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## COS30017 – Software Development for Mobile Devices - Extension on mobile UX patterns

This report compares the usage of 3 UI patterns across 3 different mobile applications: Spotify, Canvas, and Gmail.

### Settings design pattern

The settings design pattern provides users with a central location to adjust the application's behavior (Toxboe, n.d.).

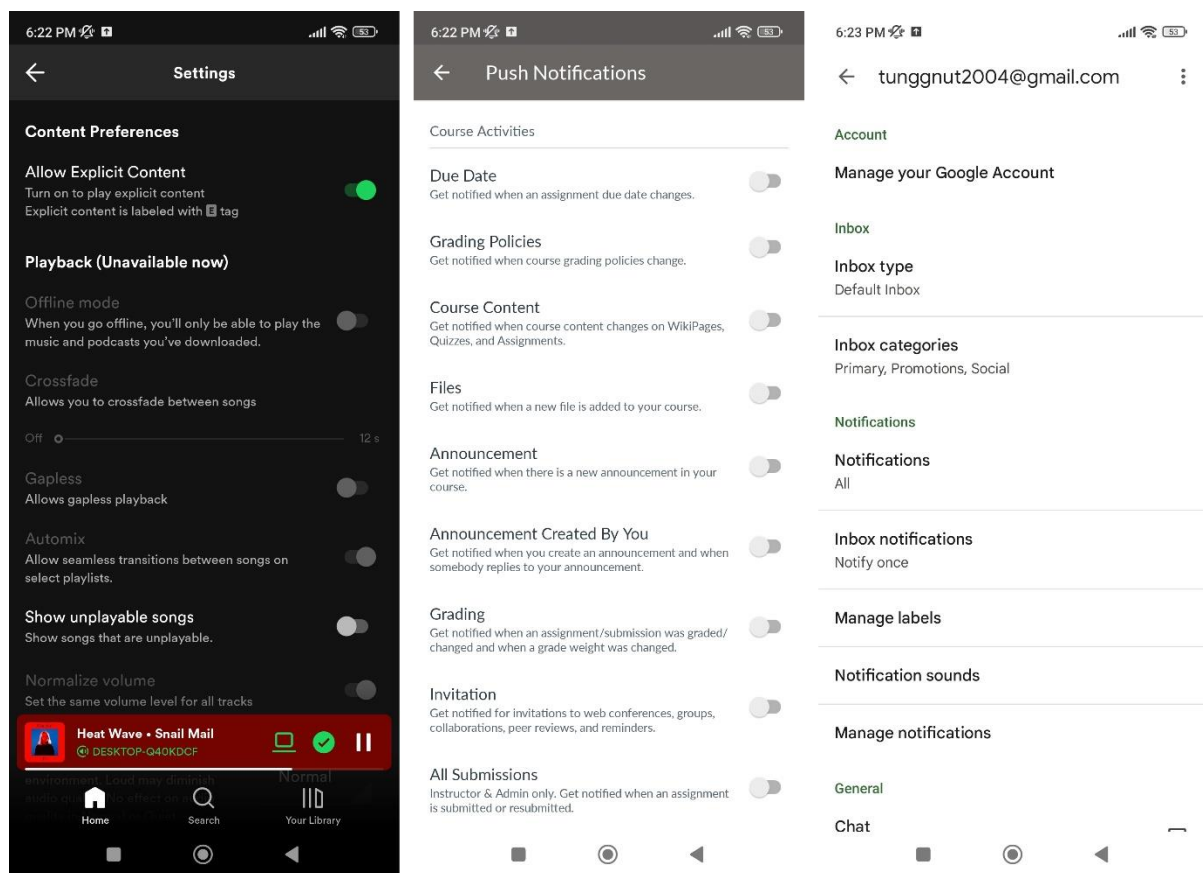


Fig. 1: The settings design pattern in use for three applications.

The settings tabs of all three applications allow users to edit global settings such as enabling explicit content (Spotify), receiving notifications on grading (Canvas), or playing a notification sound on email arrival (Gmail).

