

# Boosting Your Mobile App

Small Details, Big Impact

ConFoo 2025  
Mathieu Fillion



# Mathieu Fillion

12 years at **nventive**

Windows Phone

Mobile / Xamarin / .NET / Flutter

Azure

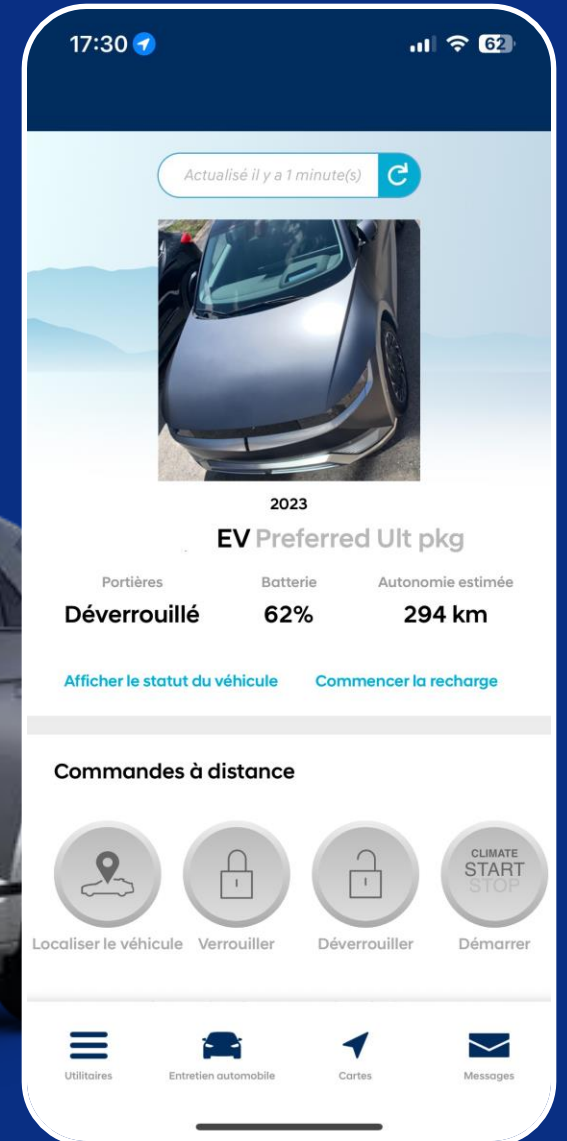
I always had the user at the center of my attention and loved collaborating with designers.

