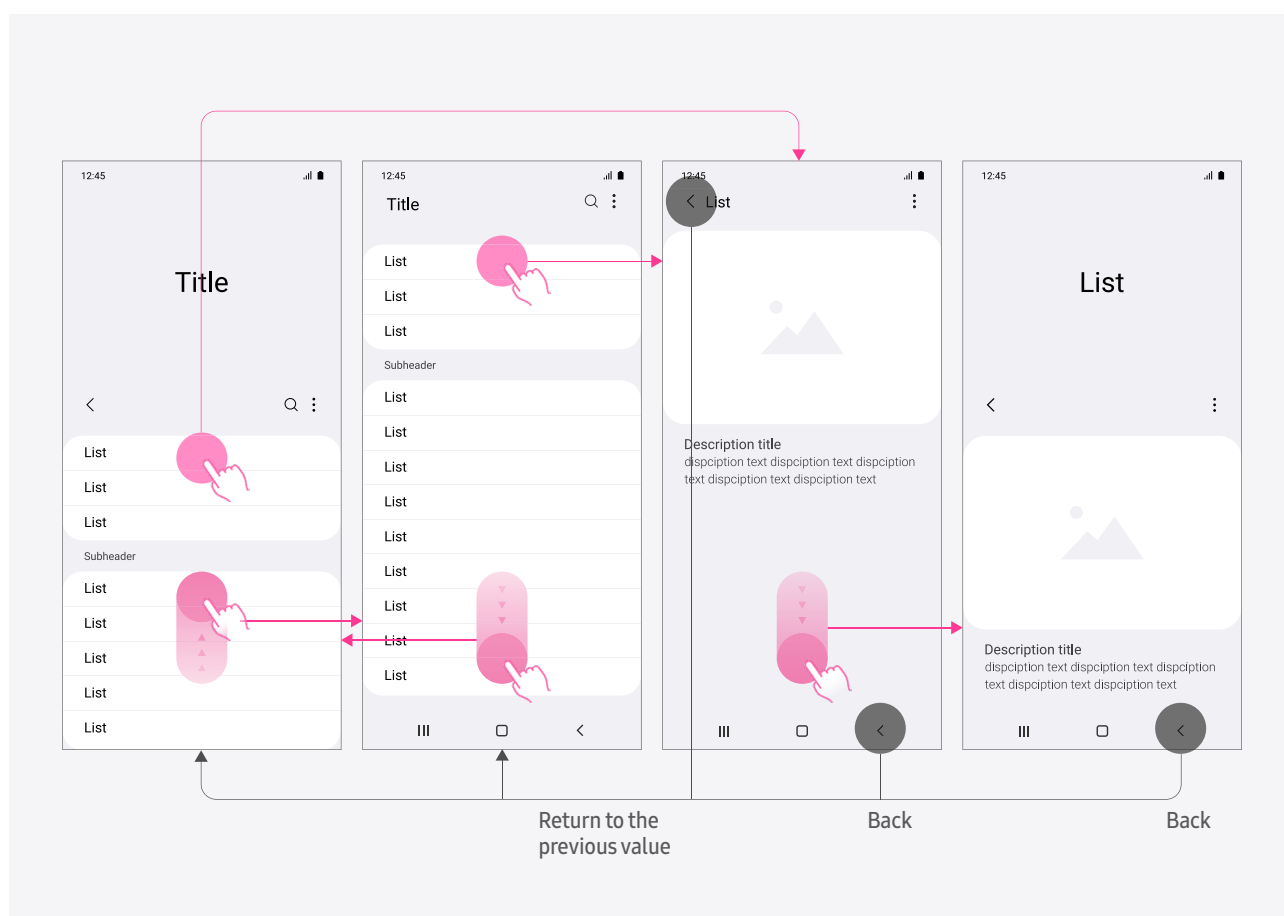


## 02. Expandable app bar

### Upon opening an app

Display an expandable app bar when the user enters the first main screen.

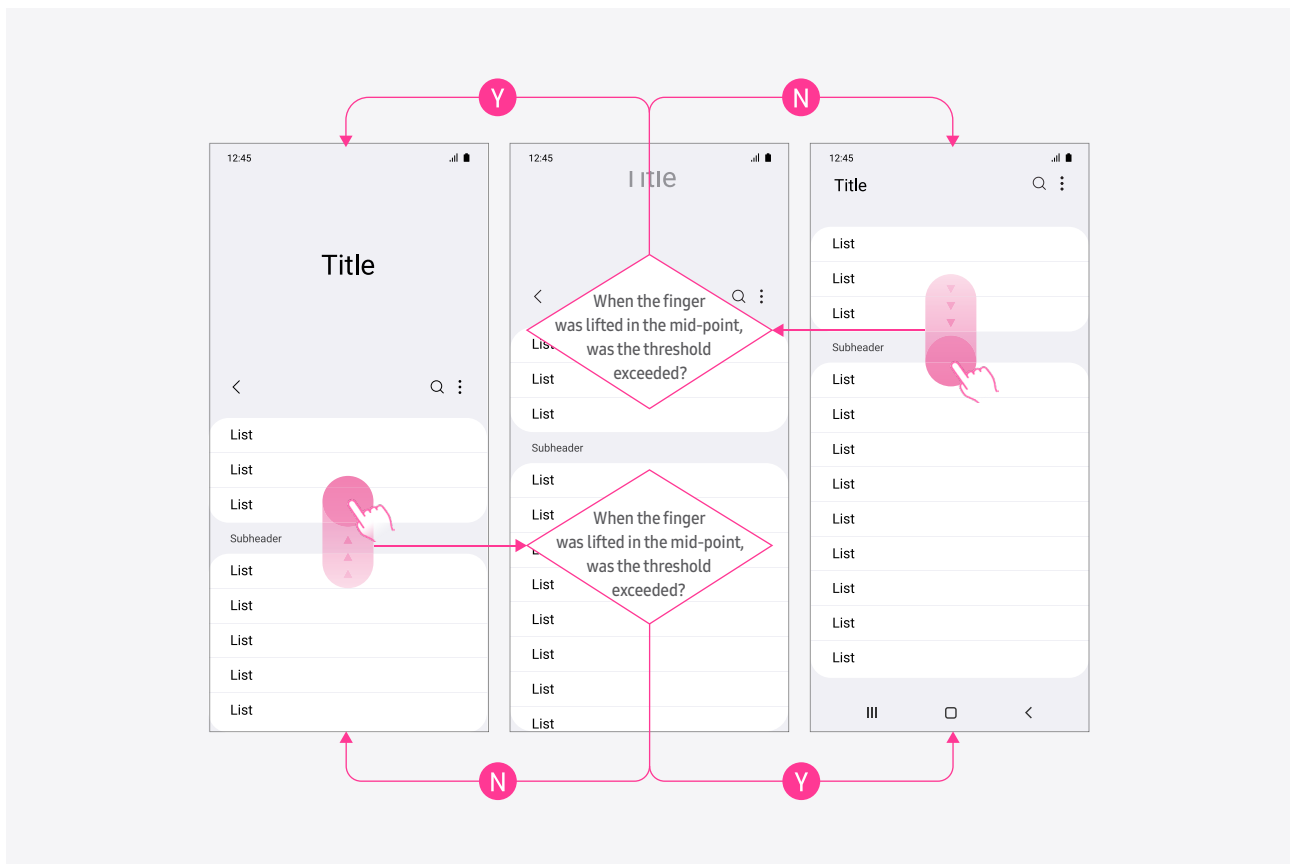
For the second and later depth screens, display a collapsed app bar as default, and an app bar can be expanded by scrolling down. However, where an expanded app bar is deemed useful, an expanded app bar can be treated as default on the second and later depth screens.



## 02. Expandable app bar

### Snap

When the user lifts their finger in the mid-point while scrolling up and down, the display of the screen in expanded view or collapsed view is determined depending on whether the threshold was exceeded at the time the finger was lifted, and then the screen snaps accordingly.





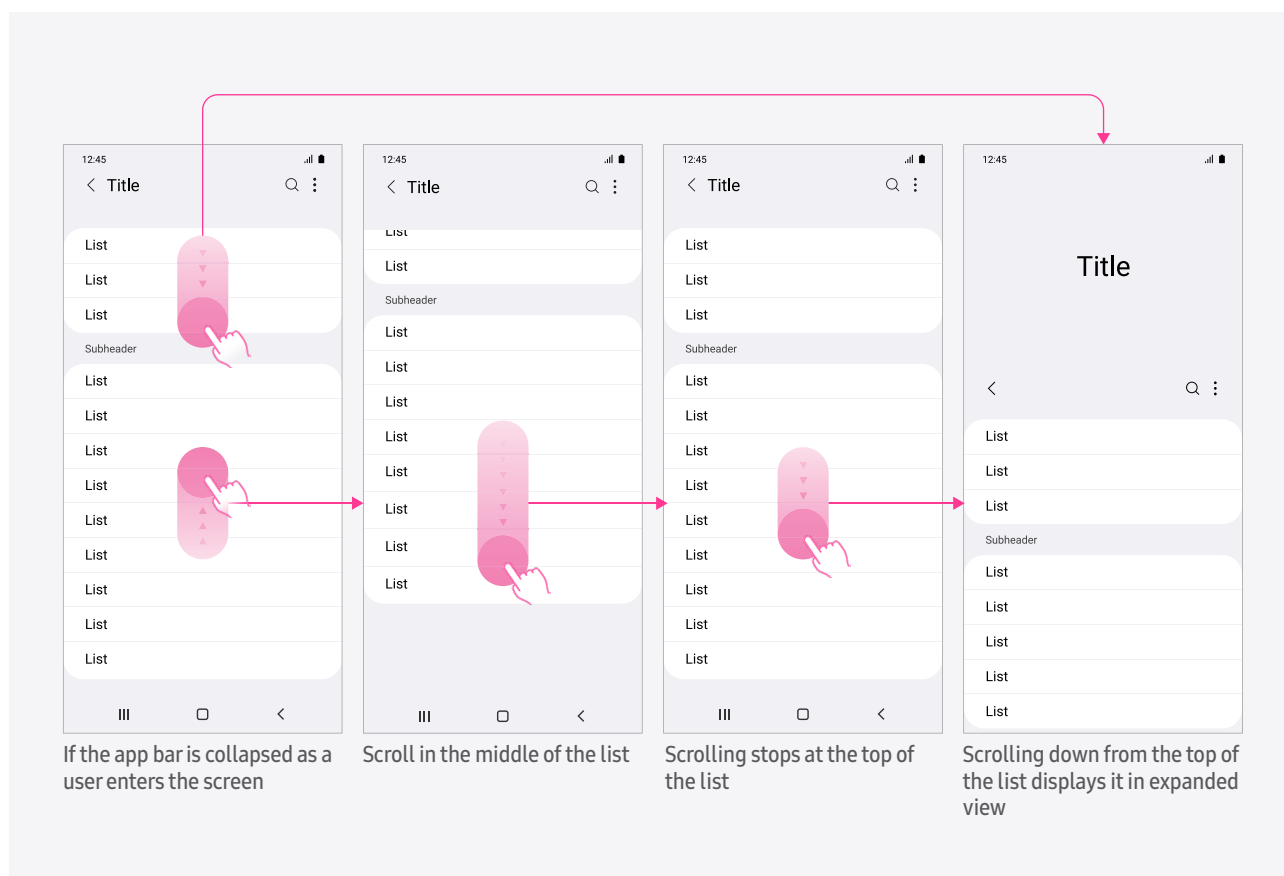
## 02. Expandable app bar

### Scroll stop

When the user scrolls down in the middle of a list on the screen in list/grid view, etc., and then moves to the top of the list, whether or not to stop the scrolling is determined based on whether the relevant screen's default view is expanded or collapsed. The position at which the scrolling stops in the middle of the list is determined based on what the user sees upon entering the relevant screen.

#### [Case 1]

When the screen's default view is collapsed, if the user scrolls in the middle of a list, then the scrolling stops at the top of the list.

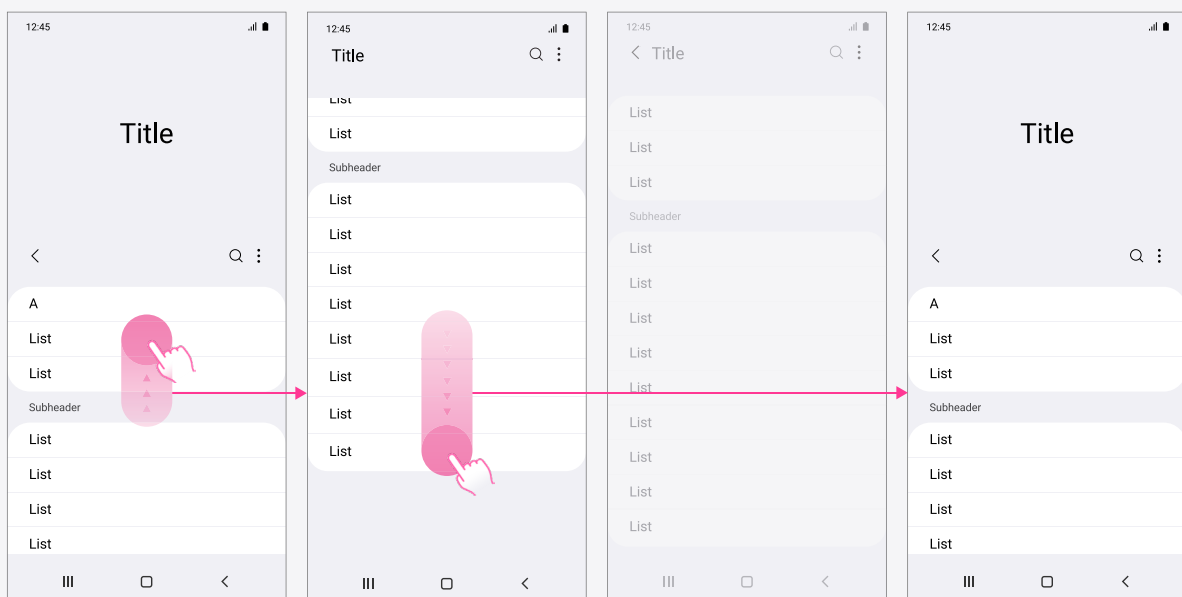


## 02. Expandable app bar

### Scroll stop

#### [Case 2]

When the screen's default view is expanded, if the user scrolls in the middle of a list, then the scrolling doesn't stop and the user is moved to the screen that shows an expandable app bar instead.



If the app bar can be expandable as a user enters the screen

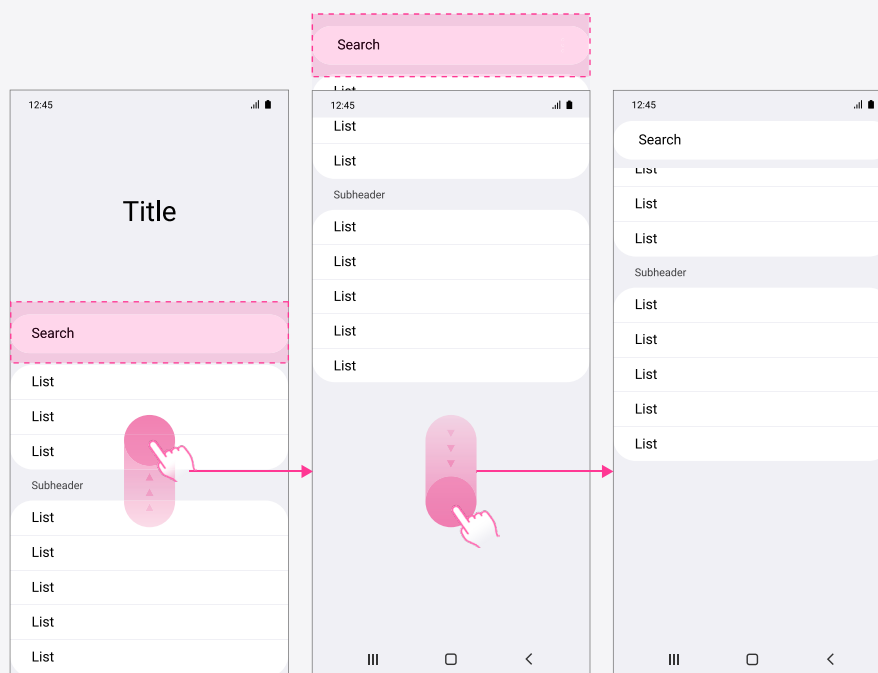
Scroll in the middle of the list

Switch to expanded view immediately without stopping the scrolling

## 02. Expandable app bar

### Search bar

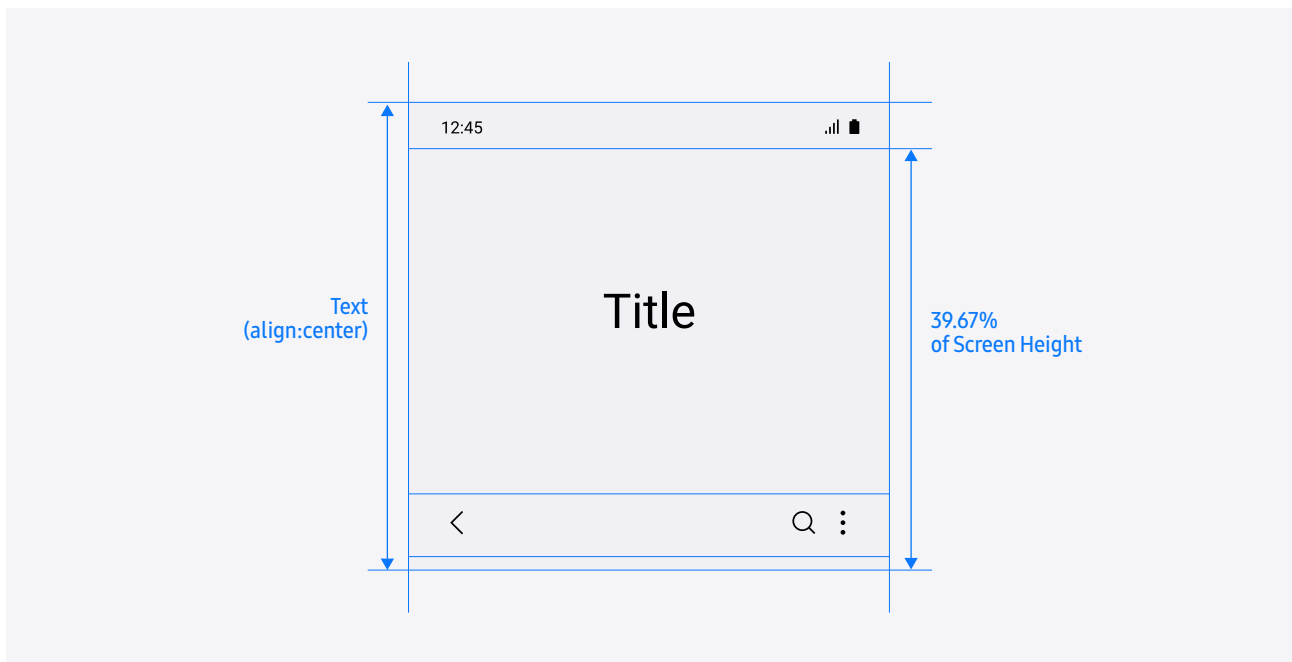
If the use of a search bar is essential for the app, then the search bar can be displayed on the screen. The search bar should disappear while the user is scrolling the list, and then reappear afterward.



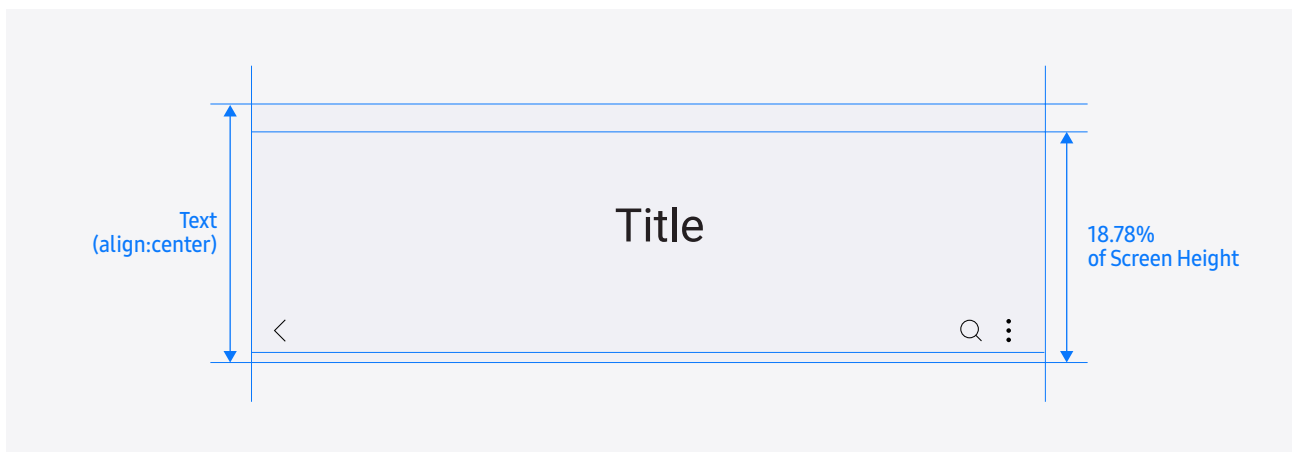
As the list appears, the search bar becomes hidden.

## 02. Expandable app bar

### Phone



### Tablet



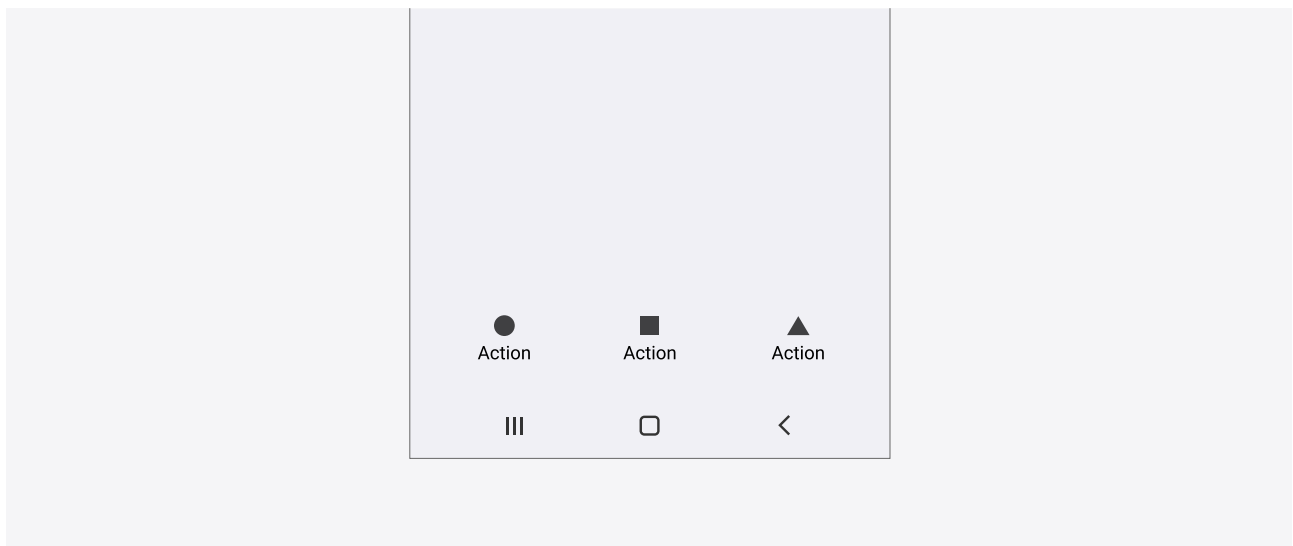
## 03. Bottom bar

Utilize bottom bar for actions buttons with higher priority.