The benefit of using the settings pattern is that most global settings can be found in one centralized place. This saves users from having to navigate to different parts of the app to adjust its behavior. This pattern is so commonly used that it is common nowadays to expect a settings tab in any application.

A drawback to using this pattern is that users might be overwhelmed with the number of settings available. A glance at the screenshots above is enough to tell how hard it can be for a user (especially an inexperienced one) to find the settings they are looking for. A solution to this is to group related settings into categories (see Gmail's example) or provide a search feature so that users can quickly look up their settings of interest.

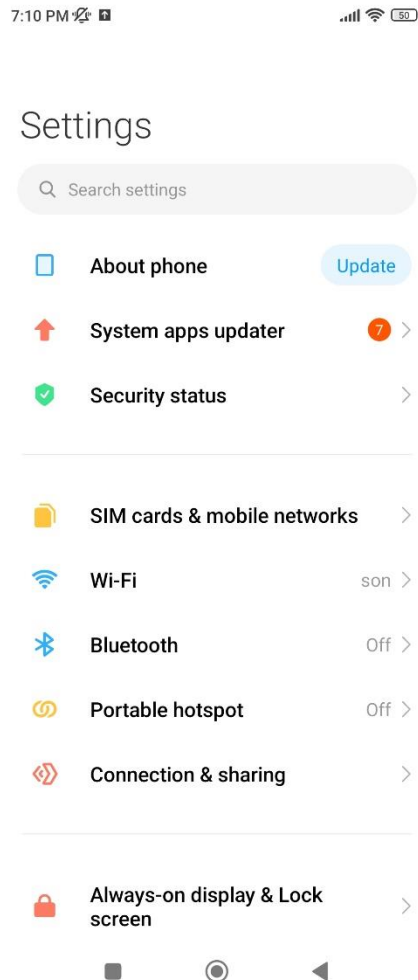


Fig. 2: Search bar for settings.

## Navigation Tab design pattern

The Navigation Tab design pattern divides the content of the application into sections with a flat navigation structure and clearly shows where the user is in the application (Toxboe, n.d.).