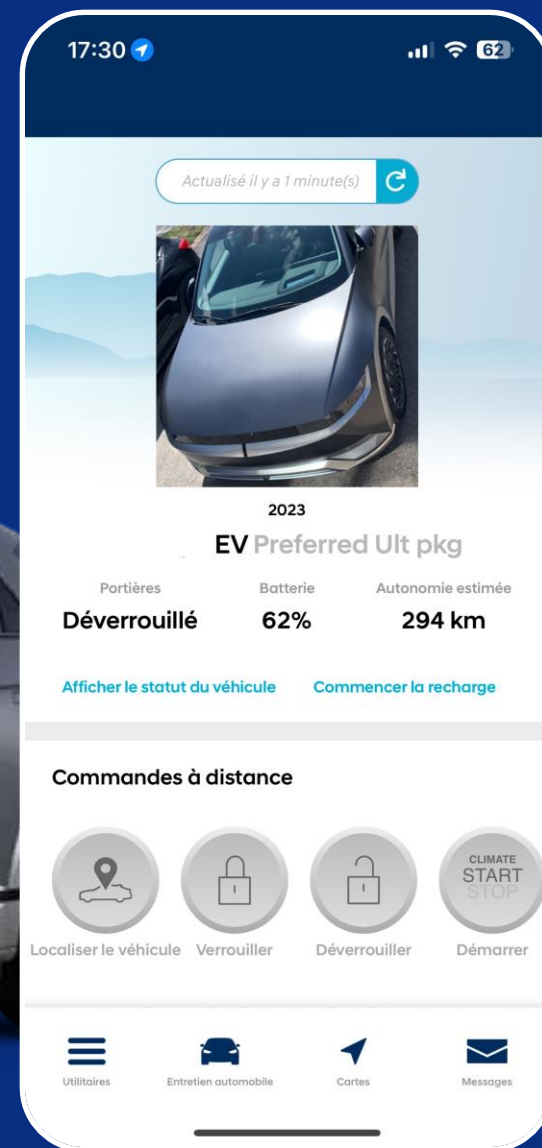
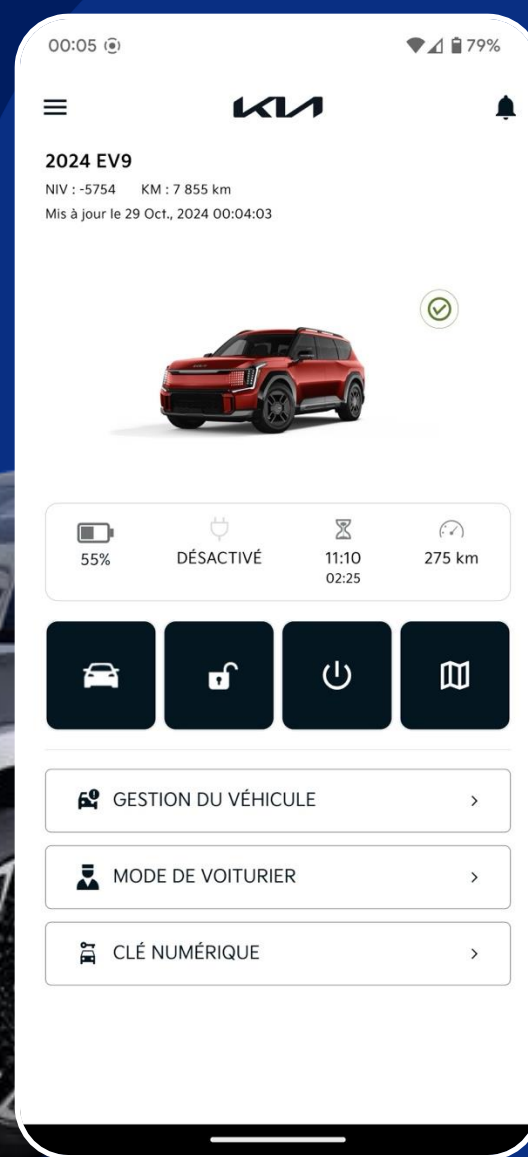