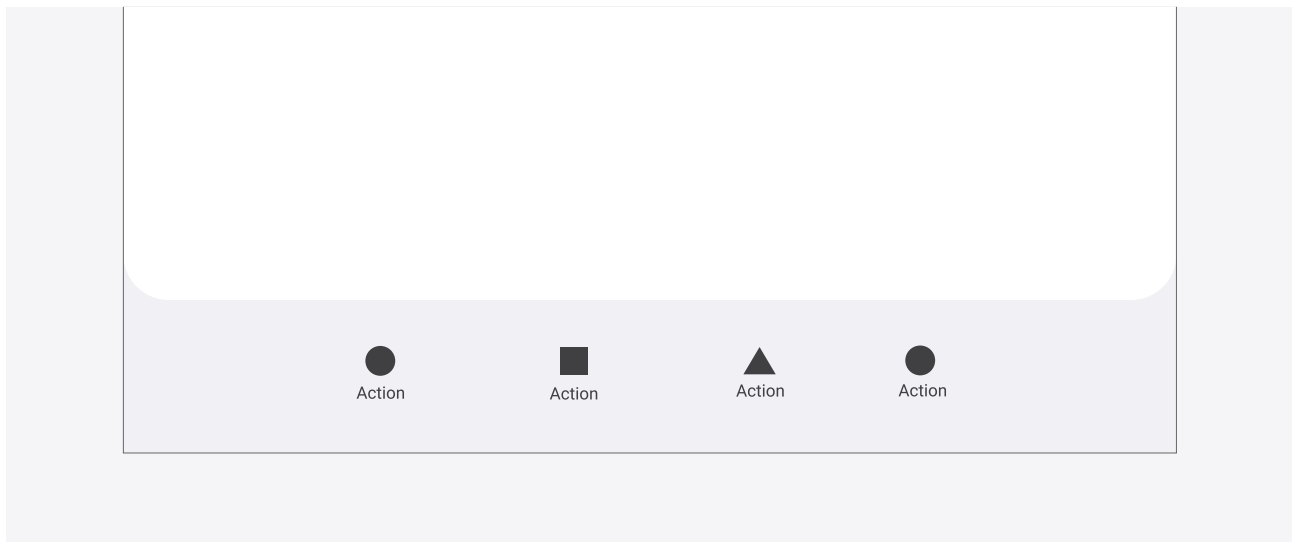
A maximum of five action buttons in the bottom bar can be provided, using a combination of icons and text. These buttons can be shown or hidden when the user scrolls up and down, depending on the amount of information displayed in the body text area.

Don't provide a more options button in the bottom bar. Do not allow the buttons to scroll horizontally. Don't place the bar above the keyboard, except for components that are relevant to keyboard input (e.g., Cancel, Done, Save, or Next).

### Phone



### Tablet

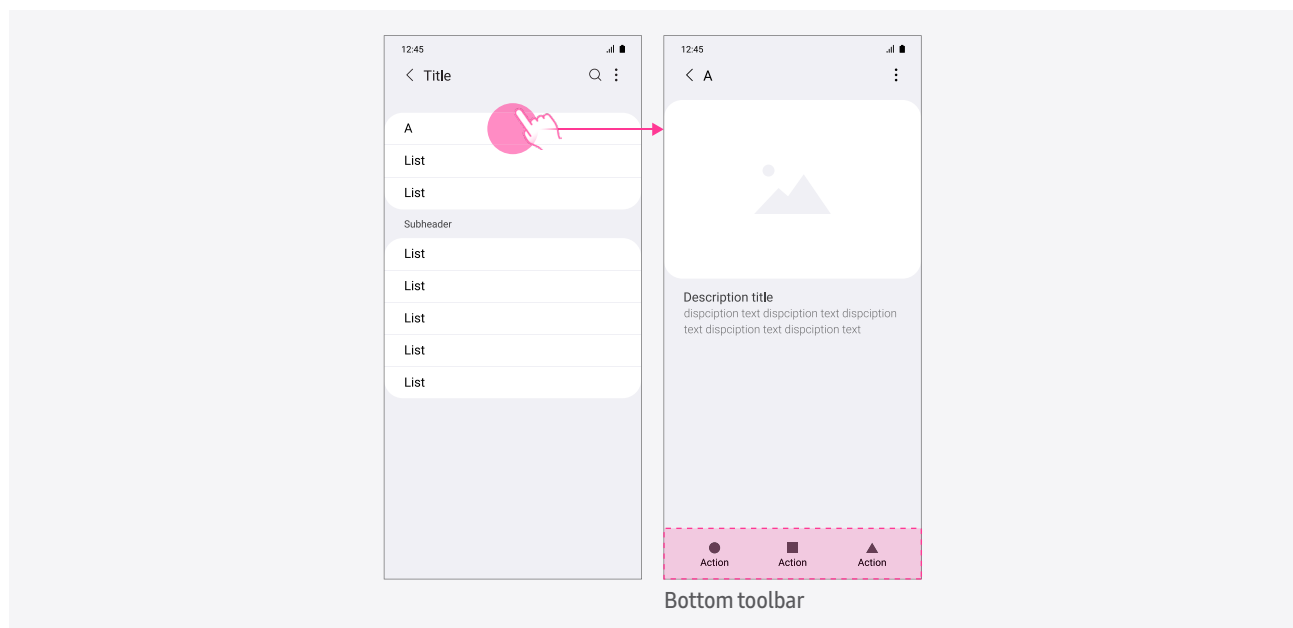


## 03. Bottom bar

The bottom toolbar, which is designed for action buttons, and the bottom tabs, which are used for navigation, are defined and function differently.

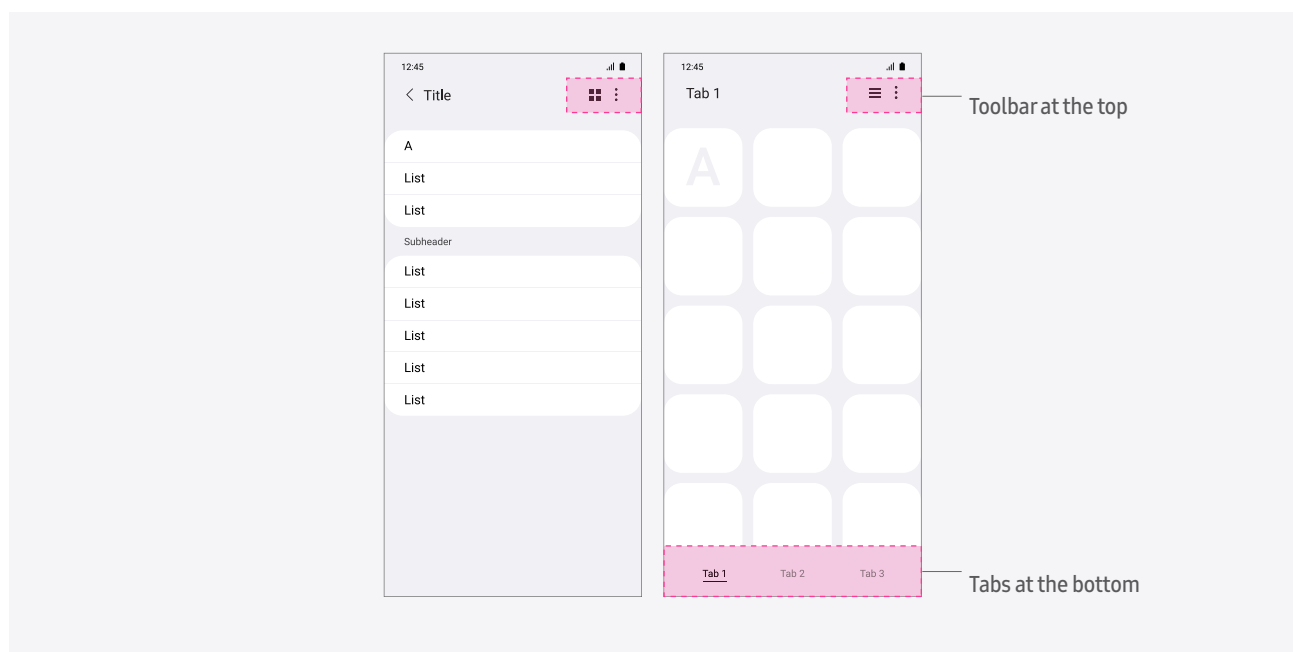
**Action buttons in the app bar on the action screen & action buttons in detail view**

Place higher priority action buttons at the bottom.



**List/Grid view – For screens where browsing is the main purpose**

Place action buttons at the top.



# 04. Bottom navigation

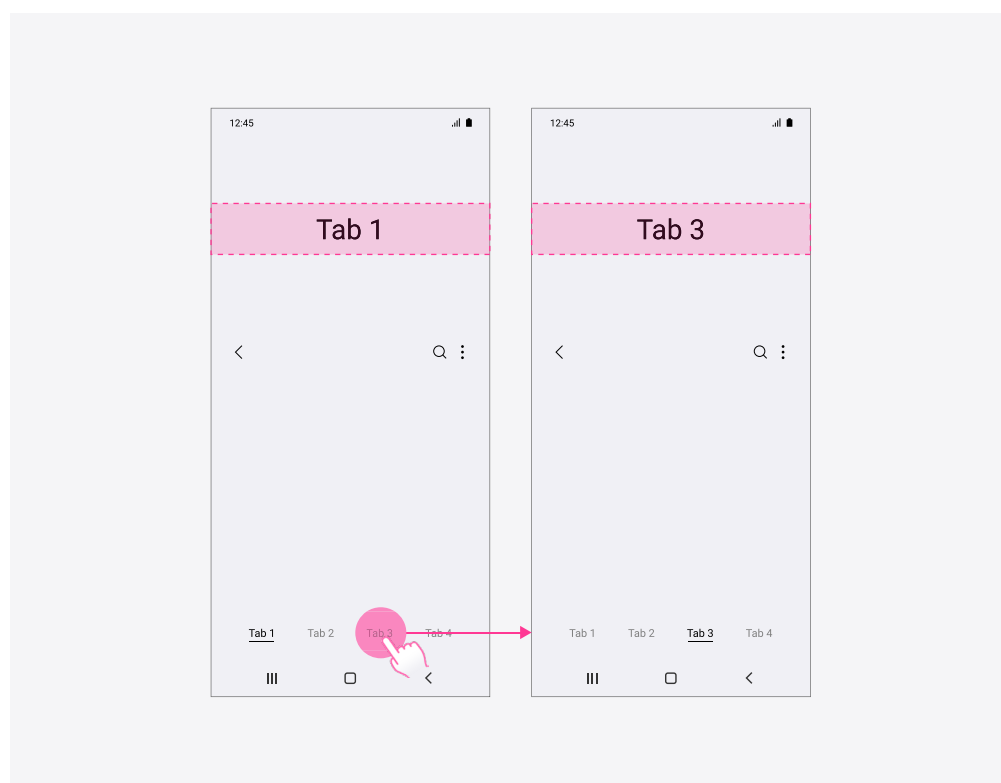
## Main tab

Use a bottom navigation bar to change the screen displayed at the top for each tab through the main tab. Each tab should have its own view. Tabs should be displayed at all times, even when the user scrolls up and down a list. It's recommended that you provide four or fewer text-type tabs (maximum of five), and name each screen title the same as the corresponding bottom tab.

Don't provide a more options button for a tab. The user can't move between tabs by swiping the body area horizontally. Don't place tabs above the keyboard.

### [Phone – Portrait view]

Omit the app title on the screen where the main tab is provided. However, when the main tab represents the app, display the main tab's name as the title at the top.

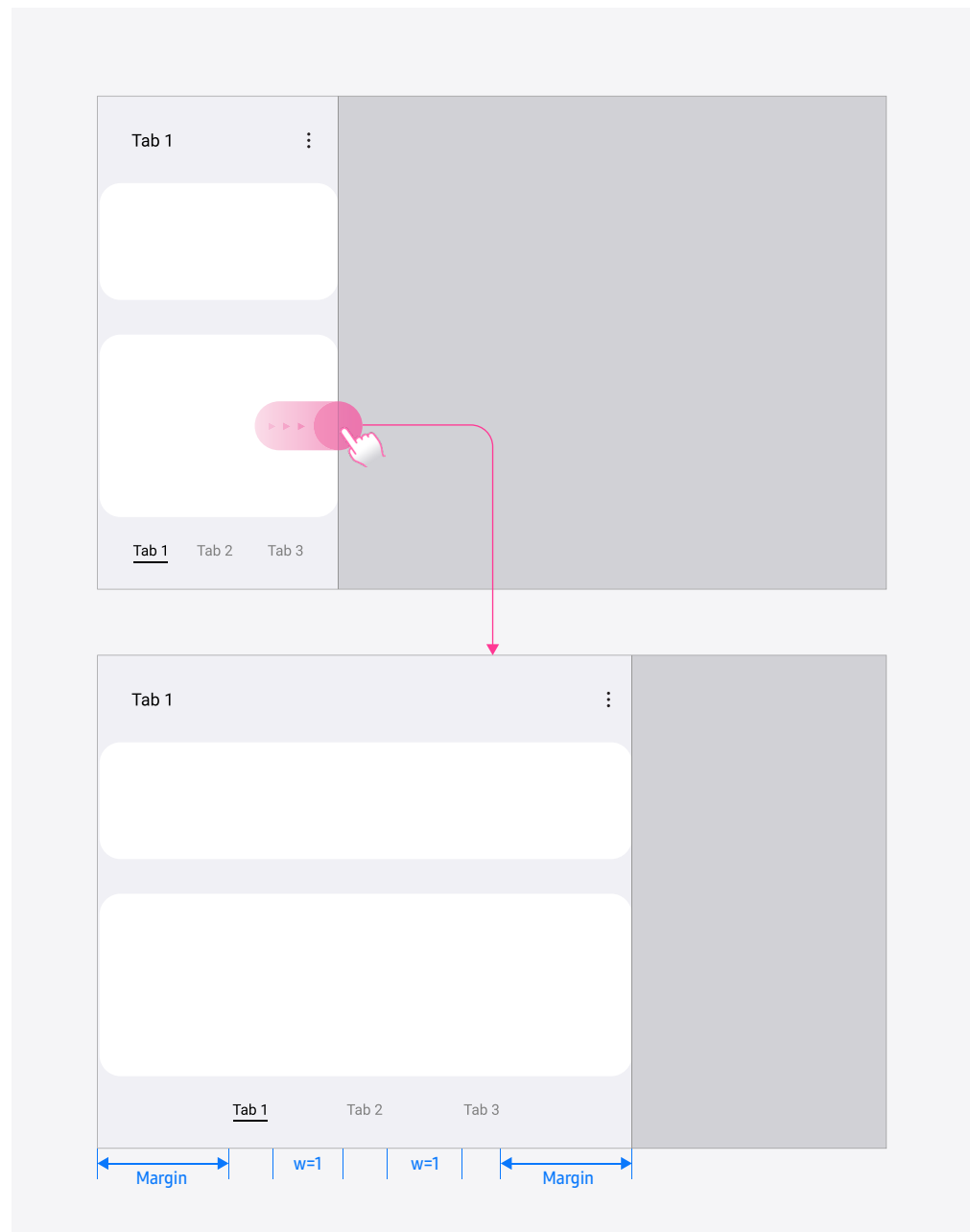


# 04. Bottom navigation

## Main tab

[Tablet – Landscape & split view]

Specify the maximum distance between the tabs so that the distance between them doesn't exceed the set value.





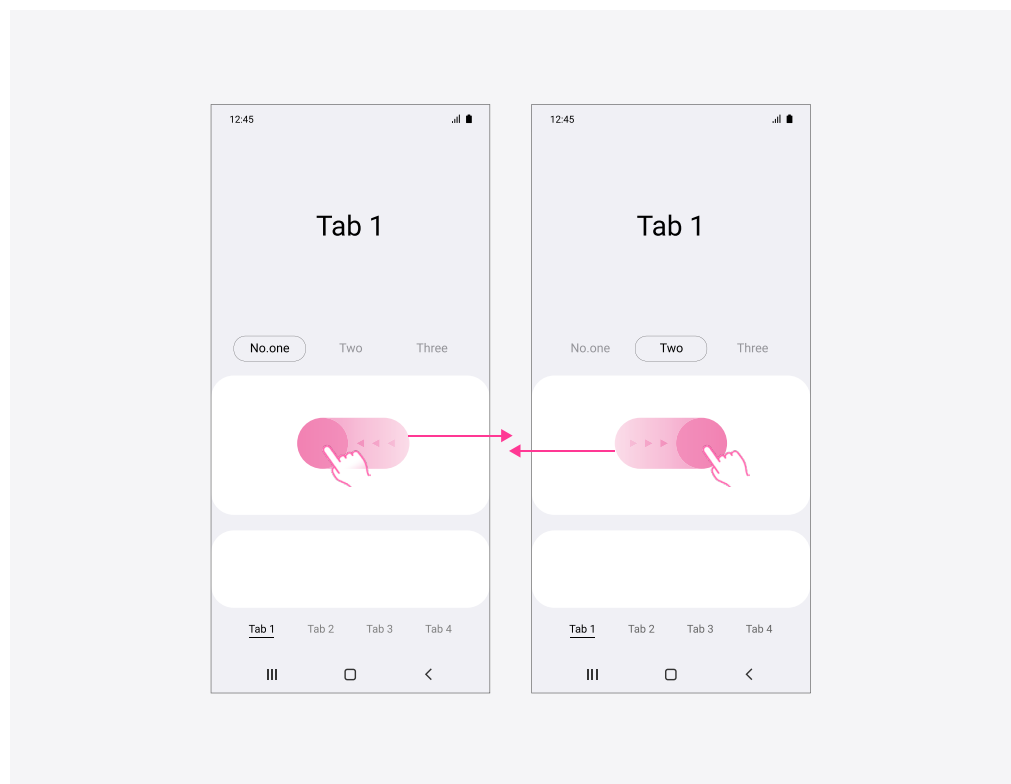
# 04. Bottom navigation

## Subtab

Use a subtab to show the categories displayed on the current screen separately. Provide text-type subtabs at the top. Subtabs can be fixed, but they can also be scrollable if there are five or more of them.

The user can move between subtabs by swiping the text body area horizontally.

[Phone]



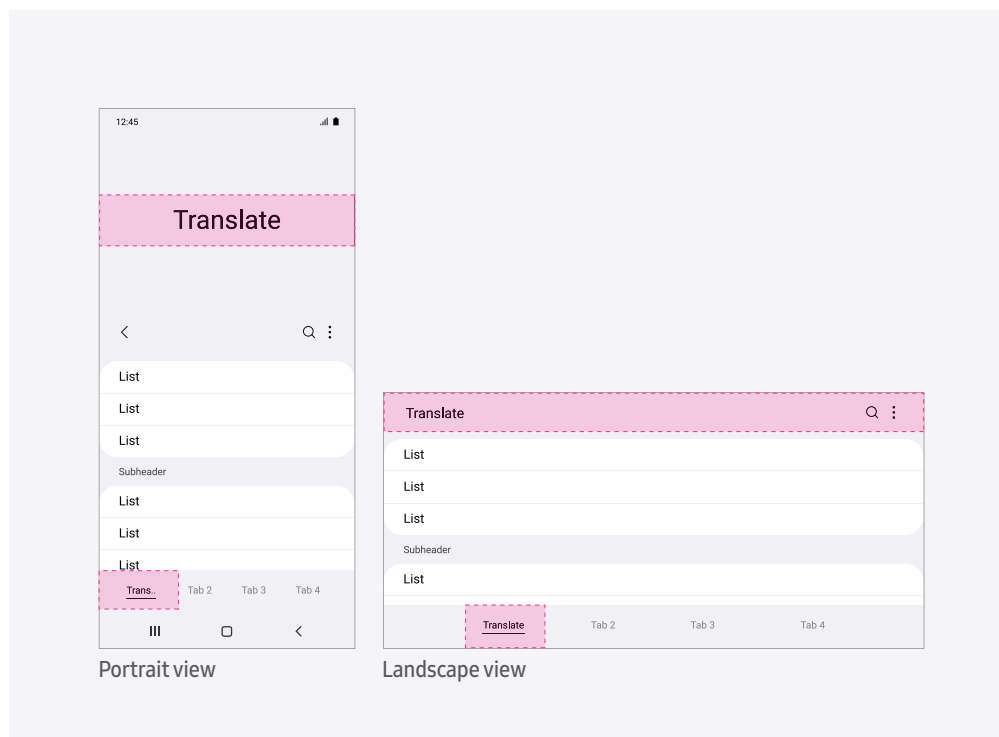
# 04. Bottom navigation

## Tab string

All navigation tabs at the bottom should be displayed on a single screen when the default font size is used. Exceptionally, scroll can be applied.

1. If a user scrolls horizontally within a tab, when the default font size is applied.
2. It's recommended that you use fixed-type tabs with default font size, even when the strings are translated into different languages.
3. In order not to allow each tab scrollable, make sure that each of translated or abbreviated tab string doesn't exceed N characters. (Even if a bottom tab string is abbreviated, the complete string should be used for its app bar title. Display the complete string in landscape view and on tablets.)
4. Exceptionally the tab is allowed to scroll when a larger font size is applied and unavoidably exceeds the tab area.

[Phone]



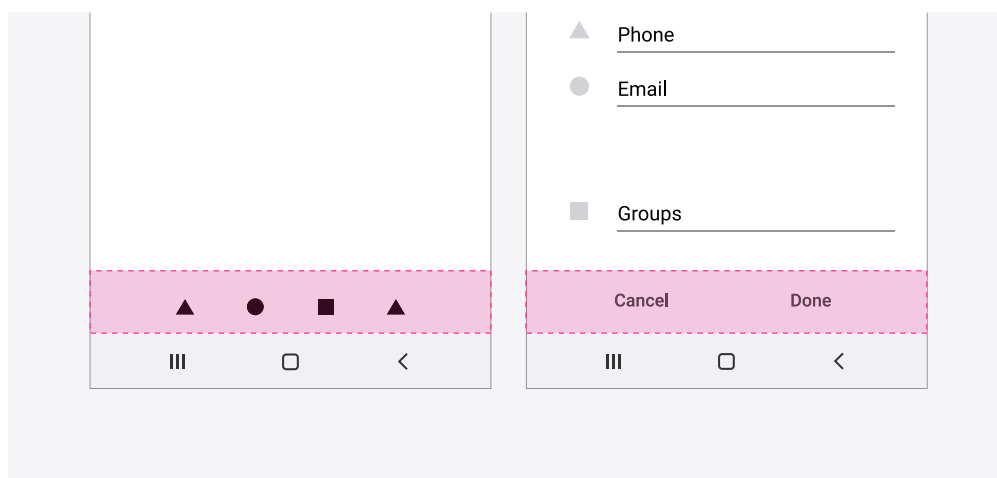
# 05. Buttons

Selectively use flat buttons or contained buttons, depending on the situation. Don't use both a flat button and contained button together on a single screen.