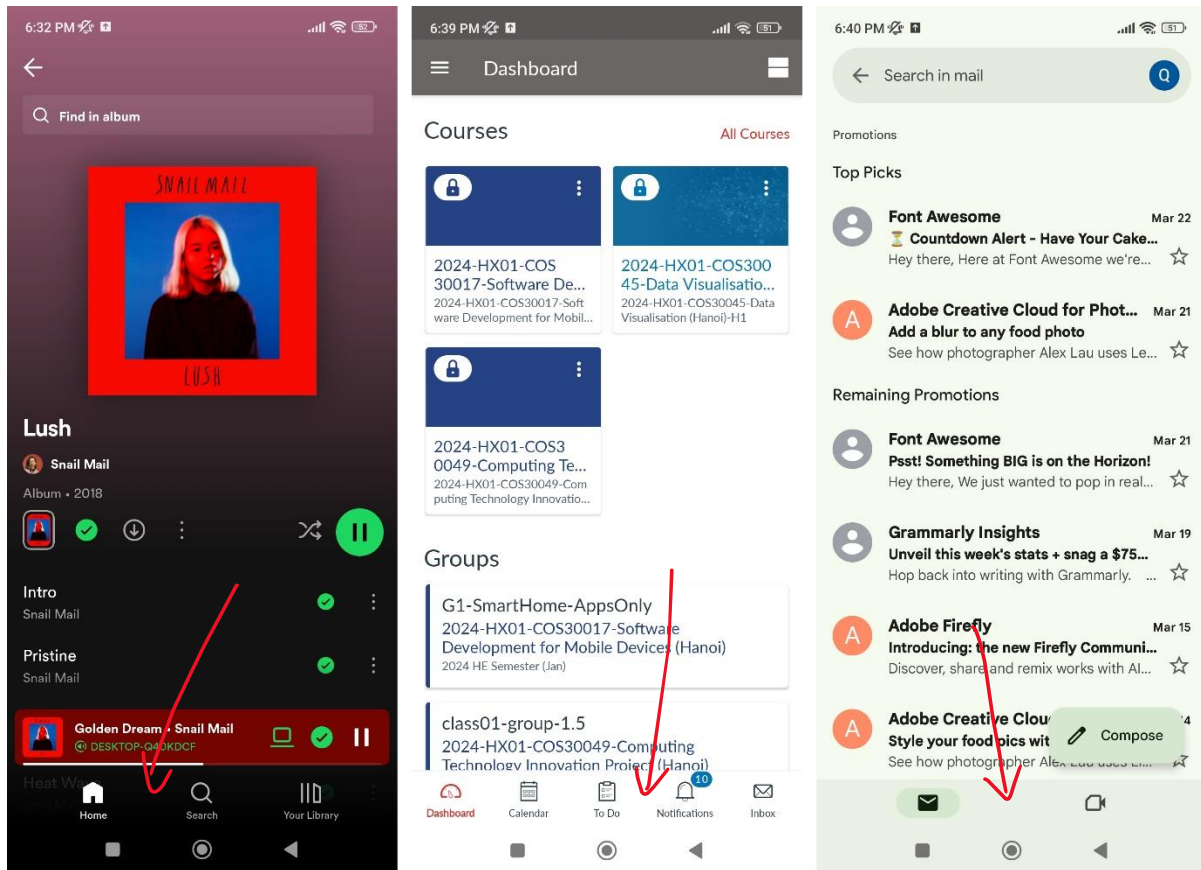


Fig. 3: The Navigation Tab pattern in use for three applications.

Each of the above applications has a navigation bar at the bottom which highlights where the user is. The user can switch between tabs to navigate to different parts of the application.

The benefit of using this pattern is that it signals to the user what the major parts of the application are. For the Spotify example, the major parts are the homepage, the search tab, and the personal library. This helps the user visualize how the application is laid out for easier navigation.

The drawback of this pattern is that it cannot support many navigation tabs, especially ones with long text. Since a mobile device has limited width, designers have to be thoughtful when choosing which tabs to put in the navigation component.

## Morphing Controls design pattern

The Morphing Control design pattern provides users only with the controls available at the current state of the application (Toxboe, n.d.).