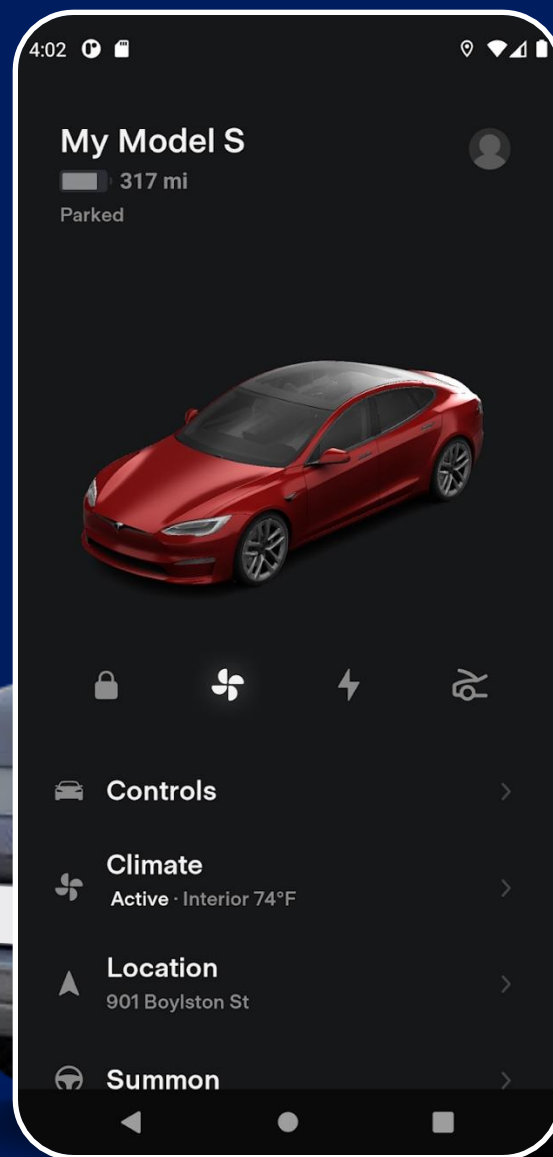
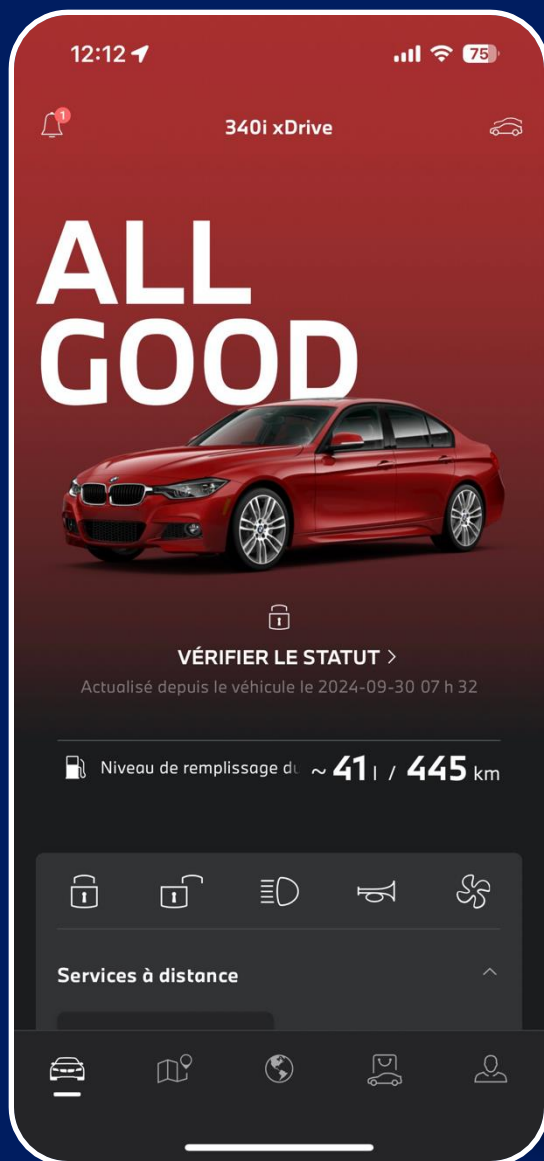