## Buttons

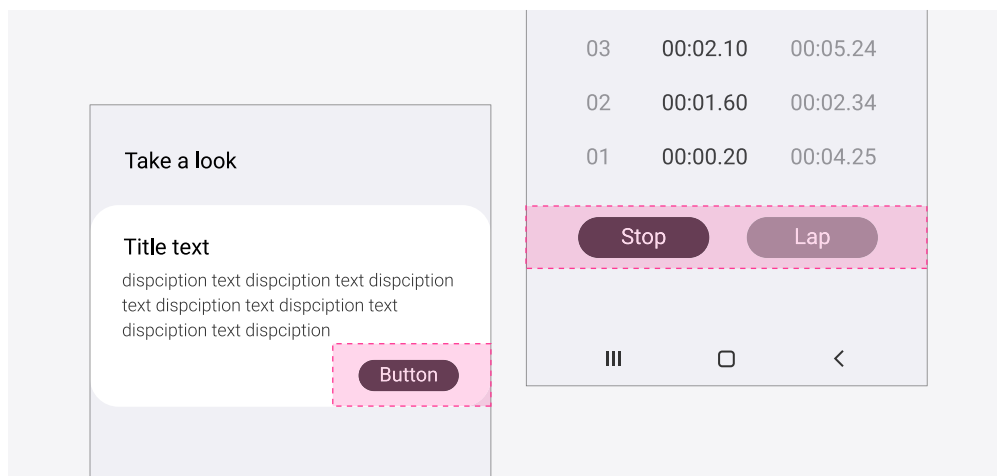
### [Flat button]

Use a flat button to avoid making an unnecessary layer in a toolbar, dialog, etc.



### [Contained button]

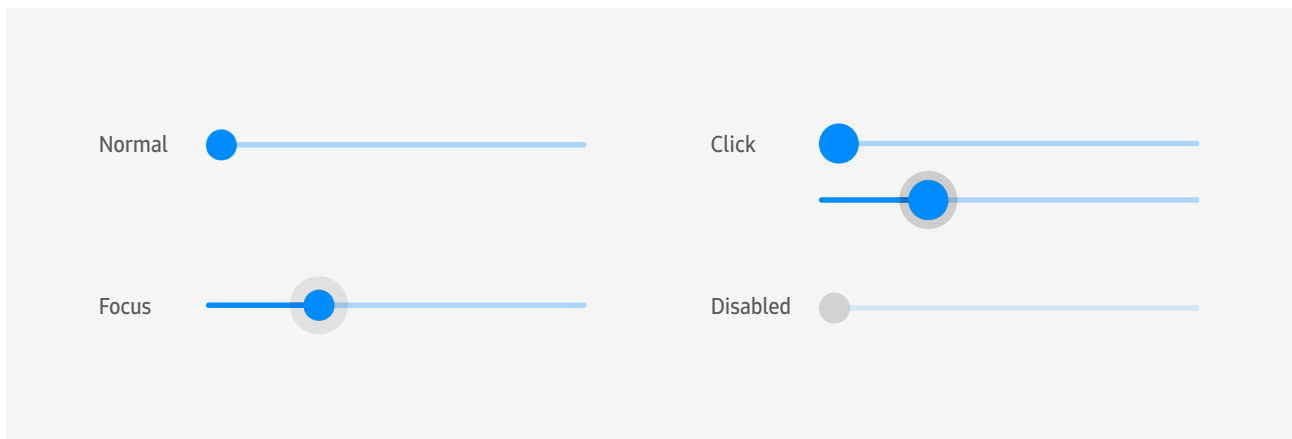
Use a contained button to emphasize features that the user might miss on a complex screen. In most cases, contained buttons are applied to a flat layout by adding colors. Use a contained button when it is difficult to distinguish the button from the other texts and images in the body.



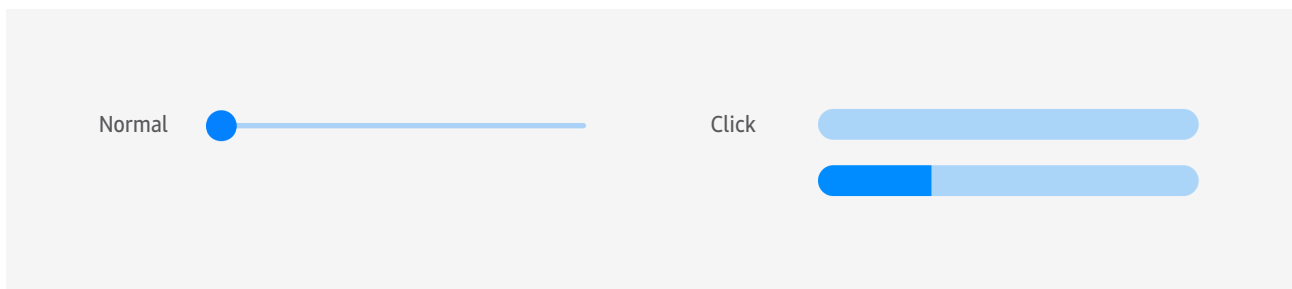
## 06. Slider

The user can change a setting within the specified value range using a slider. A slider can be used to change the volume, screen brightness, etc. When the user changes a value, provide instant feedback.

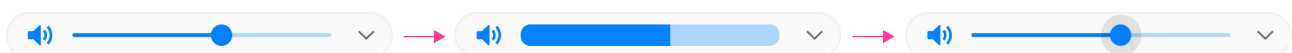
### Setting slider (Default)



### Volume popup & Brightness\_on Quick panel main page (Optional)



### [Adjust sliders in the volume popup]



# 07. Dialog

Provide a dialog pop-up, which requires a user action, at the bottom. If any action is not allowed (e.g. when 'Loading...' process gets displayed and any other action such as cancel is not allowed), then place the dialog pop-up in the middle of the screen. Display a dropdown menu on the spot where it is being touched.

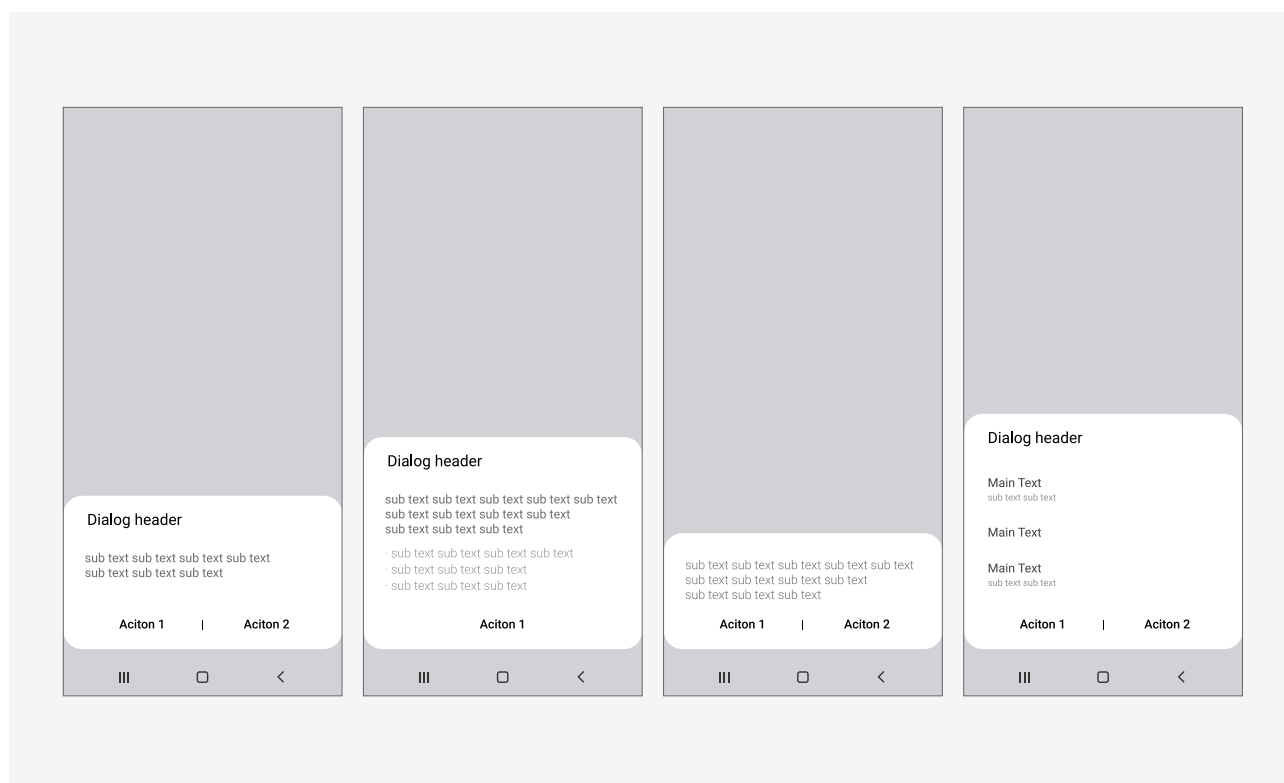
If a user deletes information that is considered very low in importance, then remove it immediately without displaying a confirmation pop-up (e.g., If there is no loss in content or it can be easily recreated (restored)).

When the user launches a feature, don't provide a pop-up that shows a simple description about the feature or feedback (e.g., a pop-up confirming that the user has read all messages).

Depending on the importance of the pop-up's content, decide whether you should provide it only once at the beginning or always.

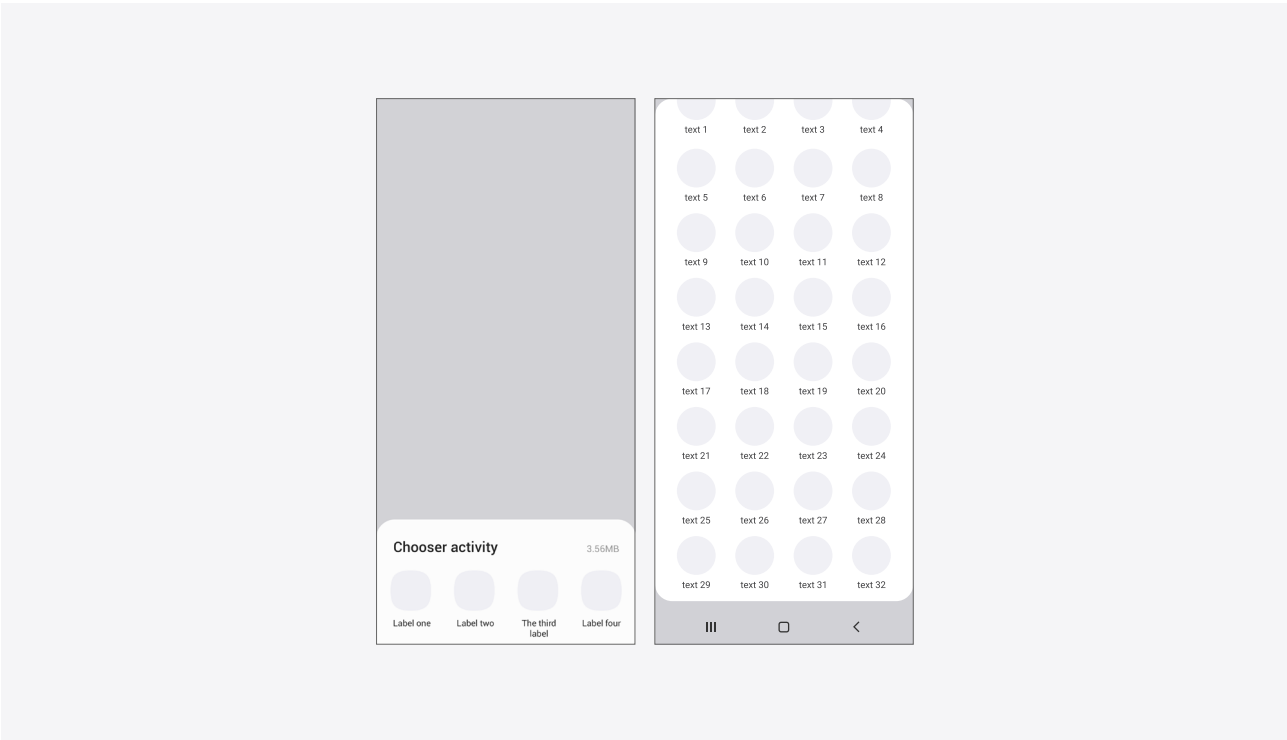
An important pop-up should be provided at all times. Avoid using pop-ups that are displayed only once at the beginning (except for legal information).

## Title + description + button

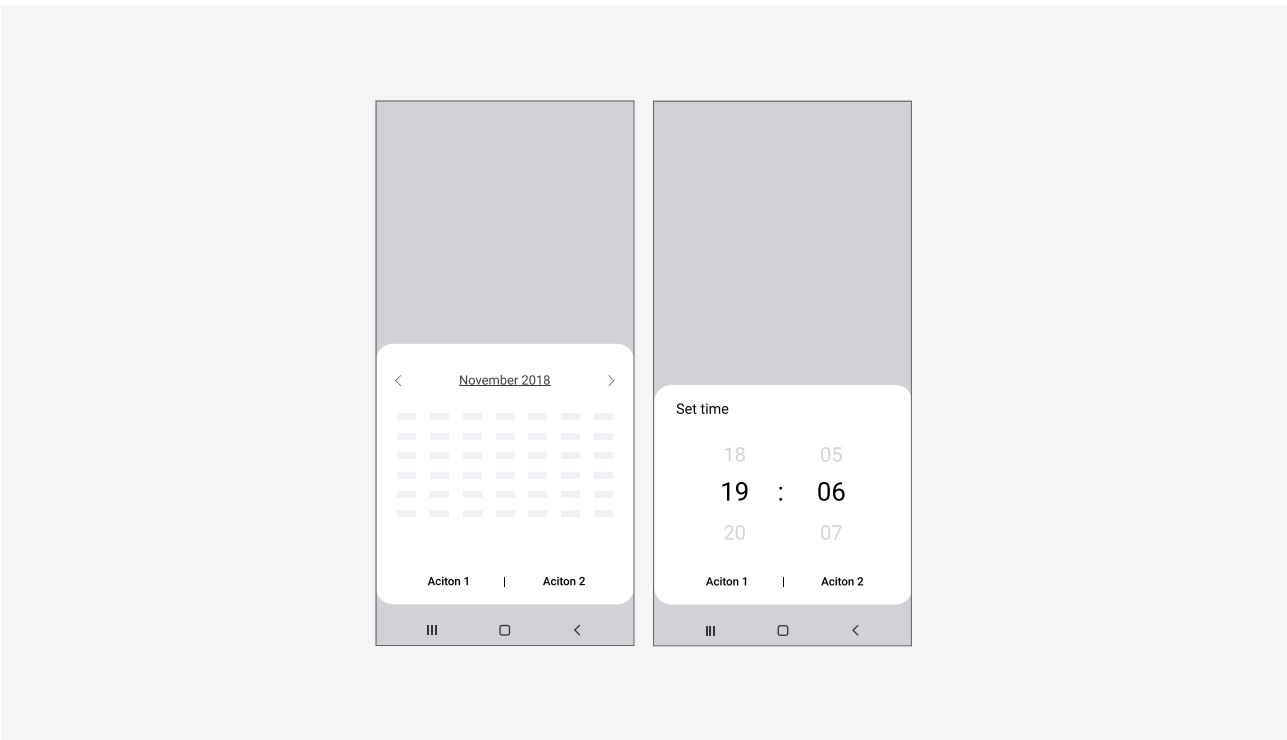


# 07. Dialog

## Chooser activity



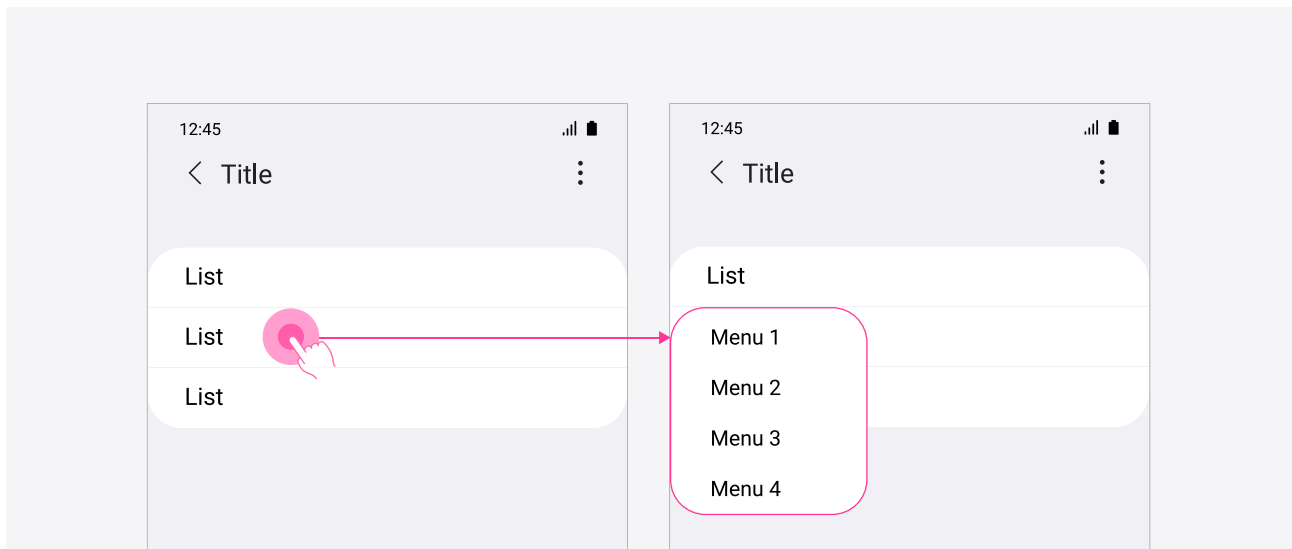
## Date/Time picker



# 07. Dialog

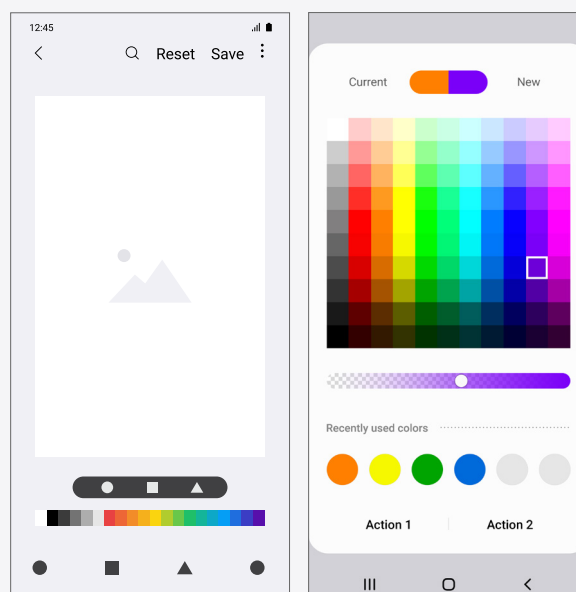
## Contextual menu

Provide a contextual menu pop-up for related options when the user taps and holds an item in list/grid view. It's recommended that you provide it as a dropdown menu without a title.



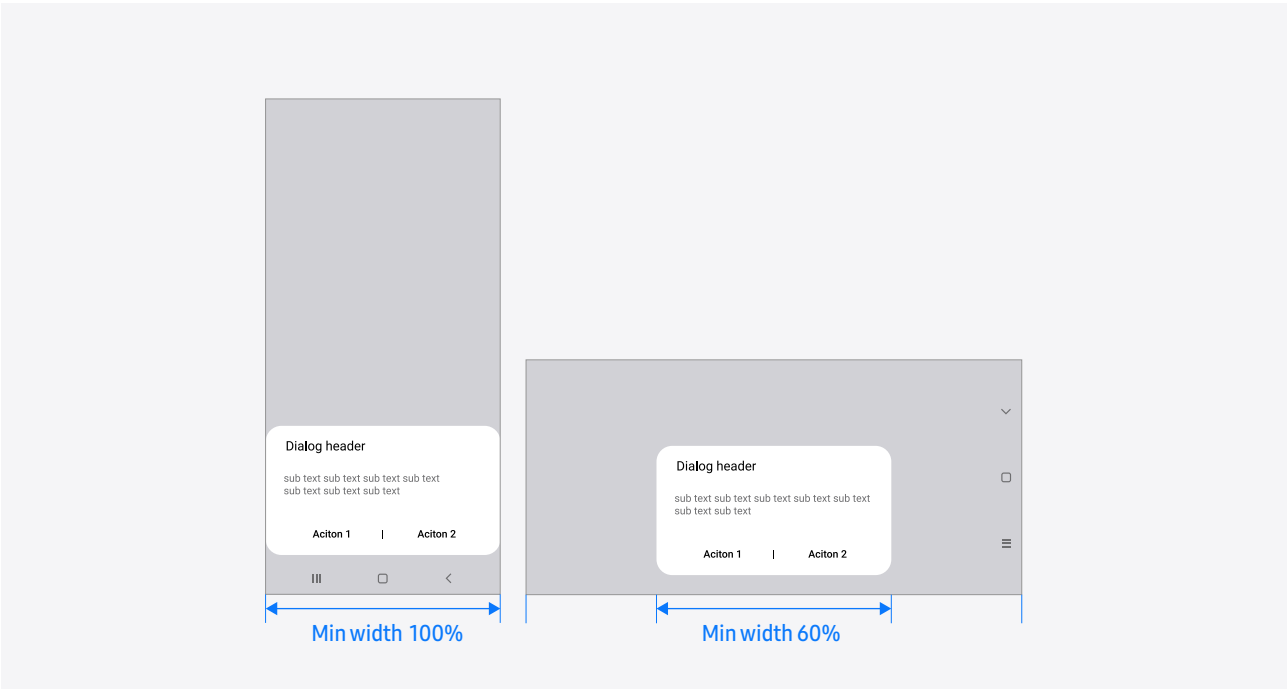
## Color picker

Provide two types of color pickers. Use a color bar-type picker to allow the user to choose a color while looking at the image they are currently working on. The user should also be able to choose a color through an advanced color picker in case they want a wider range of colors.