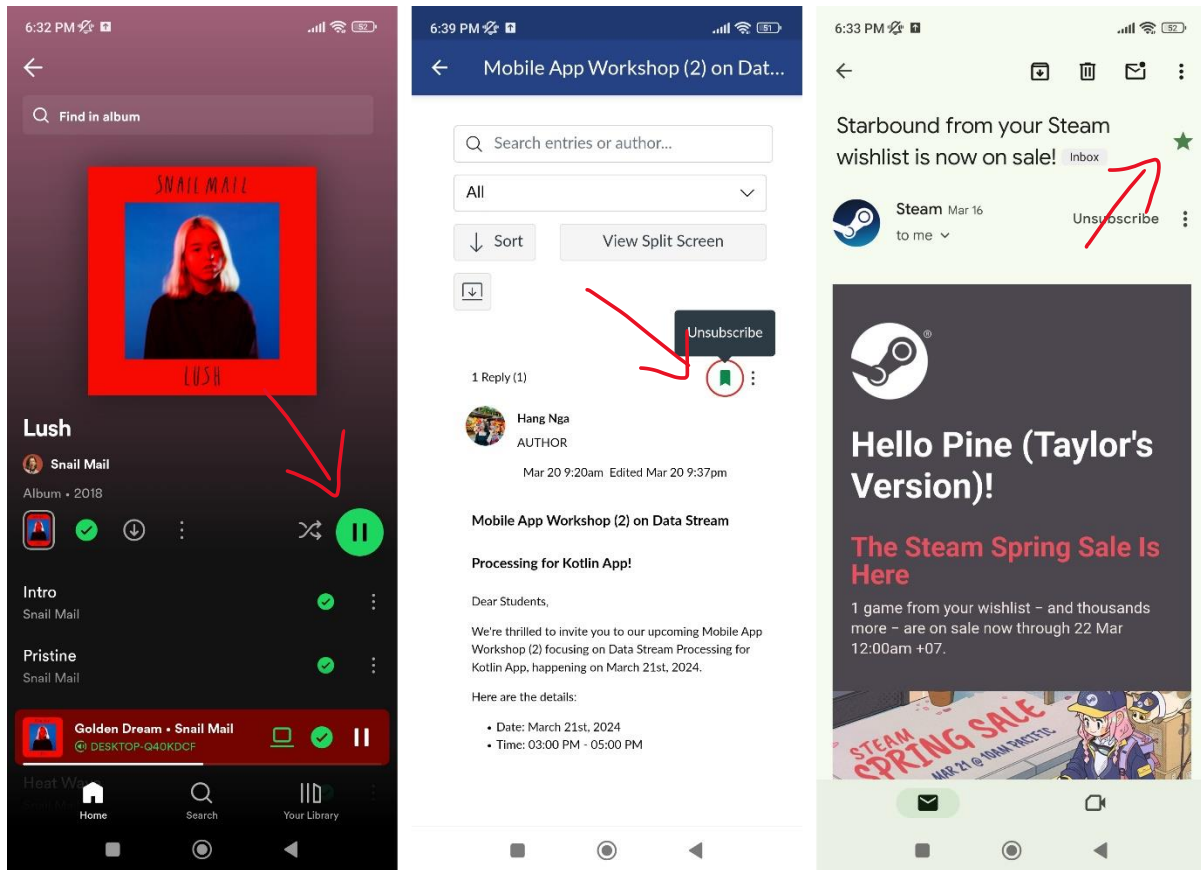


Fig. 4: The Morphing Control pattern in use.

In the above screenshots, the pattern is used for controls with two mutually exclusive states (play/pause, subscribe/unsubscribe, star/unstar). The appearance of the controls will change based on the state of the application. In the Spotify example, the button will have a triangle icon when the track is paused and two vertical bars when the track is playing.

The benefit of this pattern is that it can help de-clutter the screen. Instead of having two or more buttons that each correspond to an application state, one button with varying appearances can be used instead. This is especially useful when the states are mutually exclusive.

One drawback to this pattern is that it is not always obvious what the state of the control is and what it will do when clicked. Take the example below, which shows three possible states of the loop control on Spotify.

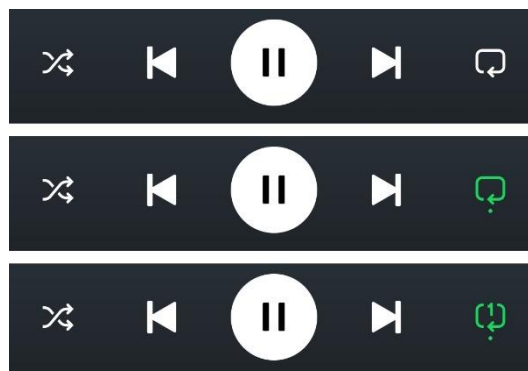


Fig. 5: Loop control on Spotify (the last control button)

The loop control in the above figure has three possible states: non-looping, looping over the current playlist, and looping over the current song. However, without manually testing these

states by listening to the tracks and seeing how they progress, users would have no idea what they do as there is no textual explanation. This example highlights an issue that designers should keep in mind when designing morphing controls: since these UI elements often have short single words or icons, designers must be aware of their audience's digital literacy level and carefully choose their wording or icons.

## References

Toxboe, A. (n.d.). *Morphing Controls design pattern*. Copyright (C) 2007-2024 Anders Toxboe.

<https://ui-patterns.com/patterns/morphing-controls>

Toxboe, A. (n.d.). *Navigation Tabs design pattern*. Copyright (C) 2007-2024 Anders Toxboe.

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[patterns.com/patterns/settings](https://ui-patterns.com/patterns/settings)