.NET



# Perception is all in the details.





**First impression  
is key**

# First impression is often a form...

9:41

✕ Register

**Your information**

First name

Last name

Email

**Create a secure password**

Password

**Your password must contain at least**

- 8 characters
- 1 upper-case letter
- 1 special character

Repeat Password

☐ I agree to the Terms and Conditions and the Privacy Policy.

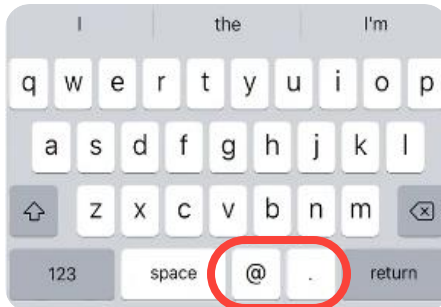
☐ I want to receive emails to earn free rewards and other promotions. I understand that I will receive a bonus of 75 Points + 1 free Reward. (Opt-in Bonus is only issued one time per customer)

Submit

Already have an account? [Sign in](#)

# FORMS

→ KeyboardType



emailAddress,

- emailAddress
- multiline
- name
- none
- number
- phone
- streetAddress
- text
- url
- visiblePassword
- values


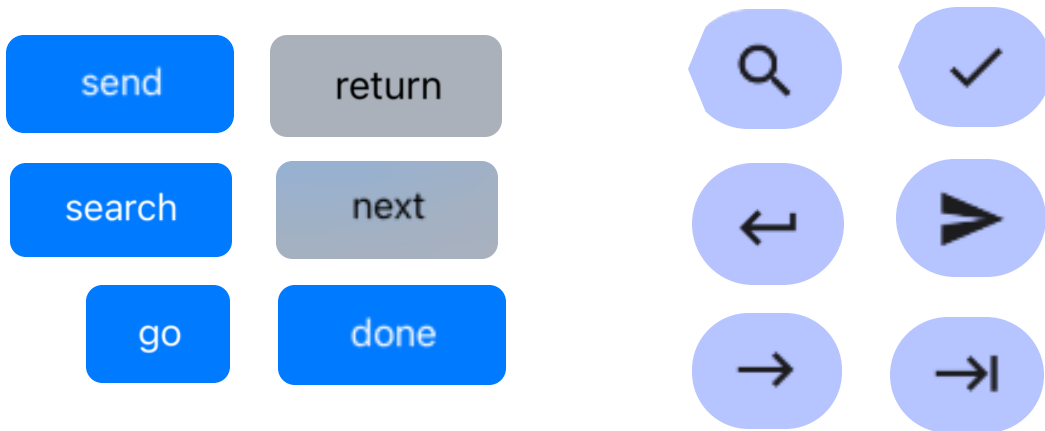
```
TextField(  
  keyboardType: TextInputType.emailAddress,  
  textInputAction: TextInputAction.next,  
  onSubmitted: (_) {  
    FocusScope.of(context).nextFocus();  
  },  
), // TextField
```



# FORMS

## Submit button Label

- iOS: UIReturnType
- Android: ImeOptions.ImeAction
- Flutter: textInputAction



```
TextInputAction.,
{
context).next
continueAction
done TextInputA
emergencyCall T
go TextInputAct
join TextInputA
newline TextInp
next TextInputA
none TextInputA
previous TextIn
route TextInput
search TextInpu
send TextInputA
```



# One Time Codes on iOS

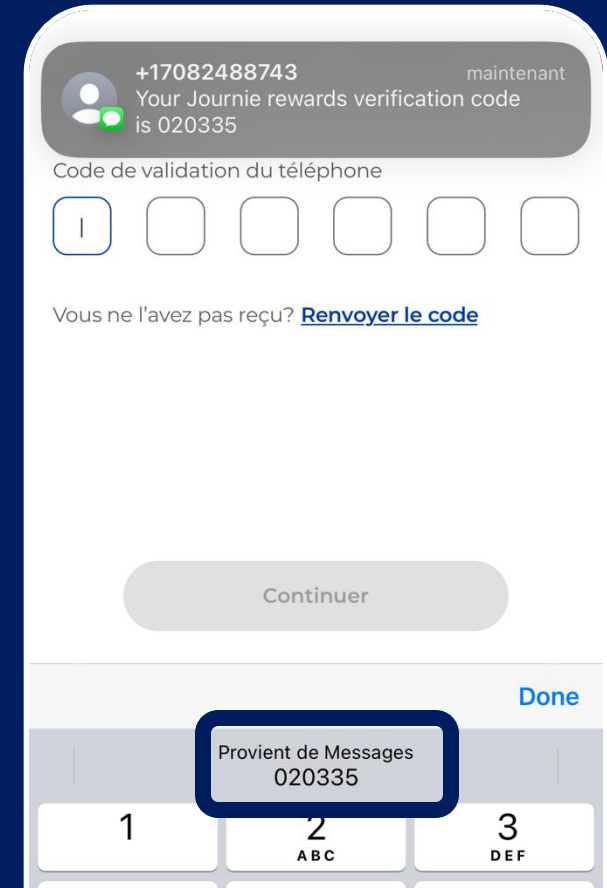


```
TextField(  
  autofillHints: [AutofillHints.oneTimeCode],  
) // TextField
```

```
myTextField.textContentType = .oneTimeCode
```