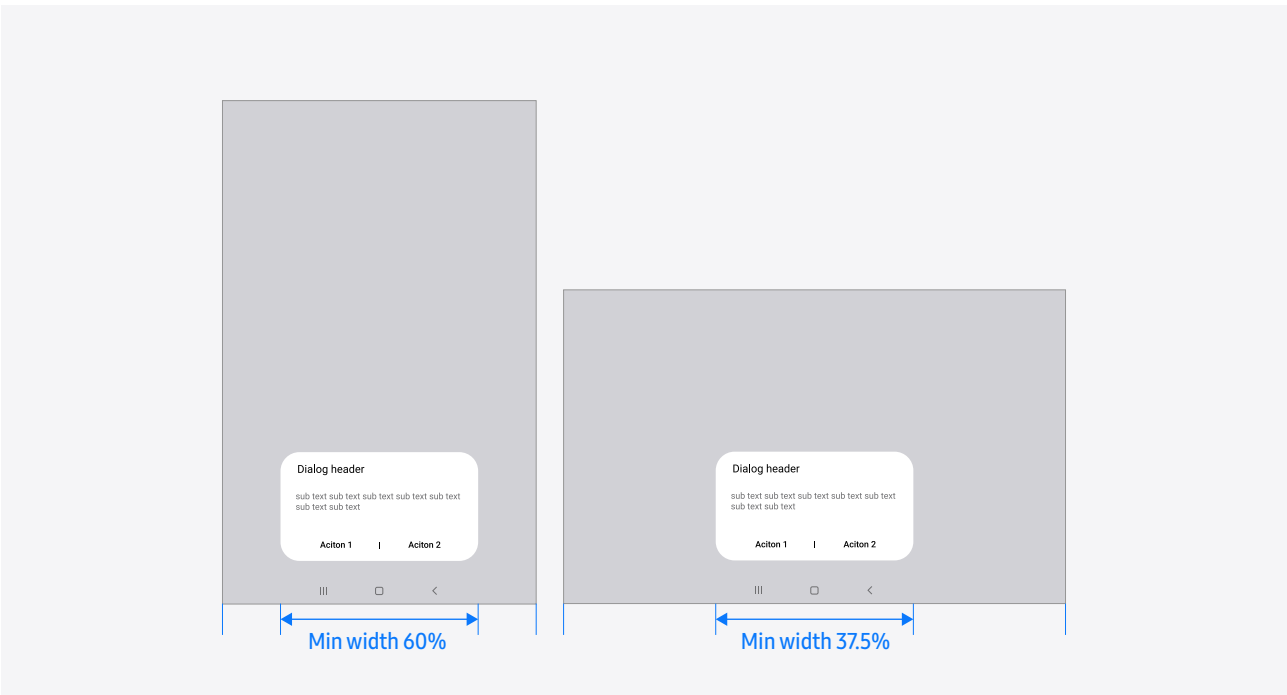


# 07. Dialog

## Phone



## Tablet

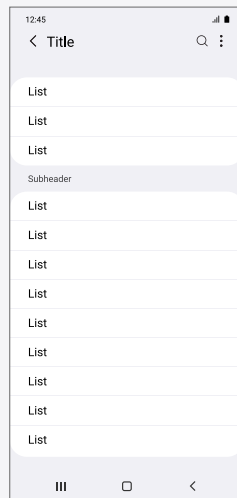




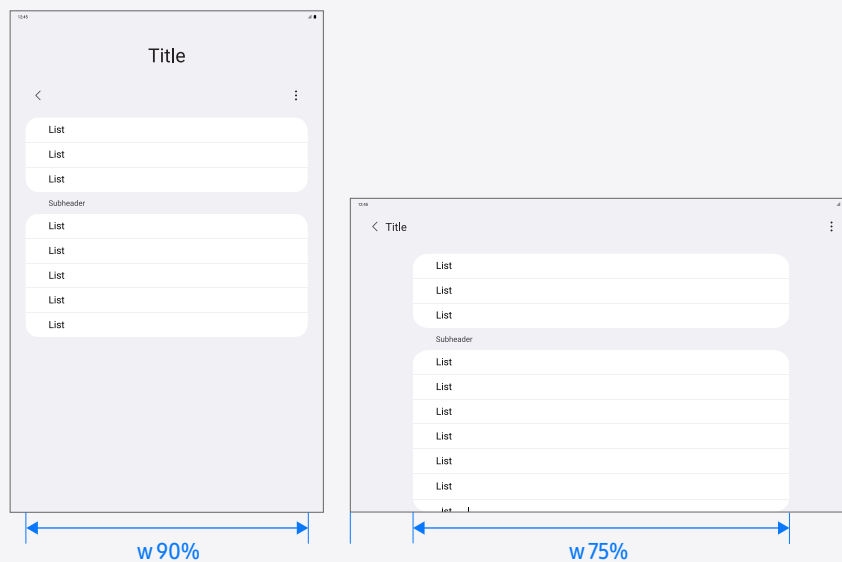
# 08. List

Use a list to show multiple, vertically juxtaposed items as a single continuous component.

## Phone



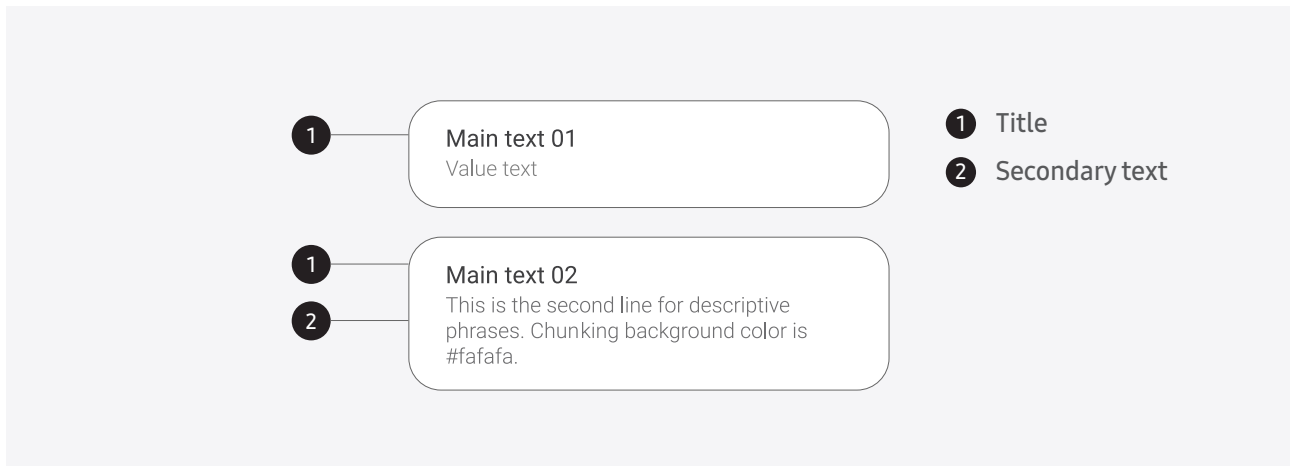
## Tablet



# 08. List

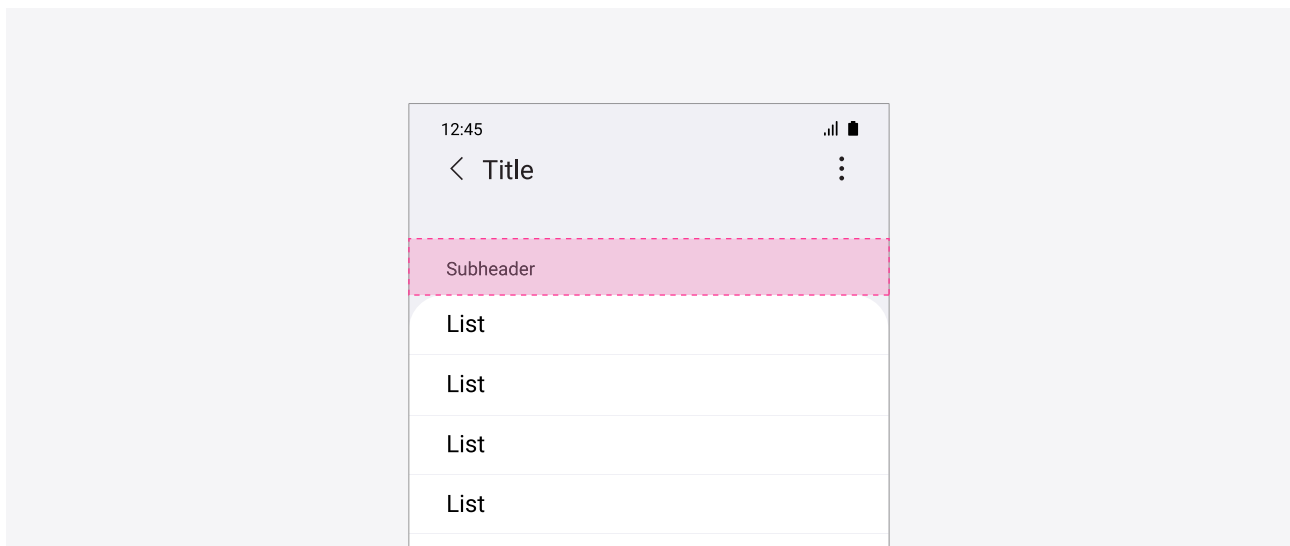
## Title

The title of the body within a list must be no longer than a line. There is no maximum length limit for the secondary text.



## Subheader

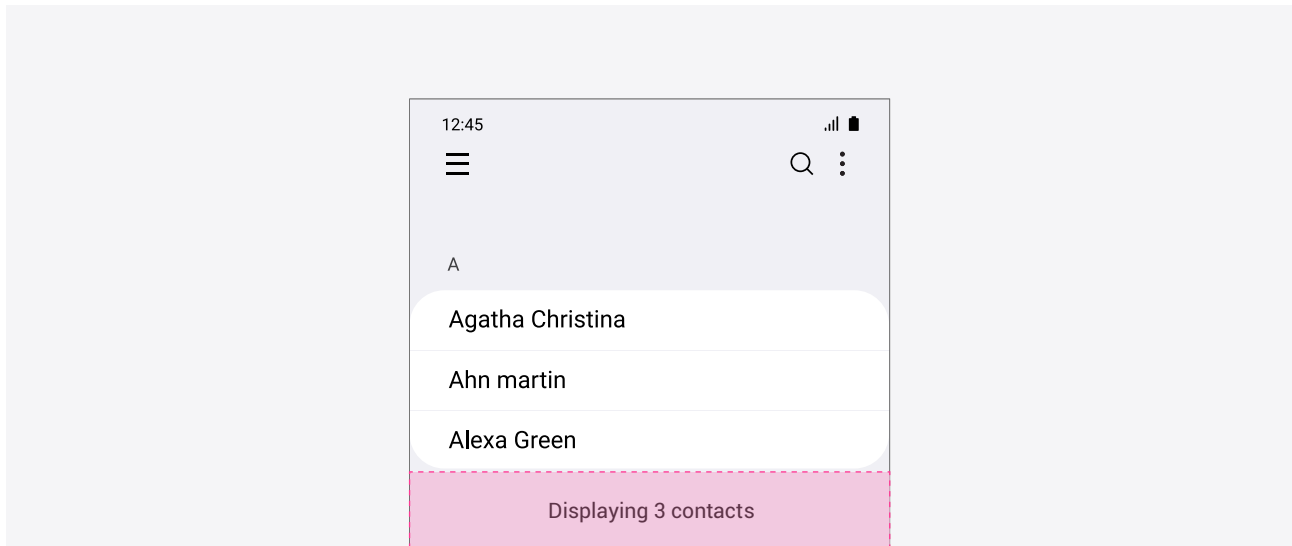
You may provide a subheader for the grouped items in a list, if needed.



# 08. List

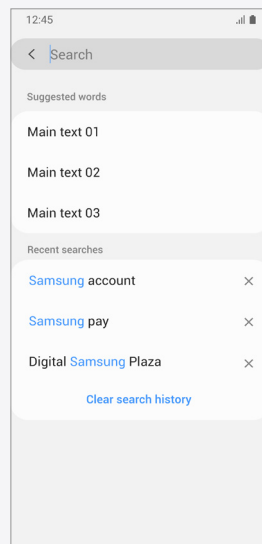
## Counter

For a list that includes content like emails or messages, provide a counter area that displays the total number of lists at the bottom.



# 09. Search

To help users find the content they want quickly from a large amount of information, provide a search feature. It shows suggestions based on the most recently typed search terms or frequently used conditions prior to inputting a search word. Also, it ensures a satisfied search experience by providing an auto-complete feature.



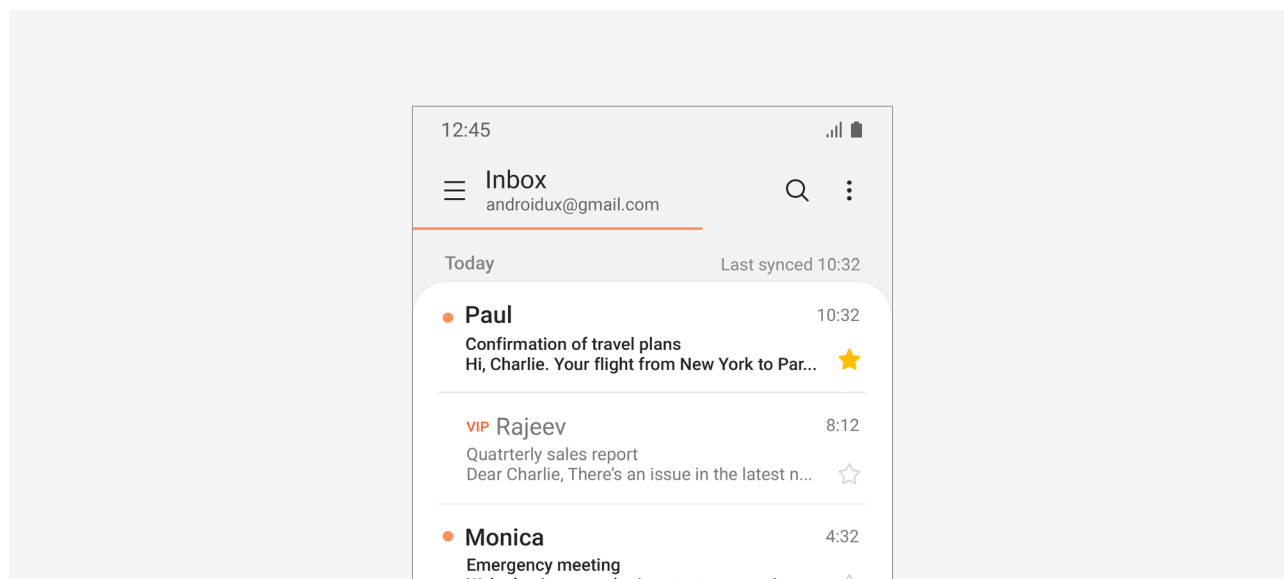
Reminder - Search

# 10. Progress indicator

Use a progress indicator to show the progression of a specific action.

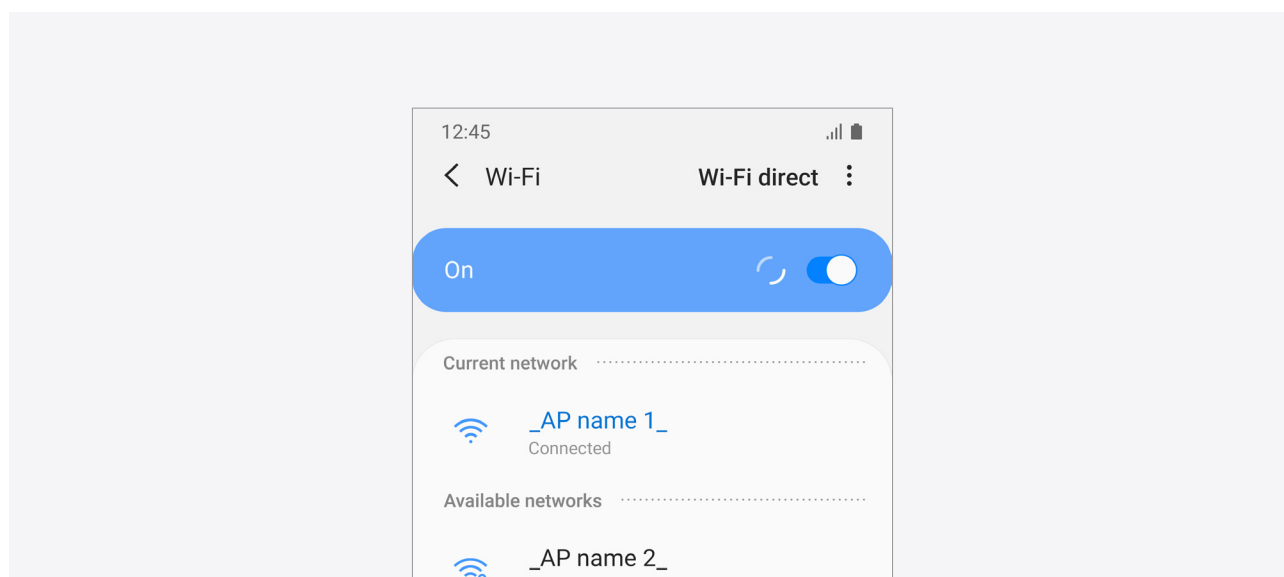
## Progress bar - Emails

When the progress status and action completion time are known, use a progress bar instead. It's recommended that you provide a progress bar in an isolated area, such as an app bar, rather than covering the whole screen with it, so that it doesn't affect the current task.



## Progress circle - Wi-Fi

Use a progress circle to let the user know that an action can't be executed immediately and it will take a certain amount of time. However, it's recommended that you use it only when the action completion time is not known.



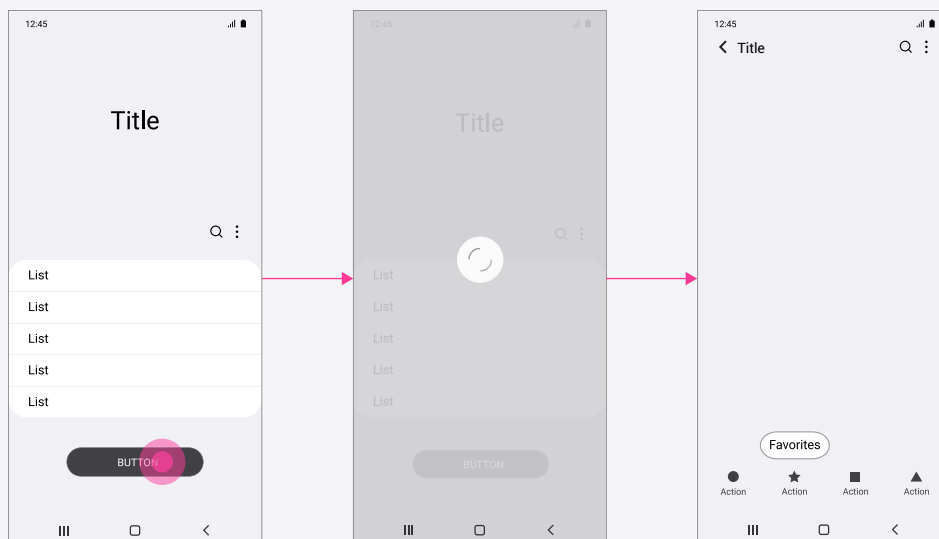
# 10. Progress indicator

Display the progress icon on the body or on the button which is just tapped to avoid disturbing the user flow. Covering the screen with a progress pop-up should be avoided.

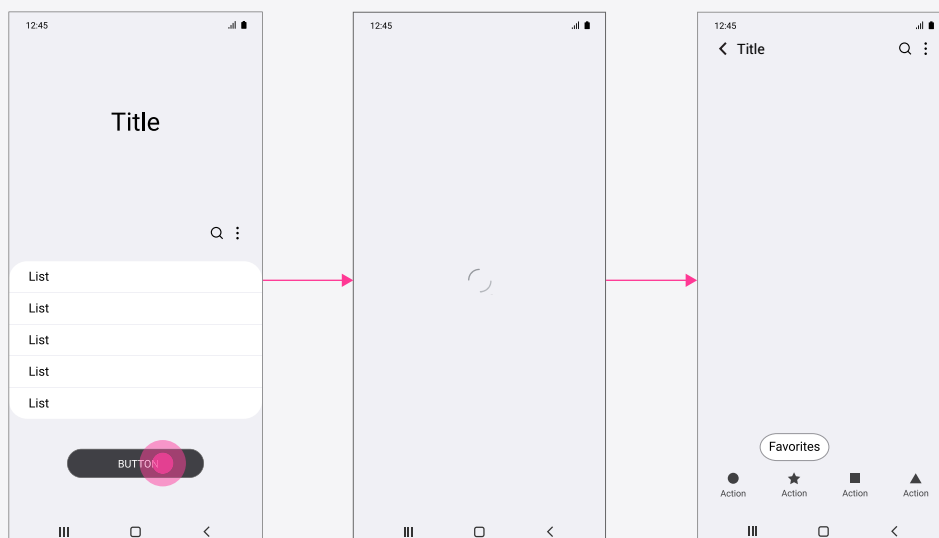
## Progress circle - Screen

When there is a landing page for the user's action, go to the page and show the basic elements first, such as app bar and toolbar, and then appear the progress icon on the content area which is updating.

[Don't]



[Do]



# 10. Progress indicator

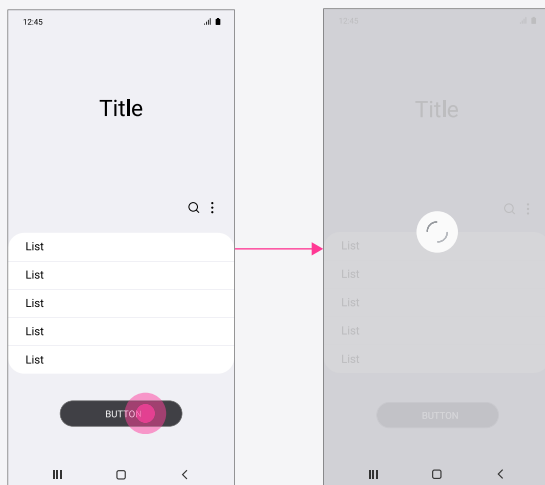
If the user's action affects on the current screen or if the landing page cannot be specified according to the condition, show Progressing icon on the button which is action is taken.

When it is difficult to offer progress circle on the body of the contents, show it on the button which is tapped.

