

Smartphone Lending Report

OVERVIEW

The main goal of this project targets the convenience of using our launcher. Many launchers are already available to users on android devices. However, the majority of people choose not to use them due to the hassle of setting them up. The existing ones were also not meant to be used as a temporary overlay over another launcher. This app would allow people to launch different lending modes easily and feel more comfortable when lending to others. Even though a discreet method of launching the app is not the main focus, it is a benefit--especially when lending to strangers. It decreases discomfort in situations where the borrower sees the lender launching a mode that gives less functionality. Discreetness is less important when lending to friends or family. They generally would not be offended since they know the lender and respect their privacy. In all cases though, the borrower's need for the phone generally outweighs offense from not getting all functionality. At most, the usage of this app would lead to the borrower taking offense. But, without the app, the lender would either hand their phone over and be uncomfortable or simply not lend their phone at all. In addition, the lender could easily decrease discomfort if the borrower found that they had restricted access. The lender could simply say that they use the same mode when lending to anyone. Thus, the lender would be seen as granting access to certain apps rather than restricting access to most apps.

USAGE

When the user launches this app, their phone would operate in this new launcher until the phone owner uses their normal phone-unlocking method (FaceID, fingerprint, etc) to exit the app. This way, sensitive content and other materials on a user's phone is protected from the borrower.

PRESETS

The app comes preloaded with four presets: family, friends, acquaintances, and strangers. The functionality of each of these modes comes from our user research. However, the user can choose to edit these presets or add their own to customize each mode to their liking. Each app can have one of three different security locking options. One is to hide the app completely in the new launcher so that the lender does not know that it even exists. The second is to make the app into a "dummy" app where the icon exists, but if it is clicked, an internet connection error or the like appears instead of the regular contents. The third is a privacy lock where the app functions as normal, but certain aspects are restricted. For example, if the messaging app has a privacy lock on it, the lender could still text anyone. However, the lender would not be able to see past messaging history as the privacy lock launches the app on a new messaging screen.

As important as restricting access, is granting it. If the borrower needed to access a restricted app and the lender approves, we want to minimize the awkwardness of the borrower giving the phone back, the lender exiting the mode, and handing it back to the borrower. In addition, the lender

exiting the mode defeats the whole purpose of the app. Instead, the lender can add certain apps into a quick access menu when setting up different modes. Thus, if the borrower needed to use Facebook for example, the lender can scroll through these quick access apps and quickly grant access to Facebook without exiting our lending app at all.

LAUNCH OPTIONS

On the home screen of the app, the user can choose how to launch presets. One discreet method would be to use the fingerprint scanner on the back of the phone. Each finger could be mapped to a different preset for a total of 9 maximum presets. The last finger would be the one that exits our app to go back to the user's regular phone. Another method is through the Apple watch where the user can click the app icon and then use the side dial to choose which preset to launch. The pulldown settings menu on phones could also have one icon dedicated to this app, or one icon for each lending mode.

The home screen has an option for quick access apps as well. This is where the Apple watch becomes very useful. If a borrower needed Facebook and it was restricted, the lender could click the quick access icon on the watch and use the side dial to find Facebook. They could then grant access to Facebook from their smartwatch. In this manner, the interaction is quick, and the phone never leaves the borrower's hands. If the lender does not own a smartphone, this interaction would slow down a bit as they would have to take the phone back from the borrower to grant access. However, the most important thing is preserved--the lender does not have to exit the app and leave their phone to be vulnerable.

BONUS FEATURES

In our research, we also found that one big reason people don't lend their phones to others is due to concerns of theft. To counter this fear, we added an "other security" menu. This menu contains an anti-theft option that can be toggled on or off. This option would make most sense to be turned on for a strangers preset. If on, if the phone's accelerometer detects that someone is running with the phone, it blares an alarm and locks the sim card tray so the phone is still be traceable. The user has the option to add other actions that would be triggered as well to better protect their phone.

Another bonus feature targets pick-pockets. Since the app does not allow the regular phone to be used until the owner logs in normally, the app essentially doubles as a lock screen. This is another case where the Apple watch is beneficial. If this option is toggled on, it could maintain a bluetooth link to the Apple watch. If the phone is farther than a certain distance away from the watch, an alarm could be triggered to alert people in the area. Besides an Apple watch, anything that has bluetooth connectivity would work--such as wireless earbuds, or even a tile designed for this specific purpose.