Native

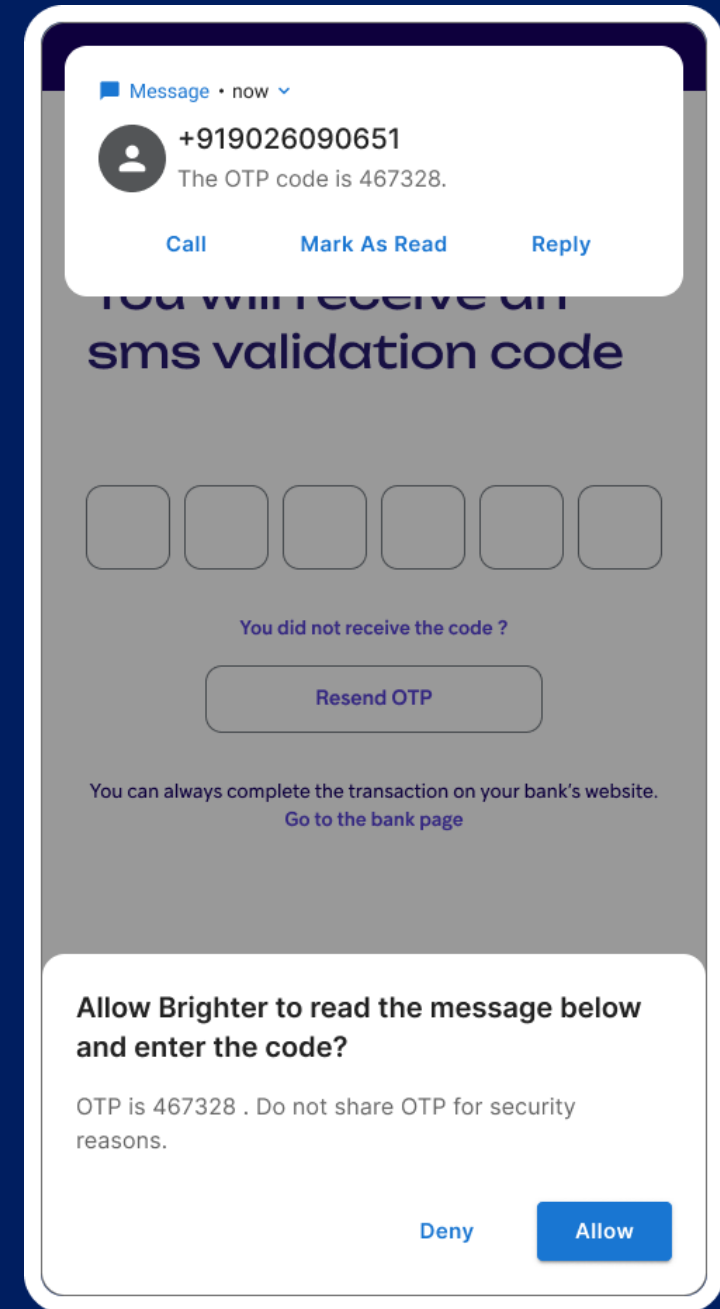
- 1 line of code
- In the SMS, include the word “code” and use digits only once to help iOS recognize it



The screenshot shows an SMS interface on an iPhone. At the top, a header bar displays a contact icon, the phone number +17082488743, and the text "maintenant Your Journie rewards verification code is 020335". Below this, the text "Code de validation du téléphone" is followed by six empty input boxes for the code. The first box contains the digit "1". Below the input boxes, there is a link that says "Vous ne l'avez pas reçu? [Renvoyer le code](#)". A "Continuer" button is centered below the link. At the bottom of the screen, a keyboard is visible. A blue box highlights the text "Provient de Messages 020335" above the numeric keys.