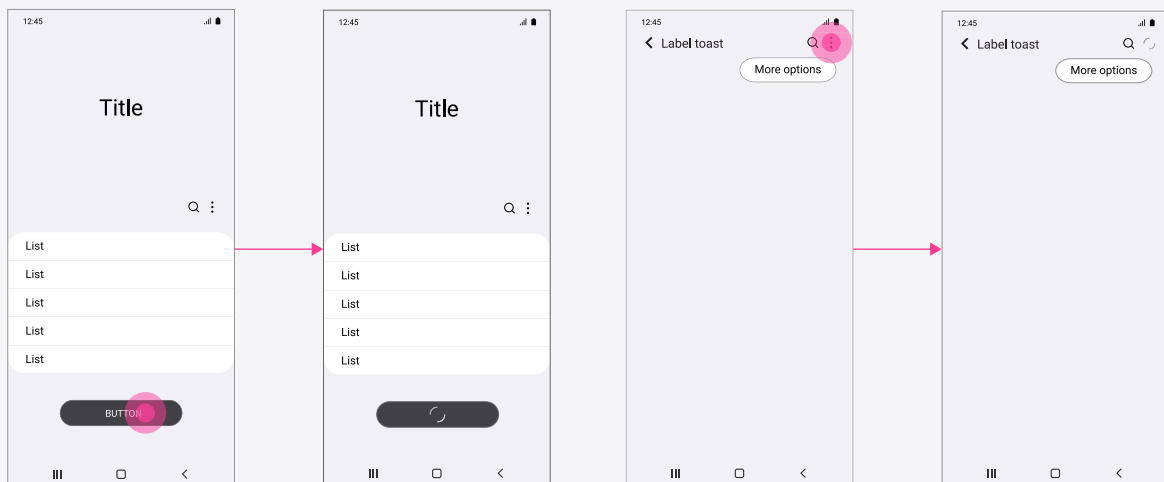
## Progress circle - Button

Use the action button to show the progress status.

[Don't]



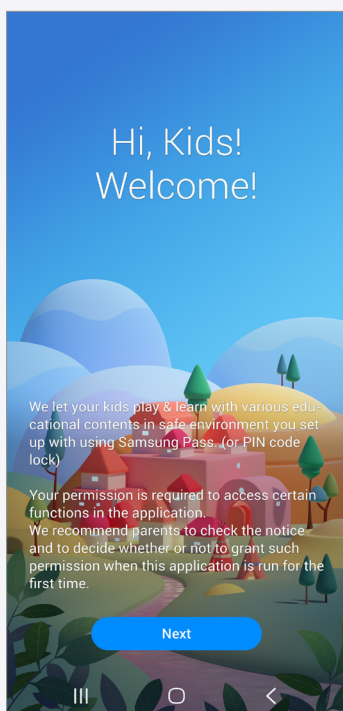
[Do]



# 11. First time use

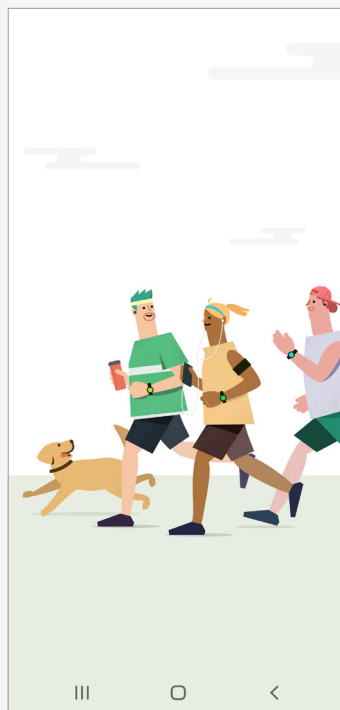
You may provide a Welcome page, Loading page or No items page when a user opens an app or uses its features for the first time.

## First time use



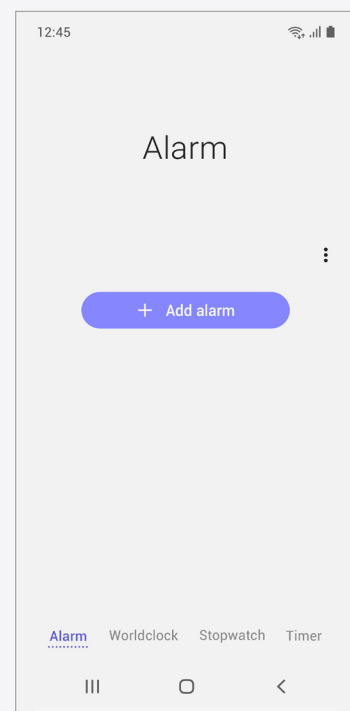
### [Welcome]

When you need to add a brief description about an app or a legal notice for users, utilize a Welcome page.



### [Loading]

When an app takes some time to load, provide a Loading page.



### [No items]

When there are no items to display, provide a shortcut button that the user can use to add new items. You may also show text that describes the current state.



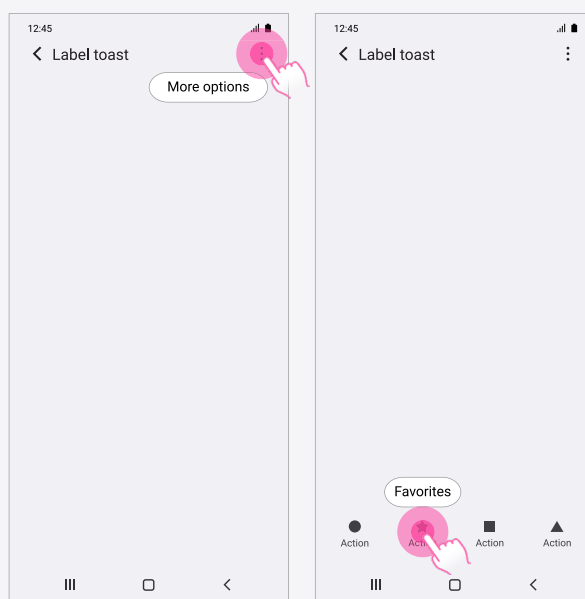
## 12. Label toast

You can provide additional information about an icon-type textless component through a label toast. Add a text description above the relevant component so that the user can tap and hold it to view.

You can apply a label toast to a component that consists only of an icon without any text, a component that consists of an icon and text, or only of text if its text size has to be fixed because of the limitations of the screen. (Apply it to all screens regardless of the system font.)

A label toast should disappear after a few seconds or when the user touches the screen. If the user selects an area outside the label toast, then immediately execute the action designated for the relevant area.

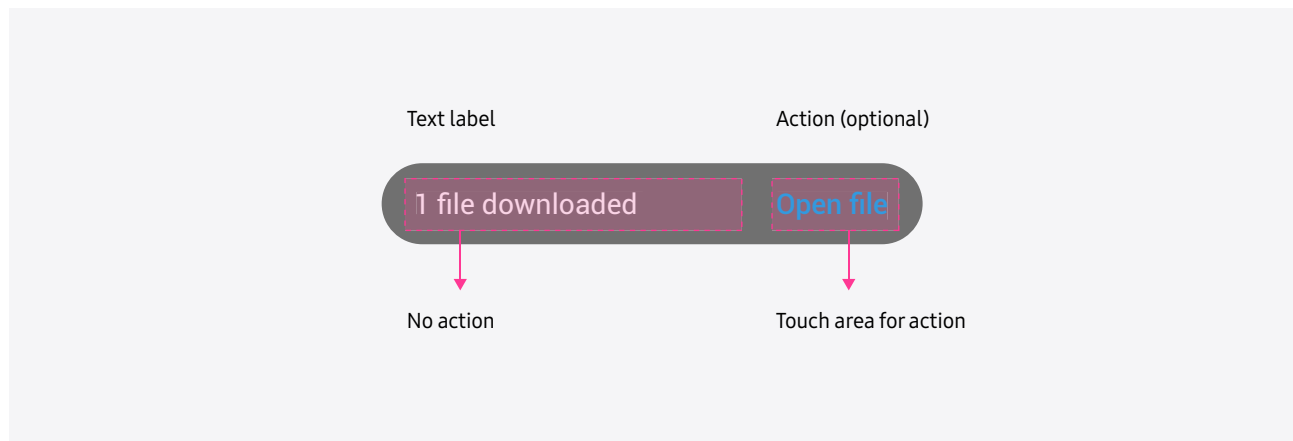
Don't apply a label toast to an indicator that doesn't have special actions, a button that consists only of text, or a button that consists of both an icon and text if a larger font size is applicable. If the app already uses the tap and hold gesture for another action, then don't display a label toast. The action specified by the app takes priority.



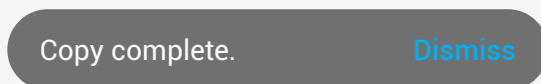
# 13. Action toast

Action toast provides an action button in the toast popup in order to immediately execute an action related to the contents of the toast.

Snack bar will remain pop-up until press the button, but action toast will disappear after a set time like other toasts.



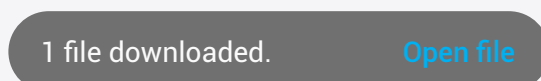
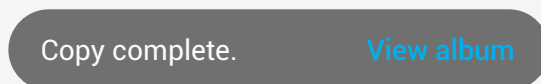
[Don't]



Do not provide Action buttons to close pop-ups, such as Dismiss, Close, Done, OK.

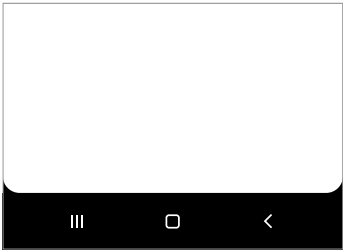
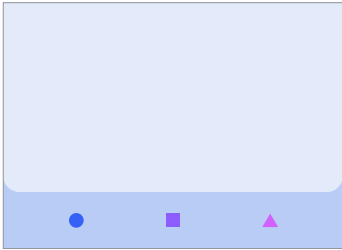
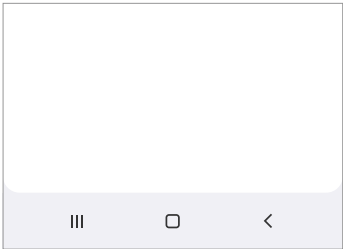
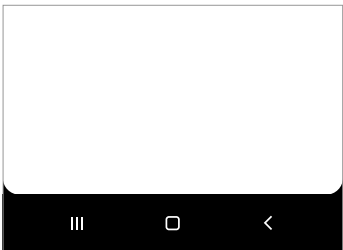
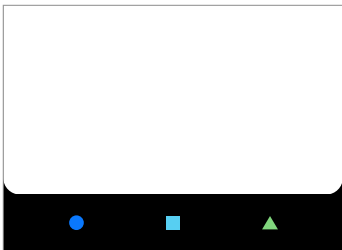
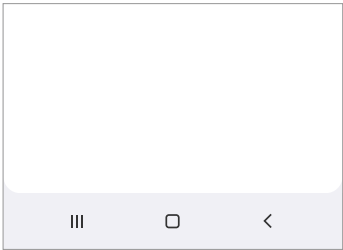
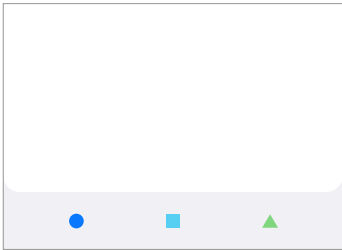
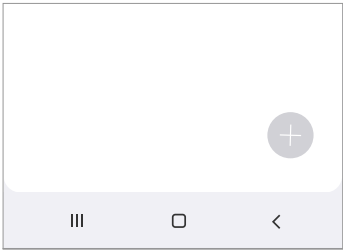
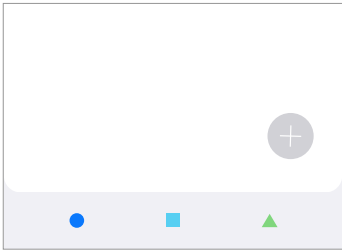
More than 2 actions cannot be provided.

[Do]



# 14. Navigation bar

For the navigation bar, choose one of the three styles according to the app design: Opaque, Translucent, or Transparent. Transparent and translucent style navigation bars aren't affected by the background settings or themes. The navigation bar is always black when the aspect ratio is 16:9.

Background settings	Default	Theme applied
Samsung theme-applied app		
		
Non-Samsung theme-applied app		
		
Other unspecified or default app		

# 15. Edit mode

Edit mode refers to a screen mode where the user is temporarily unable to save changes in real time or is allowed to cancel changes. The changes are applied through a user trigger (e.g., Save or Done).

Phone

Provide confirmation buttons at the bottom. However, in landscape view, provide them at the top to prevent them from taking up the body text area.



Phone - keyboard

When a keyboard is available, place confirmation buttons above the keyboard.



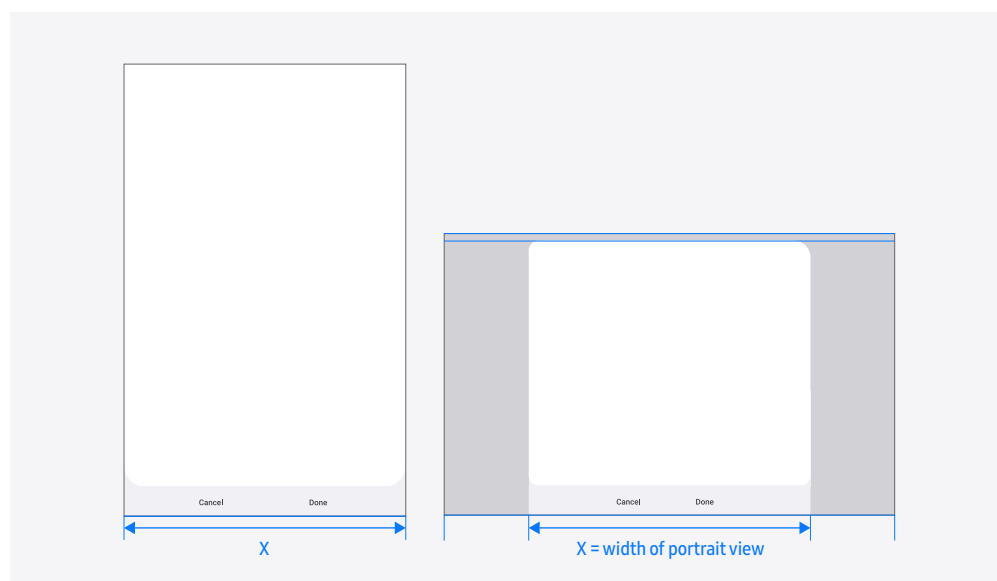
# 15. Edit mode

## Tablet

### [Create/Compose]

In portrait view, make the Create/Compose window fit to the screen. In landscape view, provide it as an overlay pop-up window, aligned to the center.

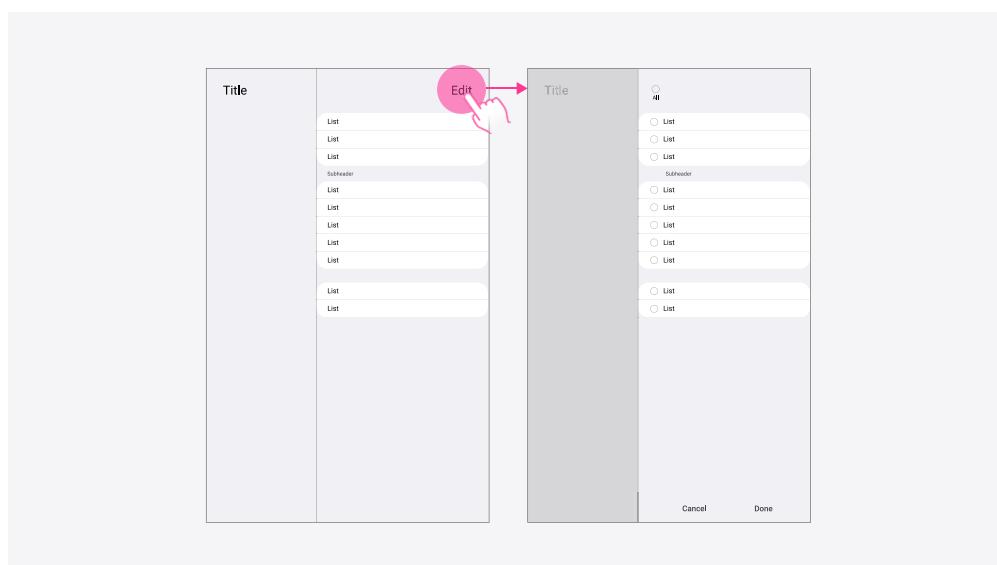
Tapping outside the overlay pop-up window should function the same way as the Back key. It's recommended that you use the same title, action buttons, etc. for both portrait view and landscape view.



### [Edit]

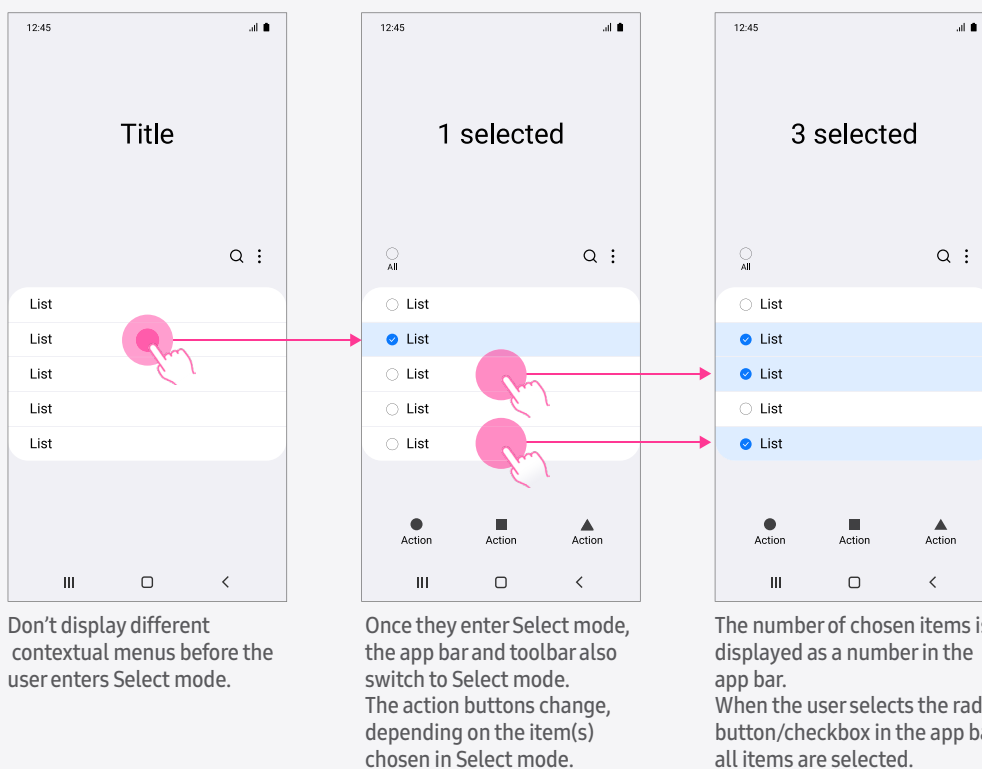
Try to make the actual displayed window and the Edit window as similar as possible.

In split view, provide the Edit window in edit view. When the user needs to create a new item, make the Create window to fit the screen or provide it as an overlay pop-up window. Make any areas irrelevant to the Edit area appear darker (dimmed). Touching the darker (dimmed) area should function the same way as the Back key.



# 16. Selection control

The user can enter Select mode by selecting an option and then tapping the Edit button, or by long-pressing an item.

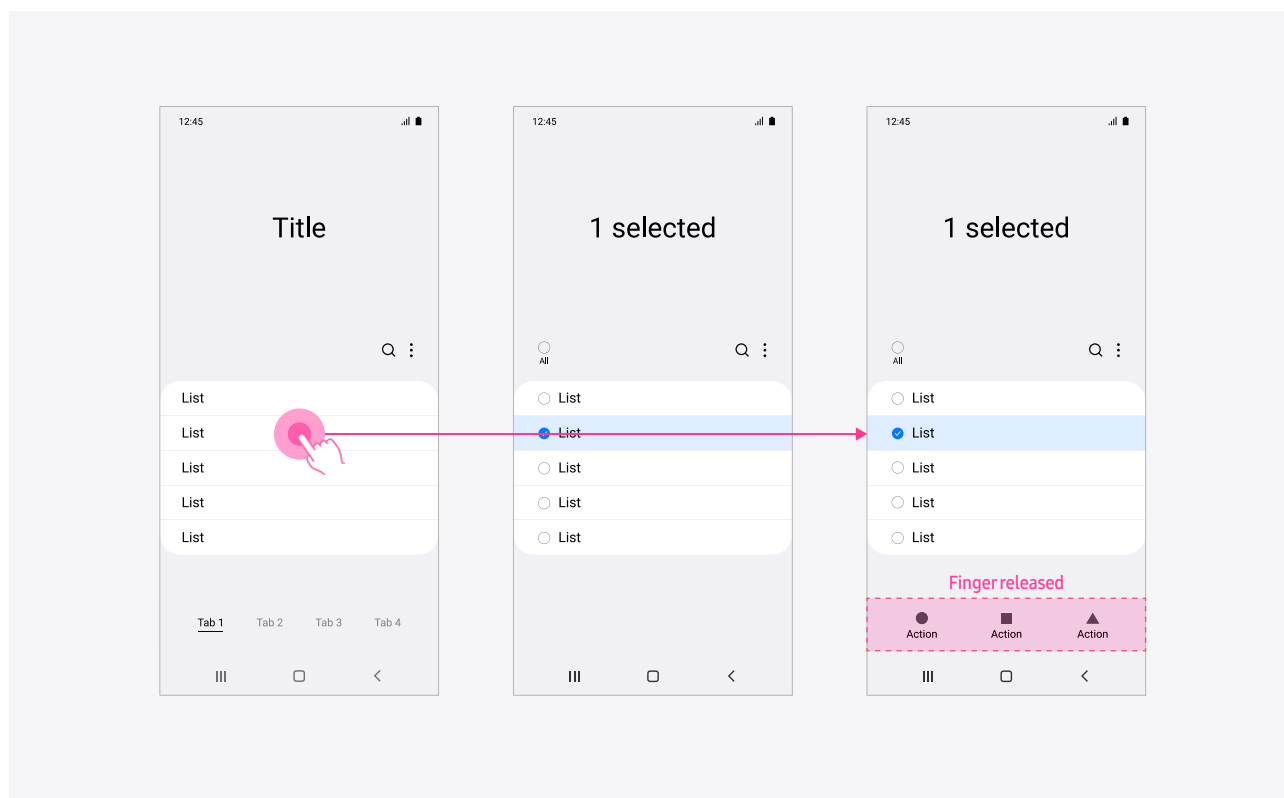


# 16. Selection control

## Timing for toolbar display after entering Select mode

1. When the user enters Select mode by tapping the Edit button, display a toolbar as soon as the user taps the Edit button.
2. When the user enters Select mode by long-pressing the screen, display a toolbar when the user lifts their finger from the screen (after selecting an item).
  - The content displayed at the bottom can be obstructed by a toolbar. Therefore, visually inform the user that they have entered Select mode and that the relevant item has been selected. Then, as soon as they lift their finger, display a toolbar.
  - Hide the toolbar while the user selects items through continuous scrolling after they enter Select mode and until they lift their finger. Provide it after they lift their finger from the screen.
  - Hide the toolbar for tabs in standard view.

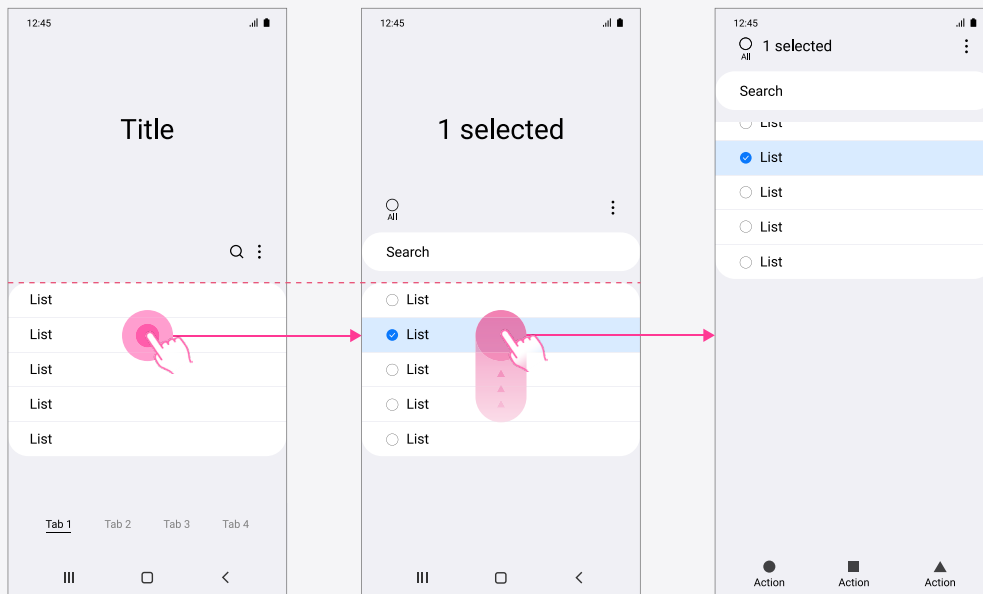
Don't display a toolbar if no items have been selected.



# 16. Selection control

## Interaction

When the user tries to use the search bar in Select mode, the list layout should be maintained and the lists shouldn't be moved when the user enters Select mode.





# Visual design

# 01. Icons

## Clear metaphors

Icons should be designed in a way that users can easily recognize them and also understand their meanings and functions at a glance.  
Use clear metaphors, which are familiar to users, for the icons in One UI.



## Minimal and modular shapes

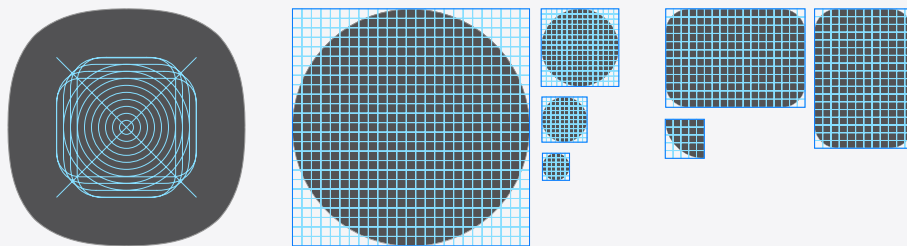
The user may find it difficult to recognize icons at a glance if you use a complex shape or too many mixed forms.  
When designing icons for One UI, try to simplify their shapes and use the same shape repeatedly to help the user recognize the icons more easily.



# 01. Icons

## Construction

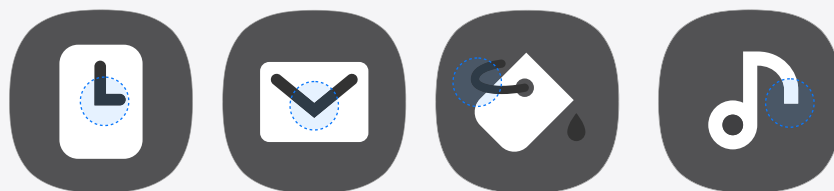
Just like building houses of different shapes using the same set of building blocks, you can use the same set of components to design your icons for better consistency.



## Softness and sharpness

As rounded corners are generally used in One UI, use rounded stroke terminals for icons to make sure that they go well together.

The stroke corners, however, should remain sharp to add contrast to the rounded corners and details.

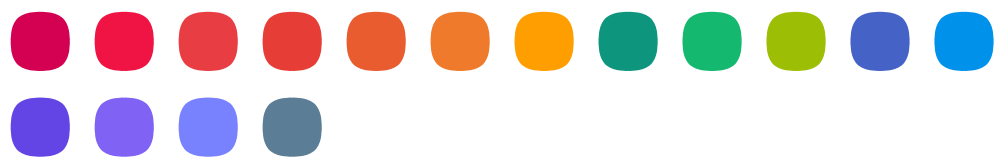


# 01. Icons

## Icon colors

For icons, choose colors that can express the characteristics of the app, and apply a palette of colors that go well together for better consistency.  
The colors applied to the app should have a different tone to that applied to the icons.

[App icon color]



Primary Color

Secondary Color



Primary Color

Secondary Color

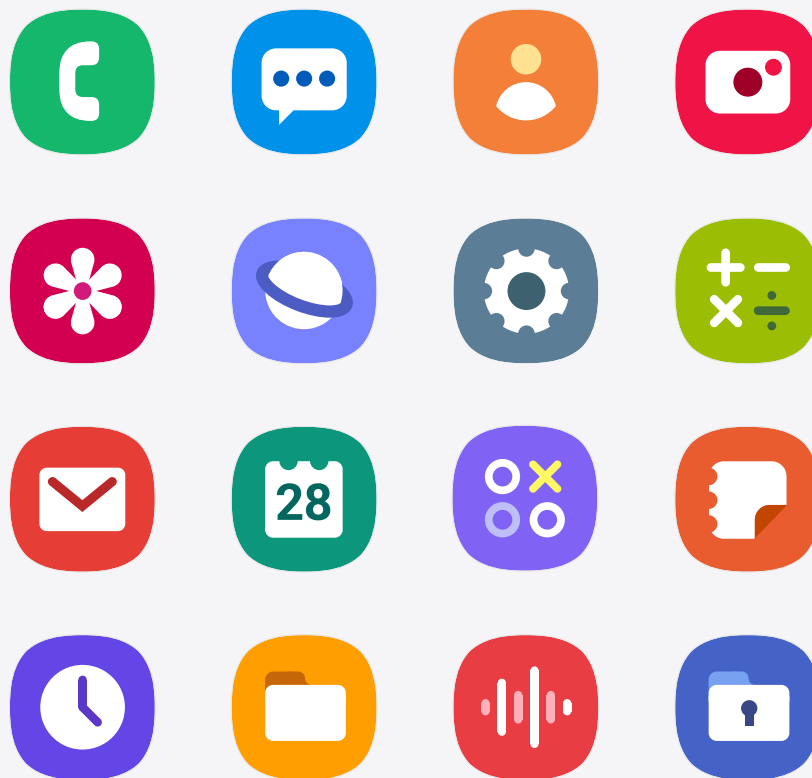


Primary Color

Secondary Color

# 01. Icons

## App icons in One UI

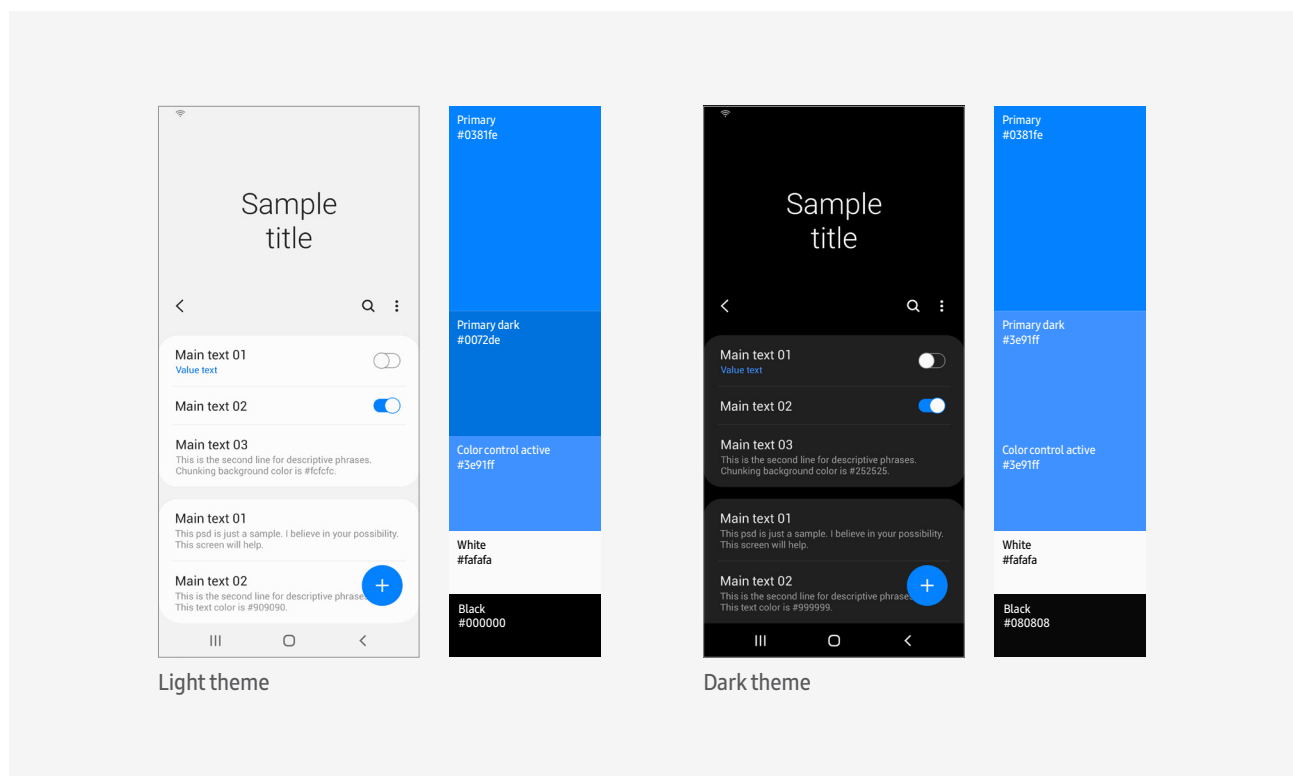


## 02. Color

Android's material theme provides a categorized color palette system. By changing the color value of one category, you can change all of the color value of on-screen element that belongs to the same category at once. You can change the style of your app more easily when designing if you make good use of this color palette system.










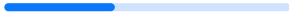
Color category	
Primary	App icons, floating action buttons, input fields, focused items, etc.
Primary dark	App bar text, text buttons, dialog buttons, No items text, etc.
Color control activated	Checkboxes, radio buttons, switches, etc.

### How to use One UI's color palette



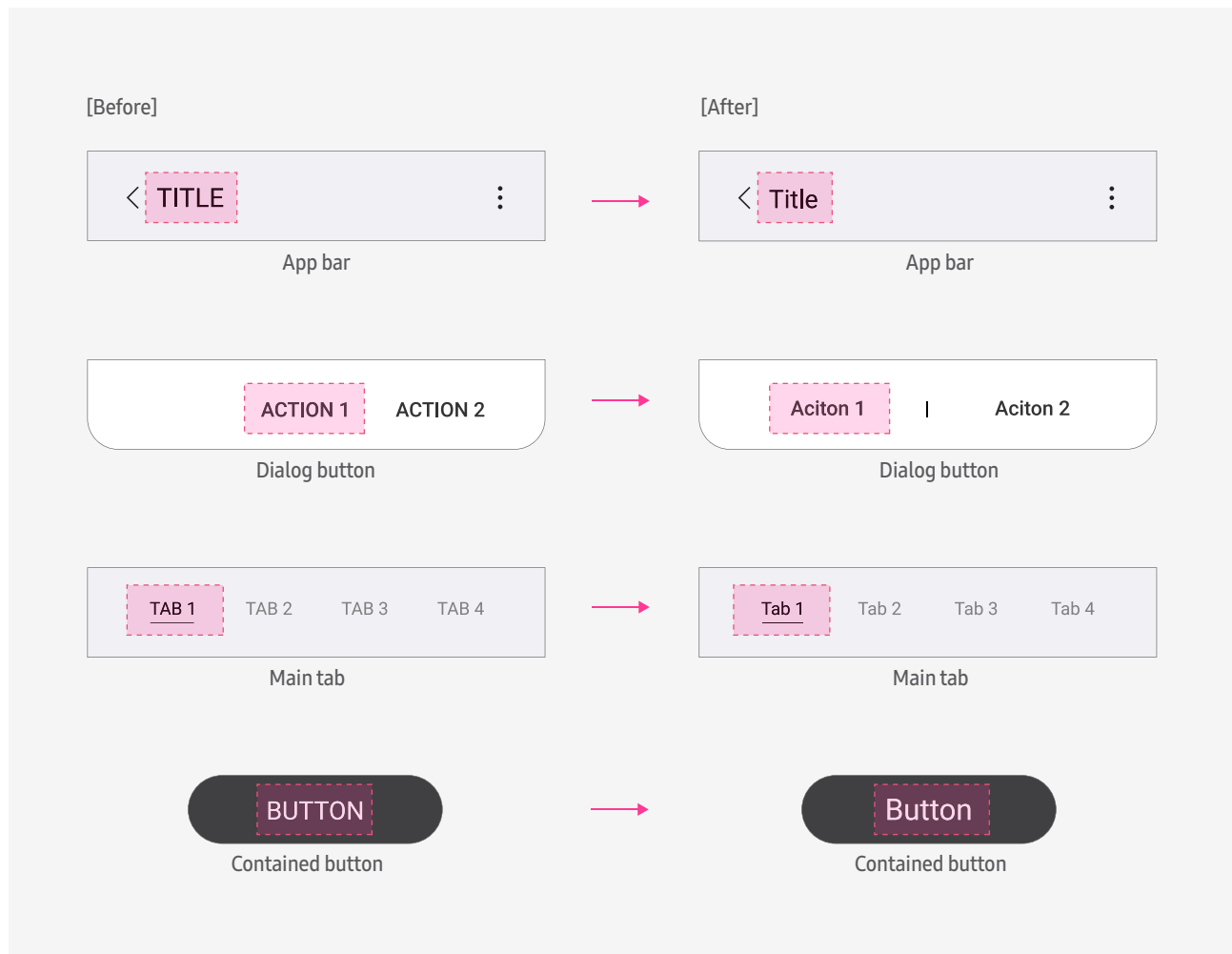
# 02. Color

When you apply a color to an element, choose a color that goes well with the meaning of the element. Take into account the color’s characteristics and what it stands for. A color typically carries both positive and negative meanings. You should also consider that some colors may have different meanings in different cultures.

Category	Color			
<div>RED</div> <div>Warning, danger, prohibition, warmth, intensity, passion</div>				
<div>GREEN</div> <div>Safety, peace, goodness, nature, environment, abundance</div>				
<div>BLUE</div> <div>Efficiency, intelligence, tranquility</div>				

# 03. Typography

In One UI, capitalize the first letter in every word and sentence used for components, such as a title, subheader, text-only button, or tab, while leaving all other letters as lowercase.





# 03. Typography

The default font used in One UI is Roboto. It's recommended that you apply the following font sizes to components.

Font family of Roboto

Category	Font style	Font size
Extend title	Light	40sp
Dialog title	Medium	20sp
Title	Regular	19sp
Main List	Regular	18sp
Text Button	Regular	17sp
Body Description	Regular	16sp
Raised Button	Regular	15sp
Sub header	Medium	14sp
Sub List	Regular	13sp <small>Smallest font size recommendation for visibility</small>

# 04. Thumbnail radius

When using a rounded-corner rectangle for a focus block or image thumbnail, it's recommended that you use the following thumbnail radius value according to the screen grid and target.

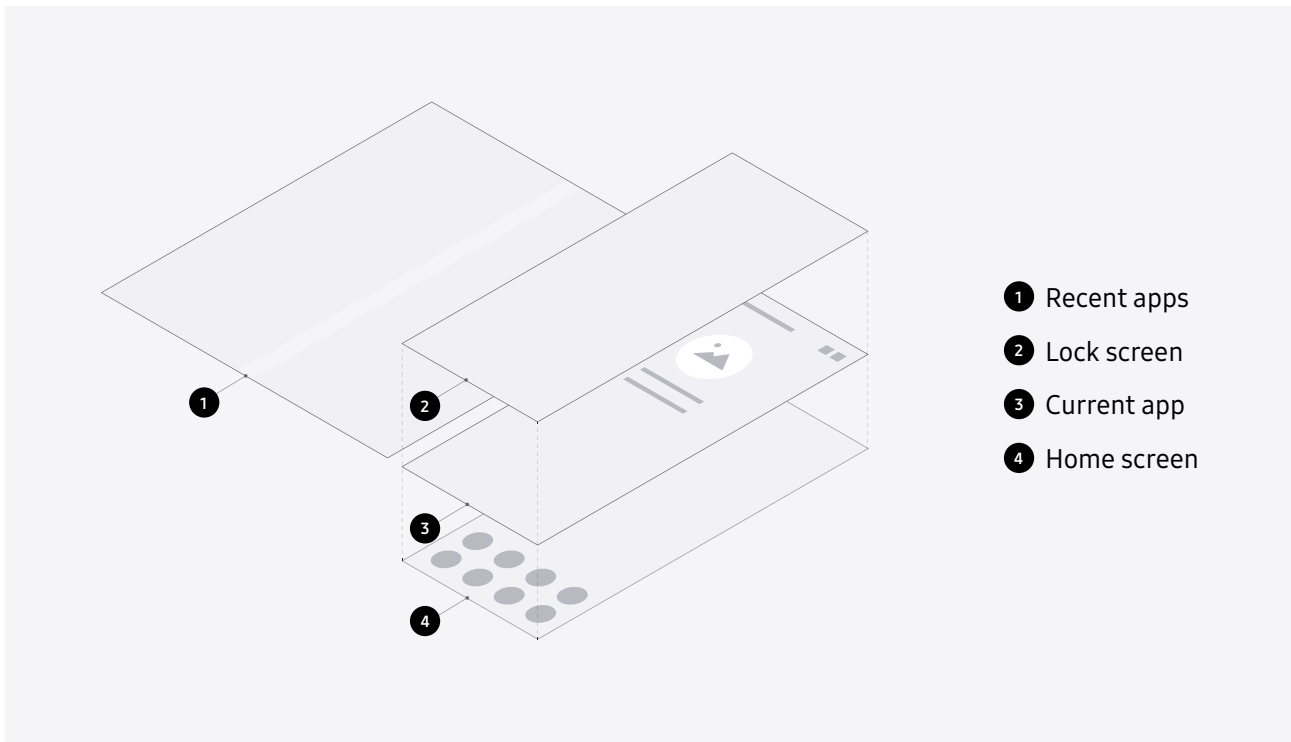


# Motion & Interaction

# 01. Intuitive

Motion and interaction help users to understand the structures and functions of on-screen elements, and guide users what to do.

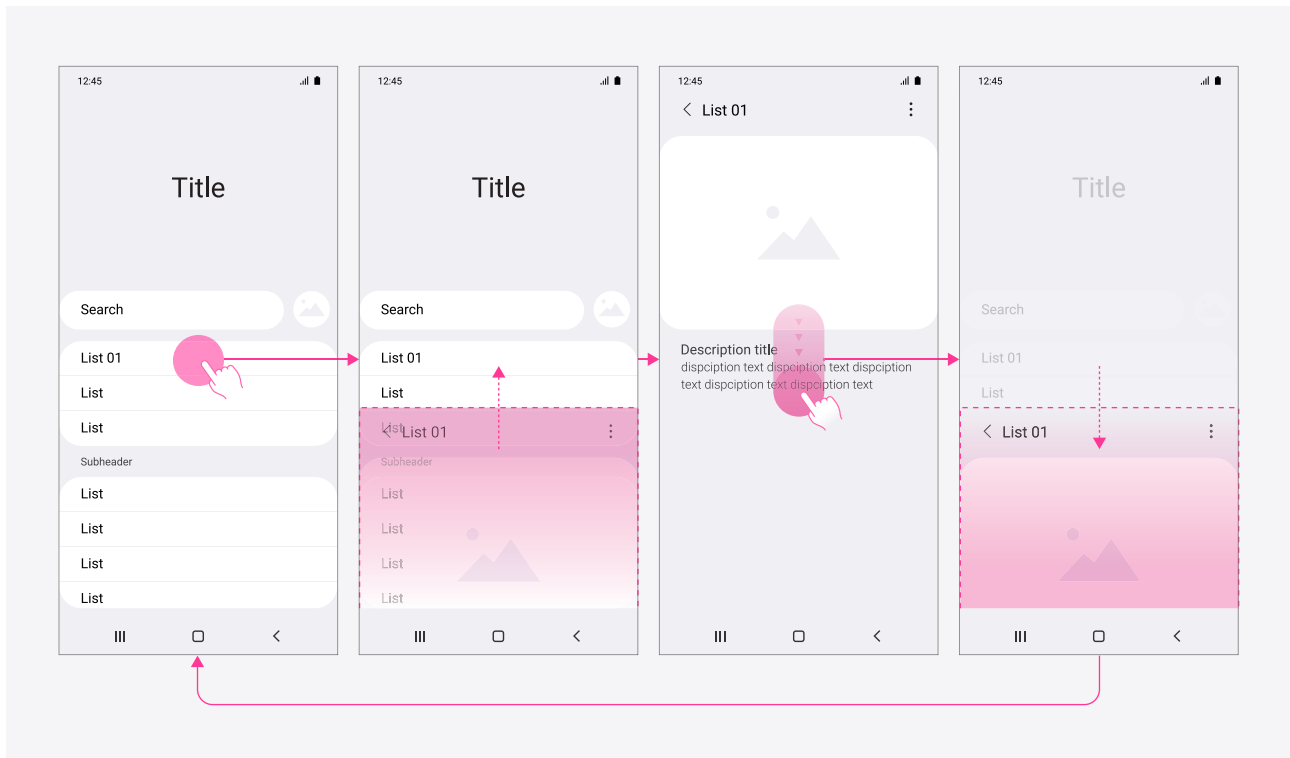
Motion and interaction should be designed to help users to understand the structures and functions of on-screen elements and to guide users actions.