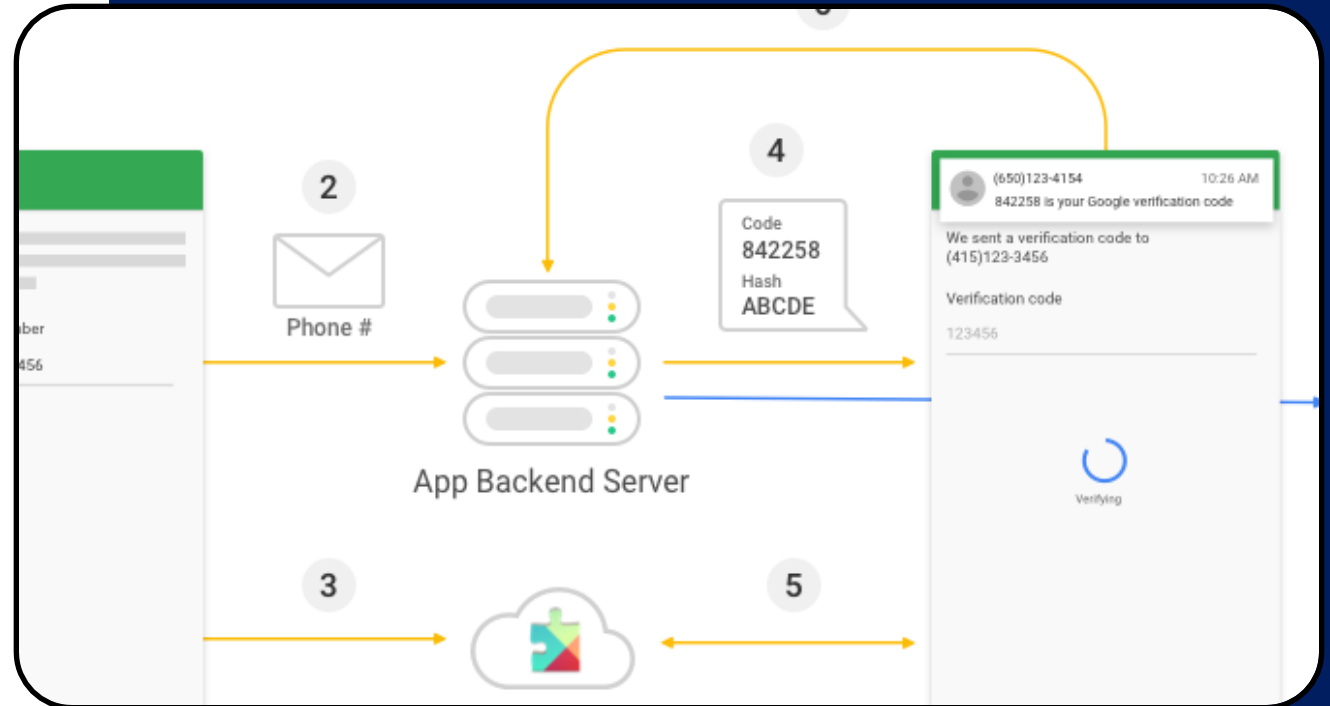
# One Time Codes on Android

- SMS Consent API
- Multiple flutter packages on pub.dev



# One Time Codes on Android

- SMS Retriever API
- No user input, it's magic!
- SMS needs to include a hash from your signatures
- “Your code is 123456. #adFE341v”
- Get the hash with android keytool



# Password managers

- Usage is increasing<sup>1</sup>
  - 21% in 2022
  - 34% in 2023
- Not only for Web!
- Don't forget the password reset flow so the manager updates the new password.
- Code looks simple, but there are additional steps --->

<sup>1</sup>Source: <https://www.security.org/digital-safety/password-manager-annual-report/>



```
AutofillGroup(  
  child: Column(  
    mainAxisAlignment: MainAxisAlignment.center,  
    children: const <Widget>[  
      TextField(  
        decoration: InputDecoration(  
          labelText: 'Email',  
        ), // InputDecoration  
        autofillHints: [AutofillHints.email],  
      ), // TextField  
      // ignore: prefer_const_constructors  
      TextField(  
        decoration: InputDecoration(  
          labelText: 'Password',  
        ), // InputDecoration  
        obscureText: true,  
        autofillHints: [AutofillHints.password],  
      ), // TextField  
    ], // <Widget>[]  
  ), // Column  
) // AutofillGroup
```

# Password managers

1

**iOS: set entitlements and host an apple-app-site-association file on**  
`https://<fully qualified domain>/.well-known/apple-app-site-association`