# 01. Intuitive

## [Example 1]

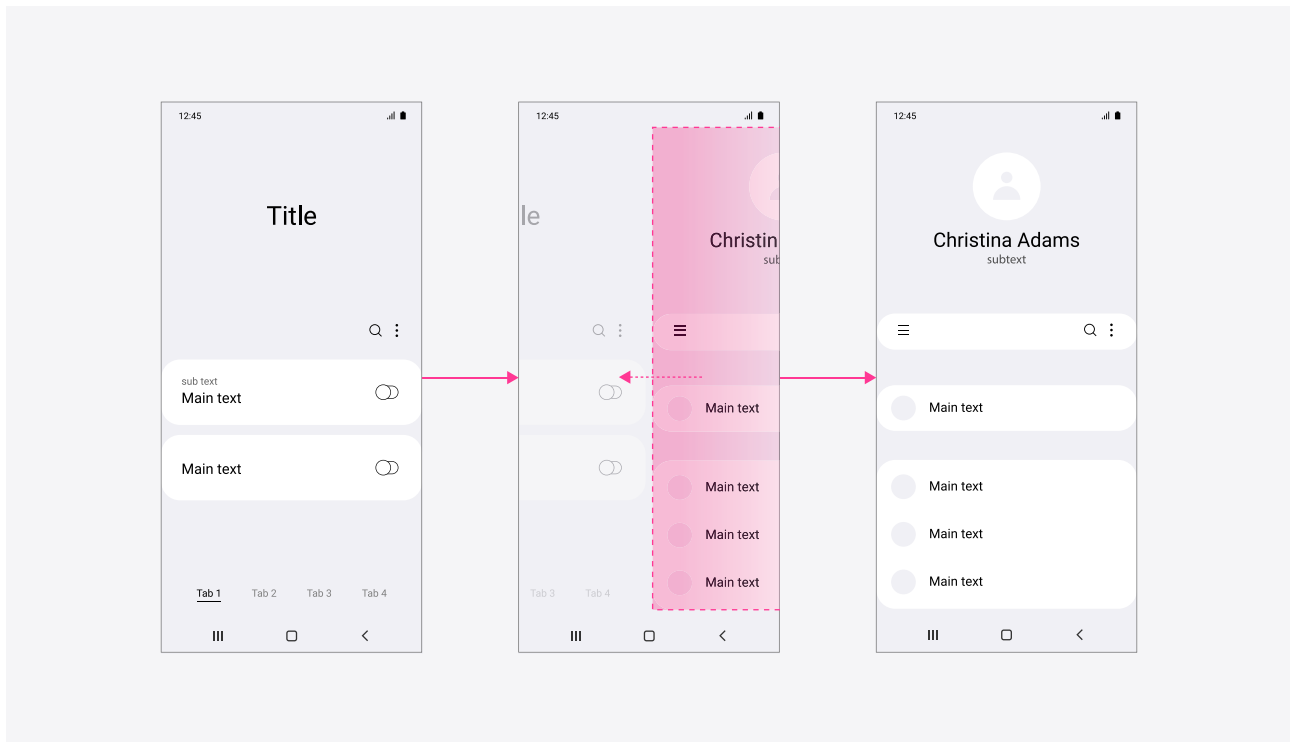
When selecting a list, the screen for the list appears from bottom to top, and when returning to the previous screen, the screen disappears from top to bottom.



# 01. Intuitive

## [Example 2]

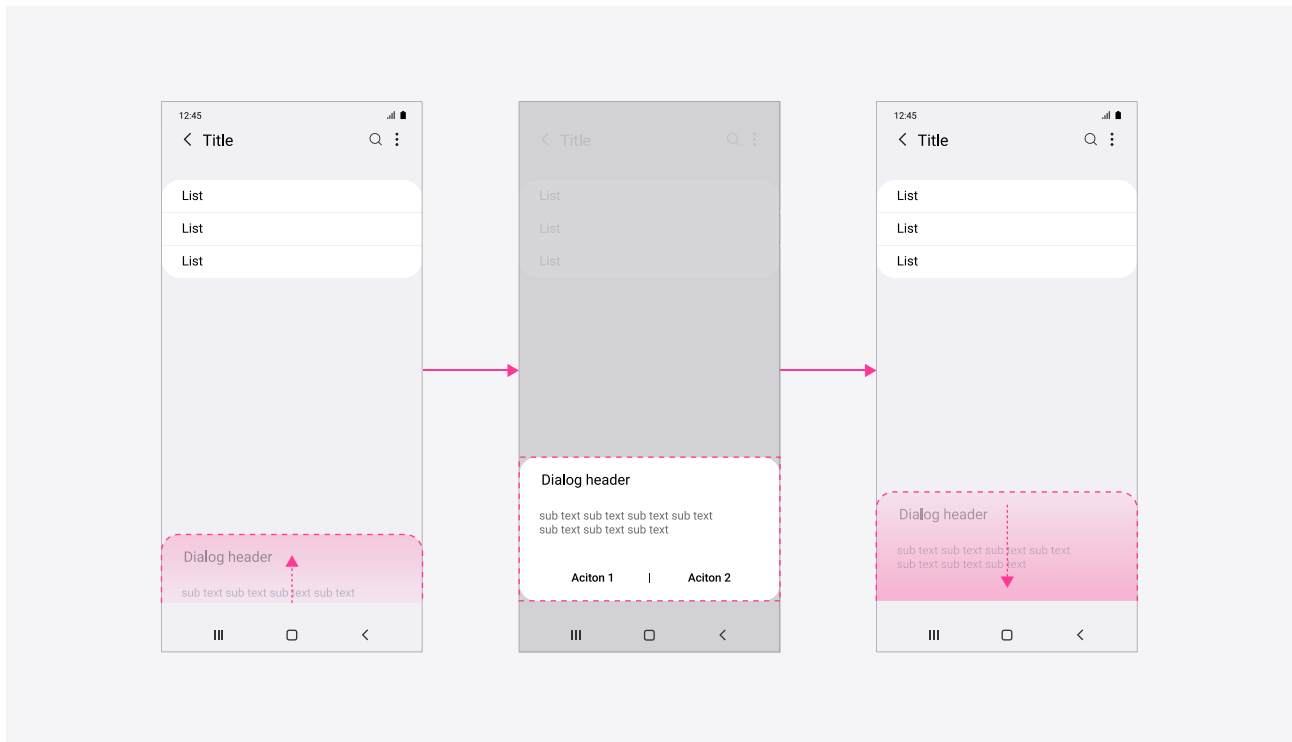
Due to each app is designed as spread out horizontally, the motion interaction works in a horizontal way when switching to another app screen.



# 01. Intuitive

## [Example 3]

Design the dialog to appear upward from the bottom of the screen so that the user's finger can reach it easily. When it moves downward, it disappears.

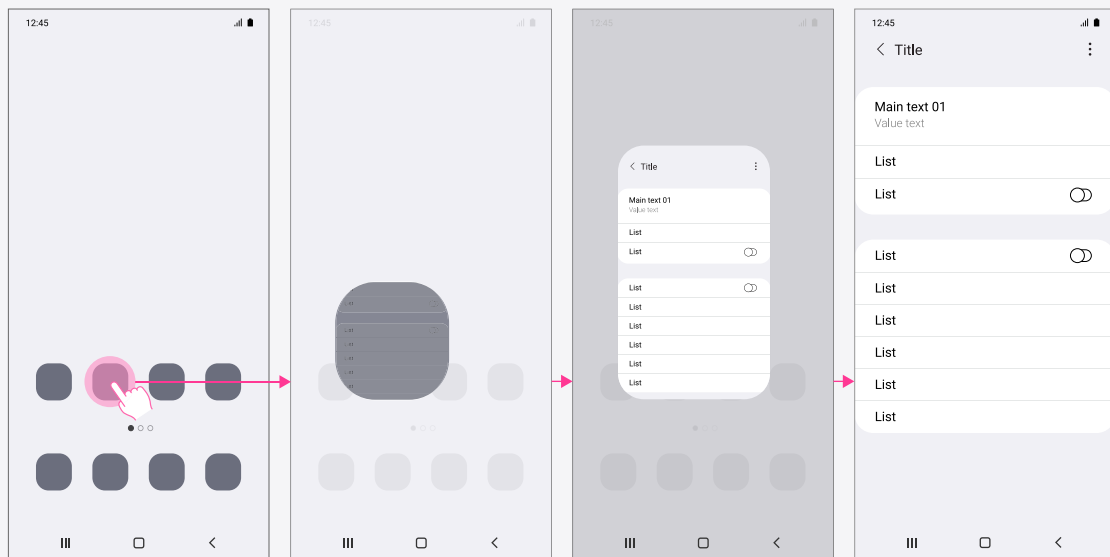


## 02. Seamless

It moves naturally reacted by the user's finger moving, while the screen transitions are smooth and connected.

### [Example 1]

When a user opens an app, the app icon expands smoothly maintaining the corner radius of the icon and expands to the app screen.

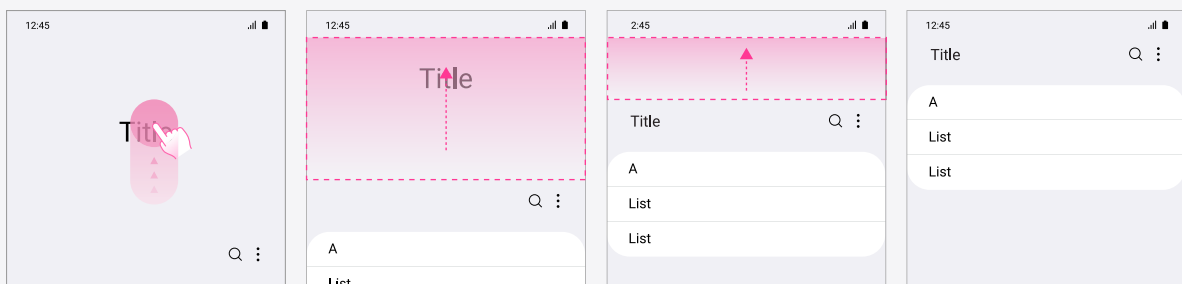




## 02. Seamless

### [Example 2]

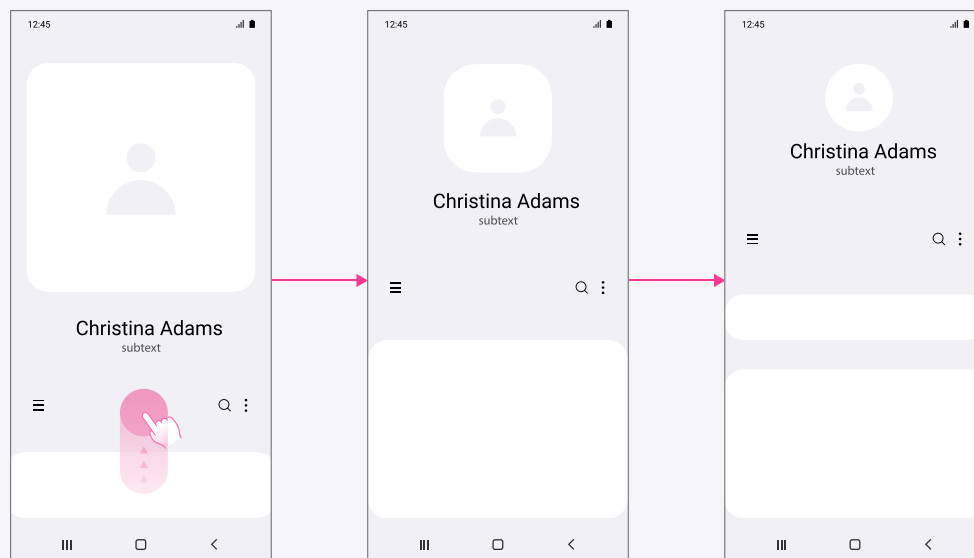
The expandable app bar can be expanded or collapsed by the user's finger moving on the screen, and the information on it is varied by the state.



## 02. Seamless

### [Example 3]

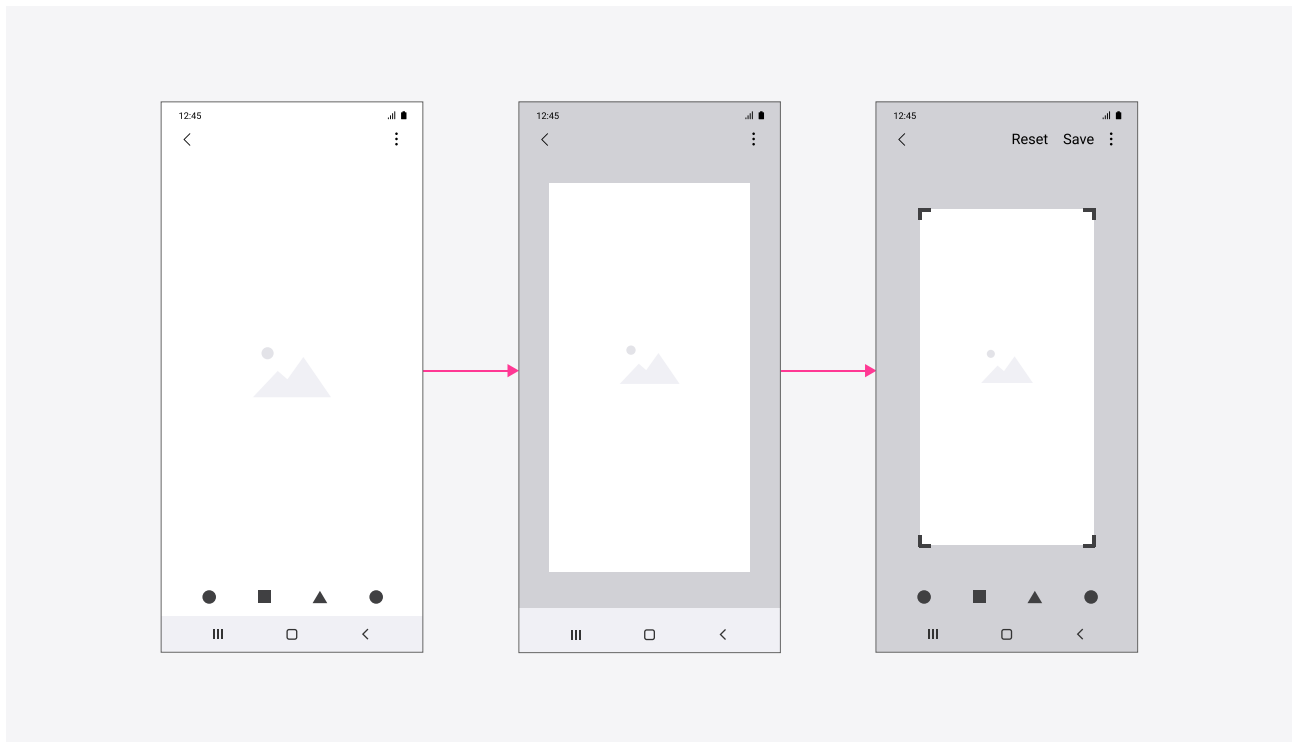
During a screen transition, the shared elements remain and react to the user's touch interaction to increase motion continuity.



## 02. Seamless

### [Example 4]

When switching from app to app, the same image remains and switch the step seamlessly.

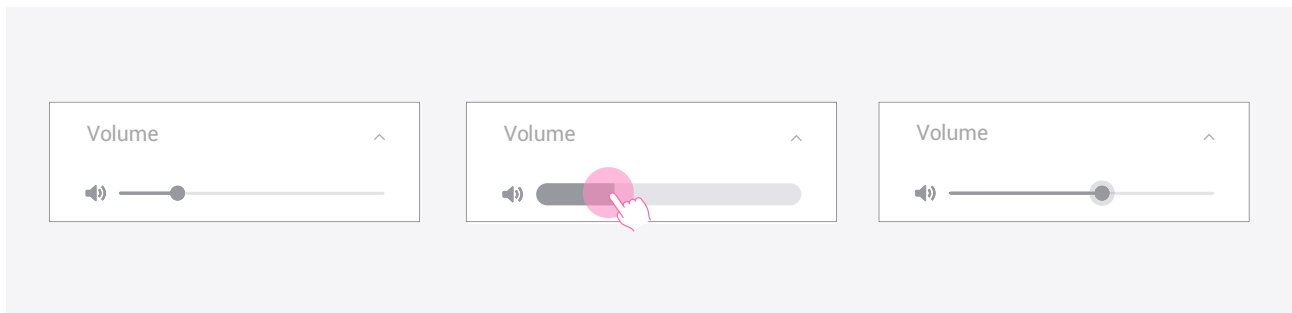


## 03. Tangible

it is more about delicate touch responding immediately to the user's fingertip, not a mechanical reaction.

### [Example 1]

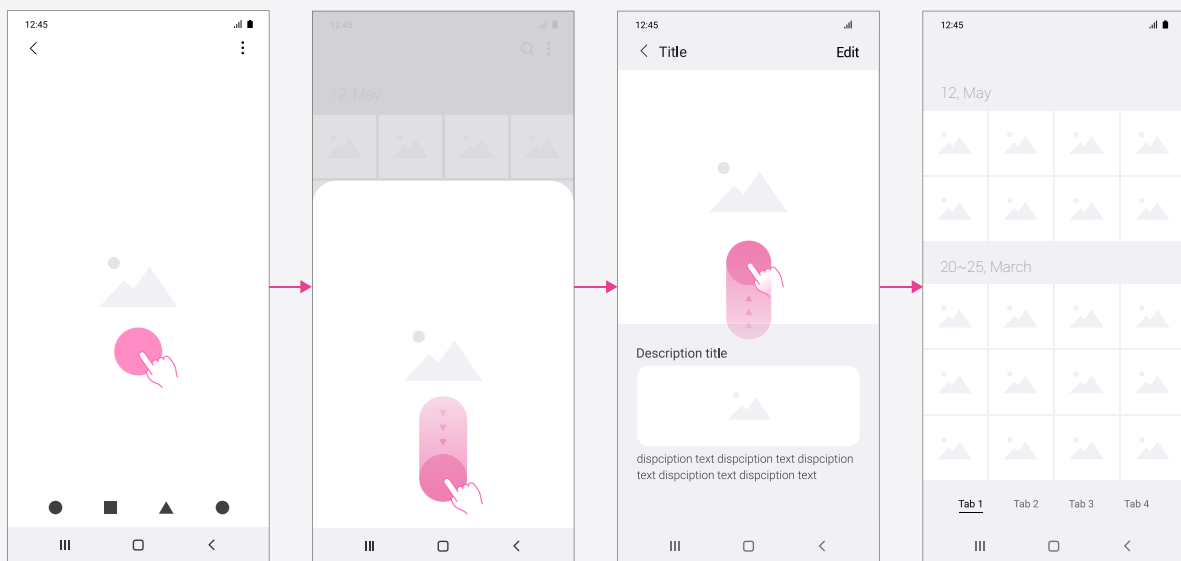
For experiences of fine-tuned touch, The slider bar will be getting bigger when it touched for easy-controlling and goes back to the original size when the finger is released.



## 03. Tangible

### [Example 2]

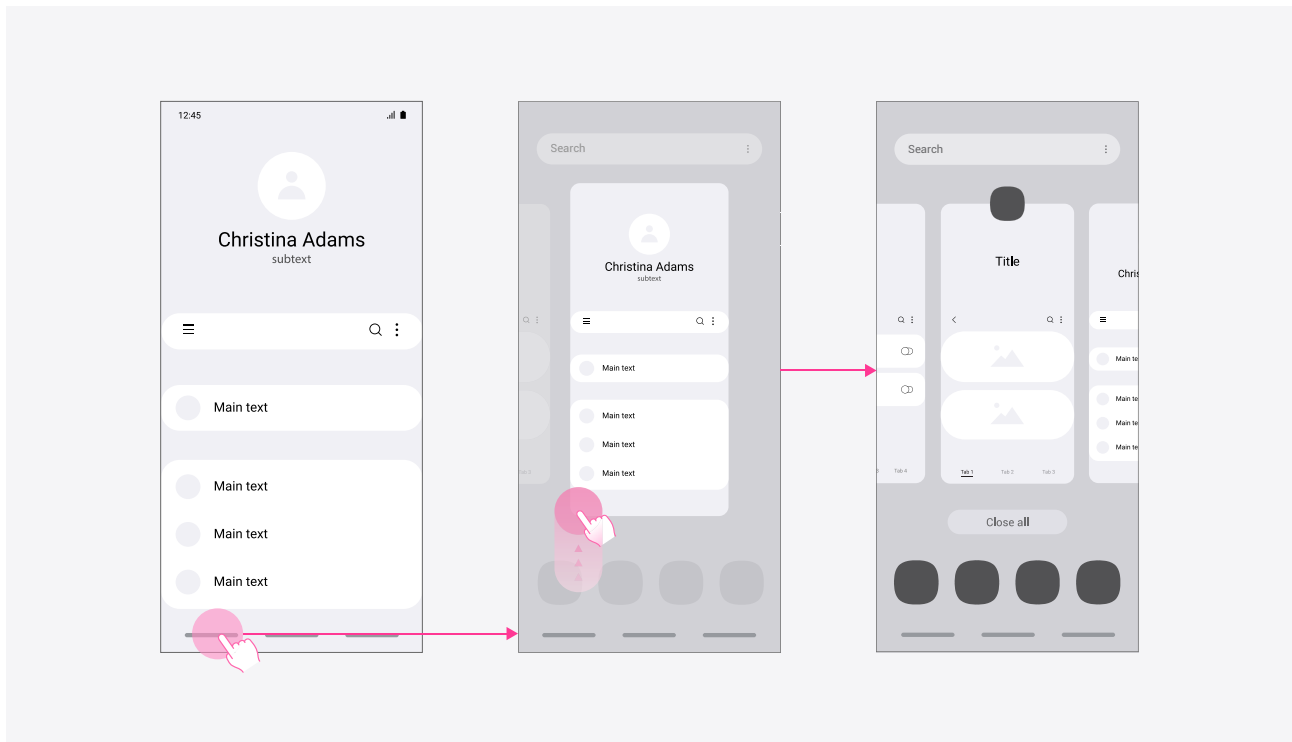
The gallery's image sticks and follows a user's fingertip when a user drags an image. If a user drags an image down, the images of the previous depth appear on the background and when drags it up, the additional information is shown at the bottom.



# 03. Tangible

## [Example 3]

When a user move the finger up on the Recents button, the app screen follows the finger smoothly. When releasing the finger after moving, the screen goes back to where it was before.



# Auditory design

# 01. Principle

In UX design, sound is a means of delivering key information that can be used to assist visual information. You can use sounds to support visual experiences when describing the system or app's state or giving feedback on user interactions. Sometimes, you may also use sounds to deliver information more effectively when there is a lack of visual information available.

## Sound design principles

### 1. Use sound consistently

Sound feedback should be used consistently and appropriately.

Unexpected sounds may confuse the user, making them feel as though the system is hard to understand or unpredictable.

### 2. Provide positive sound feedback

Provide positive sound feedback when a goal is accomplished or a task is completed.

This will ensure a better user experience and also help the user better remember its meaning.

### 3. Avoid using repetitive sounds

It's possible that the user may find auditory stimuli rather annoying than visual stimuli. Don't use sounds excessively or force the user to hear the same sounds repeatedly, no matter how pleasant the sounds are.

For example, when the user uploads a photo, it's better to give sound feedback only once after the photo is uploaded, rather than giving sound feedback repeatedly while the photo is being uploaded.



## 02. Sound feedback

### Feedback

Sound feedback helps the user feel more certainty about how they interact with the system or app, and also understand and predict outcomes.

For instance, when the user taps the Call button in the Phone app, you can notify the user that the call has been successfully placed by providing a call connect tone, helping the user get ready to talk to the person on the other end of the phone.

#### [When placing or ending calls]

A rising melody helps the user clearly perceive that the call has been placed, while a falling melody helps the user clearly perceive that it has ended.



Call connect



Call disconnect

#### [When adjusting the ringtone volume with the volume keys]

To make sure that the user clearly understands the volume level of the current ringtone, use the tone appropriate for the volume level; a single tone is recommended.



Volume control push

#### [When wired/wireless charging begins]

Once the user connects their device to a wired/wireless charger, play a rising melody to let the user know that charging has begun.



Charger connection

## 02. Sound feedback

### Notifications and warnings

Sounds can play an important role in drawing attention to something or drawing away instantly.

In particular, when the user is concentrating on a task, you can deliver necessary information with little cognitive interference and without breaking their concentration.

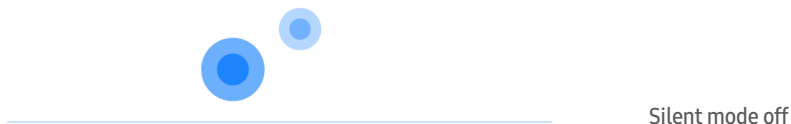
#### [When receiving notifications during calls]

Use a tone repeated four times to make sure that the user hears the notification without interrupting the call. The volume level of the phone and that of the tone should be the same.



#### [When switching from Mute mode to Sound mode]

You need to make sure that the user realizes that the mode has switched to Sound. Use a rising melody to indicate that Sound mode was just enabled.



### Branding and brand identity

Use a creative and consistent sound tone to represent your brand image and brand identity.

For One UI, use sound tones that can make the user feel like they're traveling through the galaxy. Apply mild and soft tones to express One UI system's characteristics and deliver a consistent auditory experience.

# Accessibility

# 01. Principle

One UI aims to ensure a fair, equal, and considerate user experience for everyone, regardless of their gender or physical condition. The accessibility guidelines in One UI Design Guide strive to meet the Web Content Accessibility Guidelines (WCAG).

## Principles

### 1. Consideration

#### **Empathetic and detailed design for all users**

At Samsung, we're always trying to simplify our products' interface, employing a variety of research methodologies so that our design approach aligns with the needs and desires of our users. We strive to listen to our users and make a sincere effort to understand them, including those with disabilities.

### 2. Comprehensiveness

#### **Balanced and equal design for all users**

We aim to design an interface for all users, regardless of whether they have a disability. At Samsung, we believe that users with disabilities shouldn't experience difficulty or discrimination when interacting with our products. We have set up guidelines in consideration of users with varying degrees of disabilities. From as early as the planning stage of each product, we try to ensure that it provides a holistic experience for all users.

### 3. Coherence

#### **Consistent design experience for all products**

Samsung products provide a variety of optional features for people with limited mobility. Moreover, continuous research and development in accessibility design should further ensure that all Samsung products offer an equal level of functionality for all their users.

### 4. Co-creation

#### **Designed together**

Samsung's dedicated team of professionals from various fields provides training and support for users with disabilities to help them use Samsung products and services without difficulty. Employees with disabilities, research institutes, and like-minded communities and groups all work together to take a more hands-on approach to our design experience.

## 02. Vision

The basic accessibility criteria are as follows.

**Vision:** Provide visual aids to accommodate for people with blindness, low vision, or color vision deficiency through Voice Assistant and the Visibility enhancement settings.

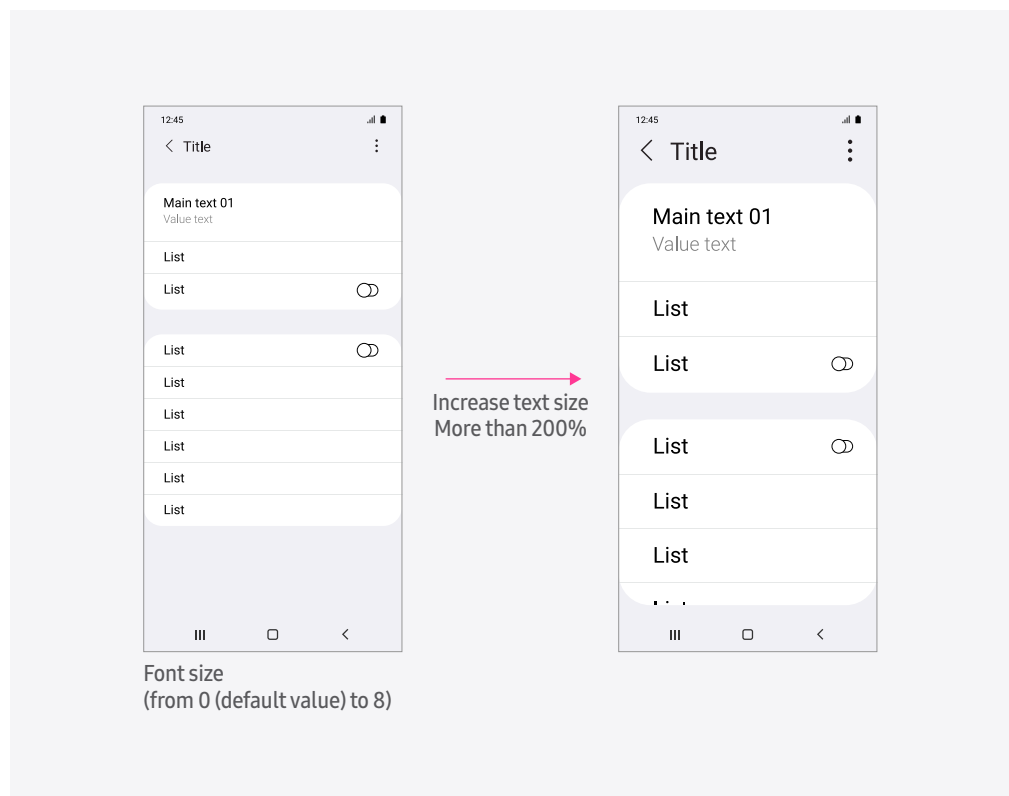
**Hearing:** Provide hearing aid settings to make sure that people with hearing impairments can use the product without difficulty.

**Interaction and dexterity:** Help people with physical disabilities use the product more easily through the Universal switch feature, Assistant menu, etc.

### Vision

#### [Resize text]

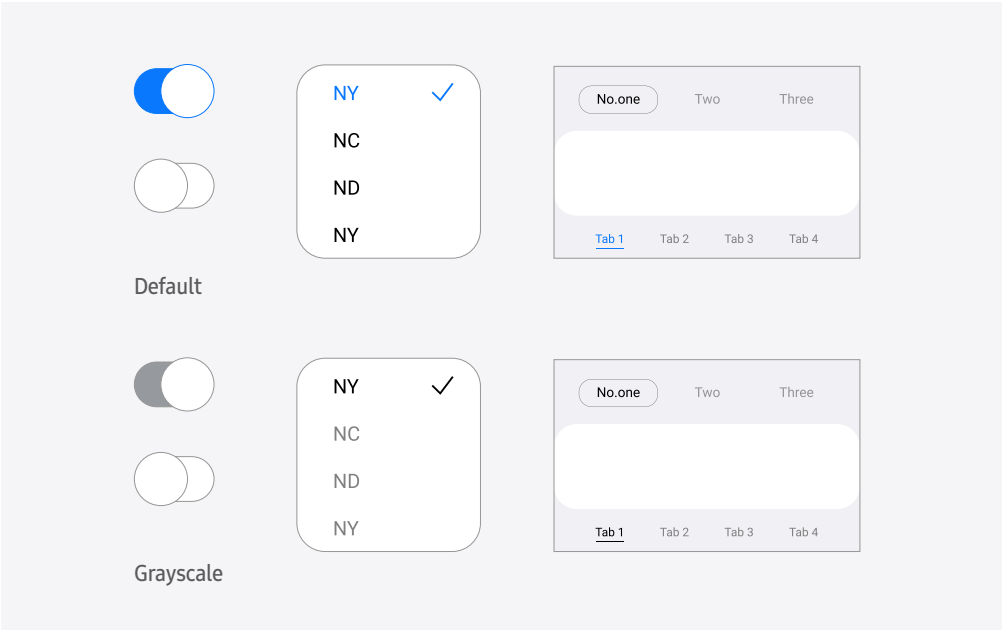
Except for captions and images of text, text can be resized without assistive technology up to 200 percent without loss of content or functionality



# 02. Vision

## Vision

**[Use of Color]**  
Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element



**[Contrast (Minimum)]**  
The visual presentation of text and images of text has a contrast ratio of at least 4.5:1 (Source: Web Content Accessibility Guidelines).

Font size (dp)	Regular font	Bold font
~12	Minimum 4.5:1	Minimum 4.5:1
13	Minimum 4.5:1	Minimum 4.5:1
14	Minimum 4.5:1	Minimum 3:1
17	Minimum 4.5:1	Minimum 3:1
18	Minimum 3:1	Minimum 3:1
19~	Minimum 3:1	Minimum 3:1

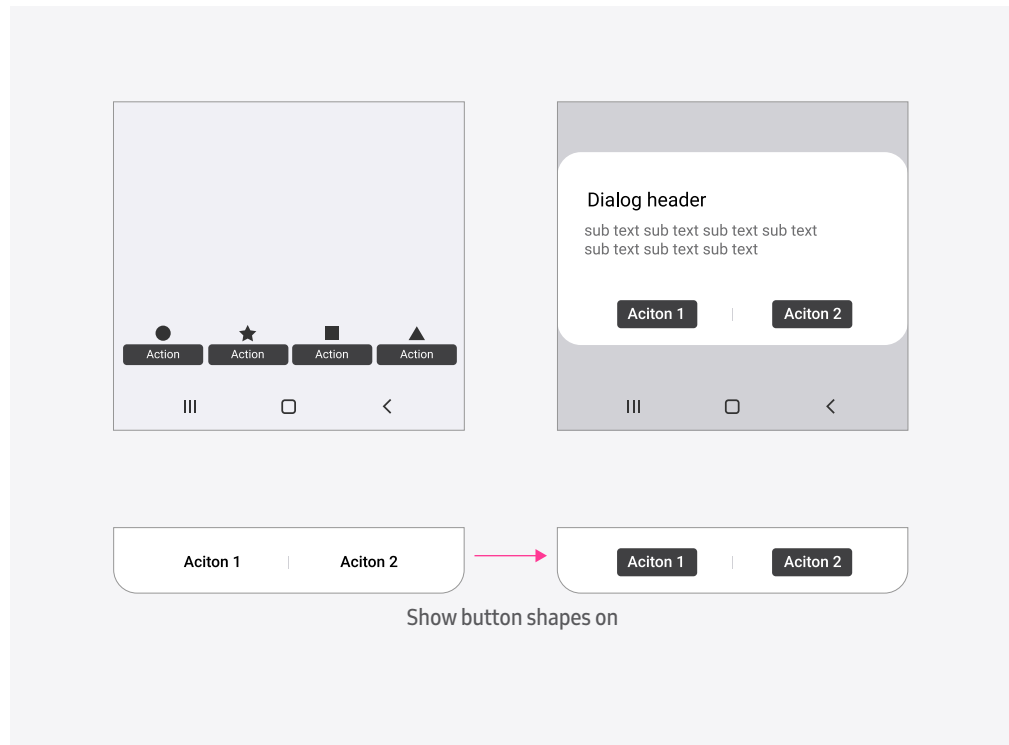
Small text: It's strongly recommended that you ensure that a contrast ratio of at least 4.5:1 exists between your foreground and background.  
Large text (Normal: 18dp or larger, Bold: 14dp or larger): It's strongly recommended that you ensure that a contrast ratio of at least 3:1 exists between your foreground and background.

## 02. Vision

### Vision

#### [Show button shapes]

A colored background shape is applied to components that function as buttons. This helps the user identify these components as buttons quickly and decide what to do next.

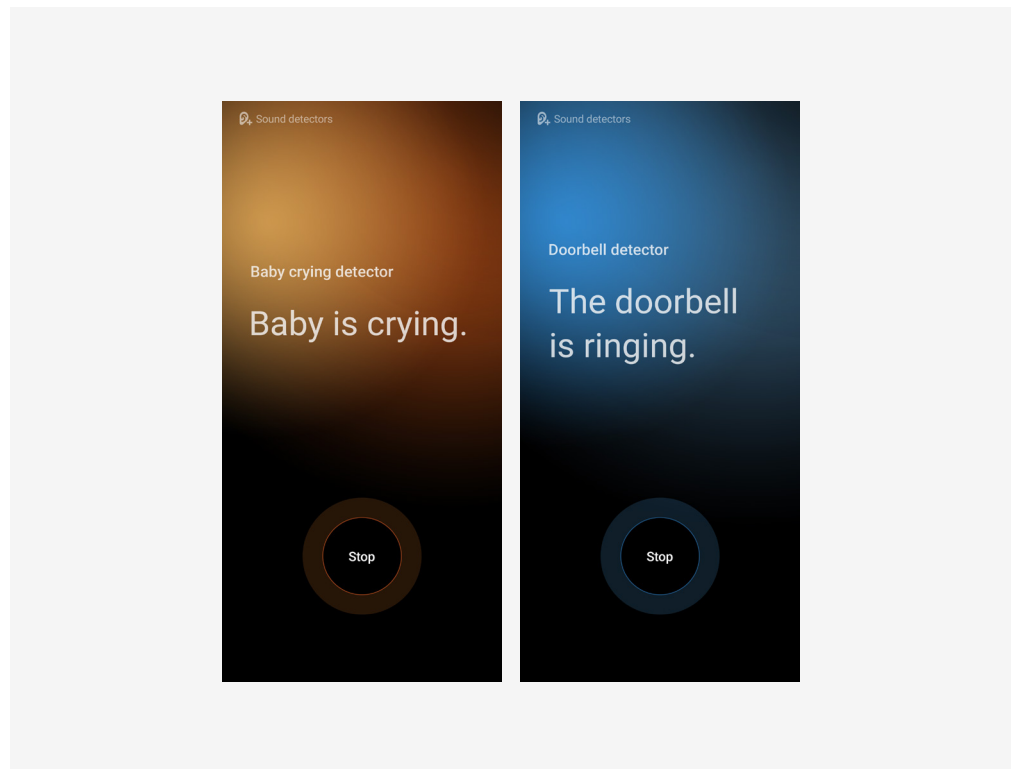


# 03. Hearing

## Hearing

### [Sound detectors]

It's possible that users with hearing impairments can't detect certain sounds. Therefore, when a sound is detected, provide feedback using a visual or vibration alert.



### [Mute all sounds]

Prevent users with hearing loss from disturbing people around them with unexpected sounds generated from their devices.

### [Left/right sound balance]

For people with a different degree of hearing loss in each ear, provide an option through which they can change the left/right volume ratio.

### [Mono audio]

For users with hearing loss in one ear, provide an option through which they can change the audio setting to Stereo or Mono when they use earphones.

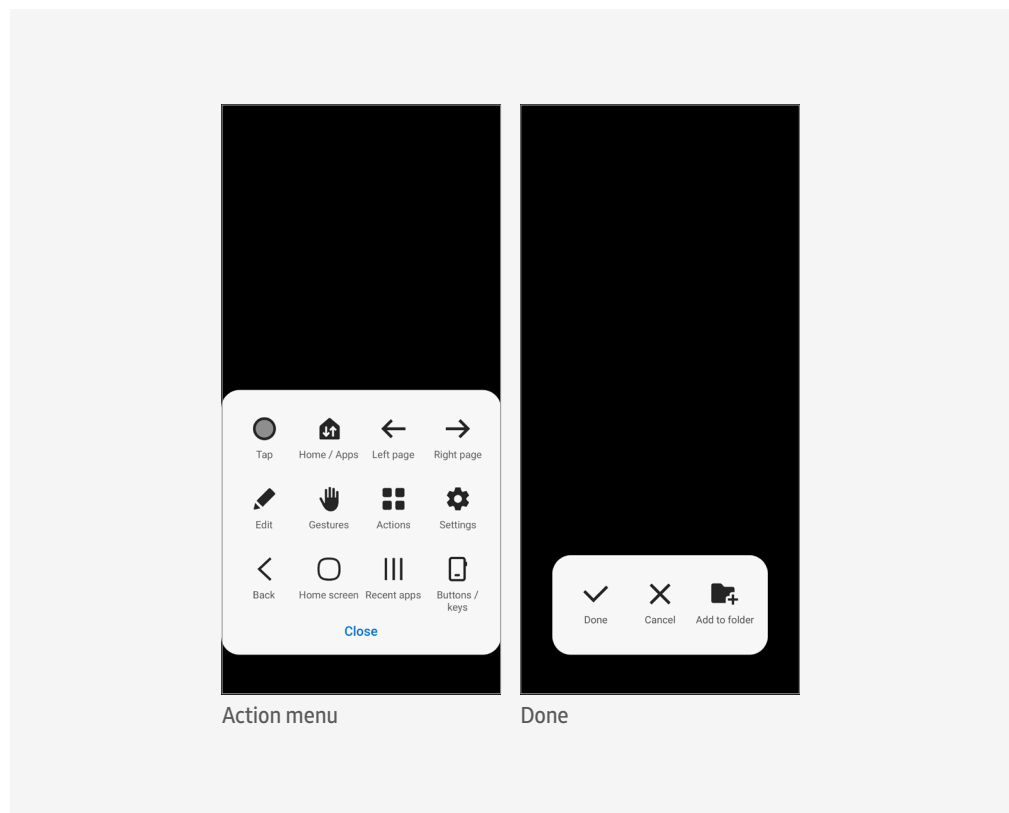


# 04. Interaction and dexterity

## Interaction and dexterity

### [Universal switch]

To help users with physical disabilities use their devices more easily, make sure that the interface allows them to choose an input method that is convenient for them. Activate the action menu while moving the focus in the interface. Then, execute the chosen action through the menu. Actions can be executed through tapping, peripheral accessories, or the camera.

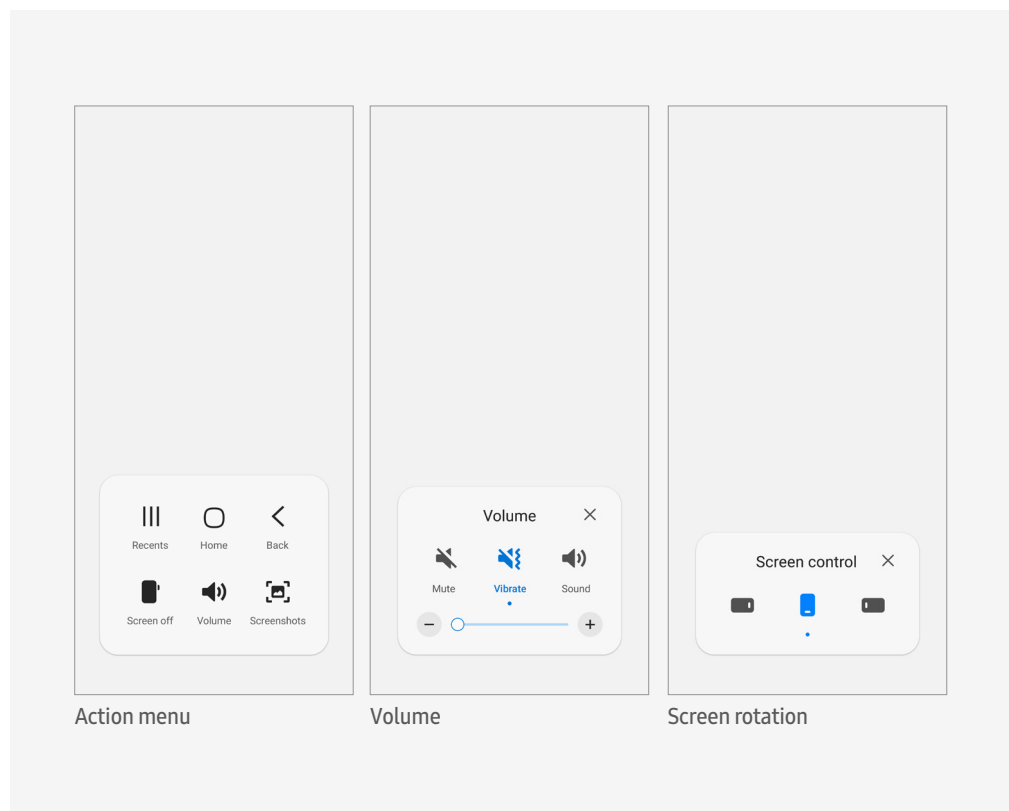


# 04. Interaction and dexterity

## Interaction and dexterity

### [Submenus]

For people with upper extremity impairments, who may find it difficult to press physical keys, access certain areas on the screen, make gestures that require complicated finger movements, etc., add submenus so that they can control their device and screen without help from others.



# 05. Checklist

It is important to follow the Accessibility Basic UI principles, but also considering to complete the task.

No.	Accessibility Basic UI list
01	Are non-text contents provided with alternative text?
02	Are voice guidance concise and specific?
03	Is it add specific labels on the same controls on a screen to classify?
04	If the text is provided as an image, does it holds all the things on the image?
05	Does it provide alternate text like entire string for abbreviated words, badges, or text buttons?
06	Does it provide detailed and intuitive alternate texts for Emojis, GIFs, and Stickers?
07	Does it provide a usgae hint text for use that explains additional information about the work which is not clear?
08	Does it provide text labels for the ongoing works?
09	Does it provide accessibility texts which make the user know the changed status or result?
10	Does it provide accessibility texts which make the user know the dynamically changed status or contents?
11	Does it provide accessibility text regarding table information, when a table or chart has selected?
12	Is all elements is given a focus, which moves sequentially?
13	Doesn't it provide a focus for a decorative element or additional image?
14	Does it designed intuitively, which is able user to find current positions of the focus?
15	Does it provide a focus for grouped similar elements?

# 05. Checklist

It is important to follow the Accessibility Basic UI principles, but also considering to complete the task.

No.	Accessibility Basic UI list
16	Can it be controlled by the user by preventing automatic hiding of the control buttons?
17	Does it provide an alternative way for complex actions such as drag?
18	Can instructions be recognized regardless of shape, size, location, direction, color and sound, etc.?
19	Does it provide notification information in a variety of ways, such as screen display, sound, and vibration? (At least two ways are required)
20	When a user is typing, does it provide a way to prevent typing errors?
21	Does it have a background music which is played automatically?
22	When there are unintended transitions or events, does it work in a way that users can understand?
23	Can users recognize the user-interface components through using assistive technologys?
24	Are multimedia contents provide suitable subtitle, manuscripts, or sign language?
25	Are user-interface components placed consistently?
26	Does content that have limited time control provide a way to control it?
27	Does a method to control contents provide that change automatically?