2

**Android : Host a Digital Asset Link file at**  
`https://<fully qualified domain>/.well-known/assetlinks.json`

3

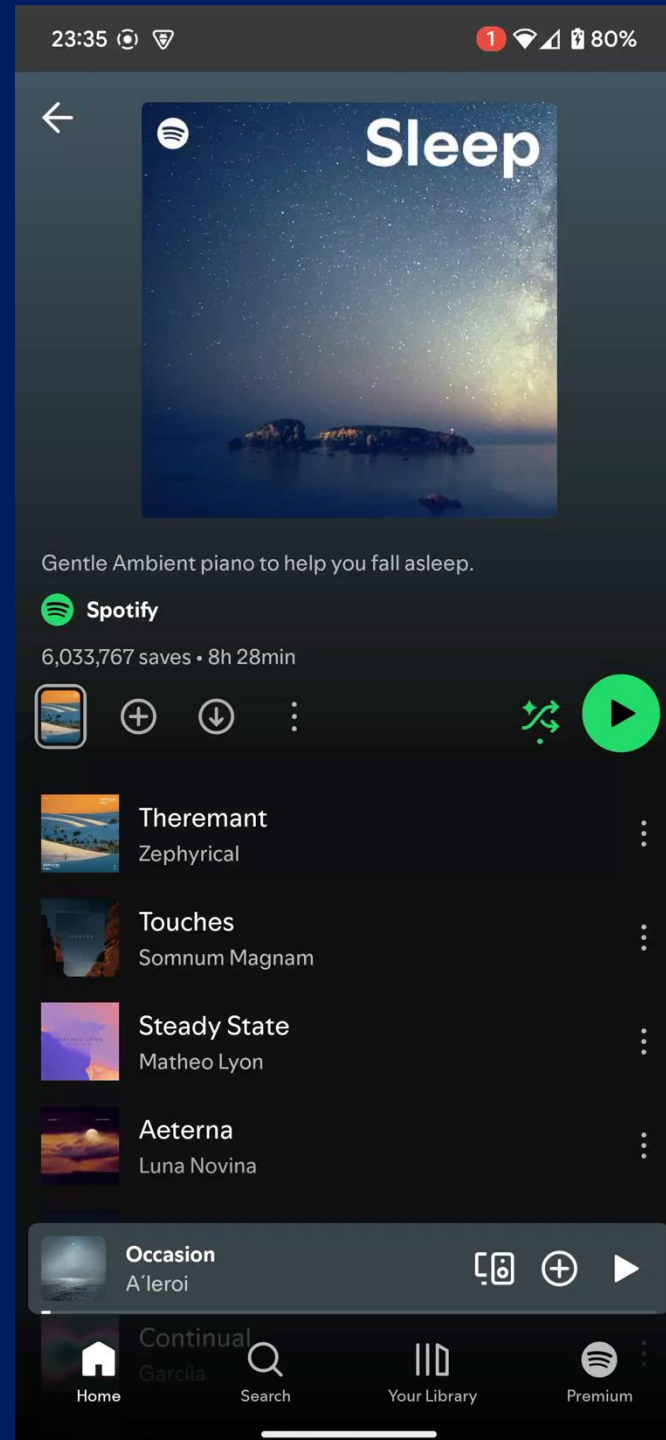
**Those files contain signatures that prove a link between the app and the website domain.**

The background is a solid dark blue. On the left side, there are two overlapping white circular outlines. On the right side, there are three overlapping white circular outlines of varying sizes.

# **Animating for a purpose**

# Animating for a purpose

## Teach



# Animating for a purpose

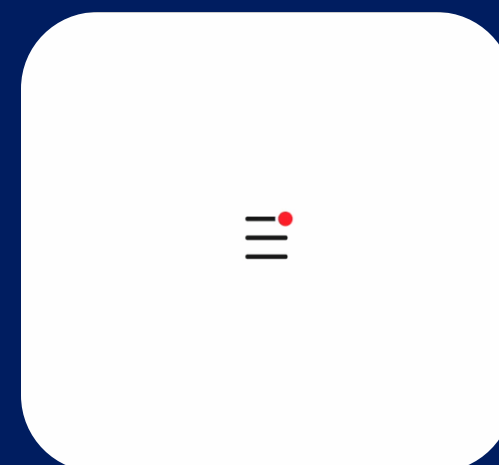
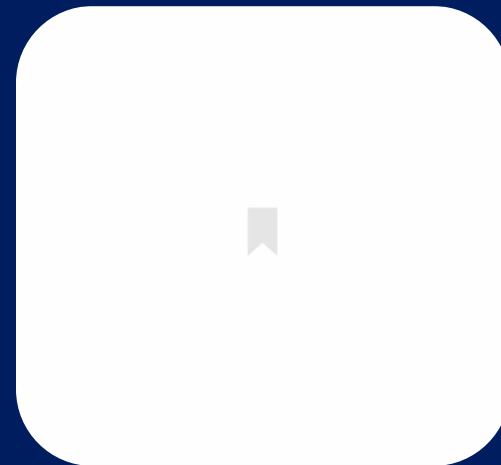
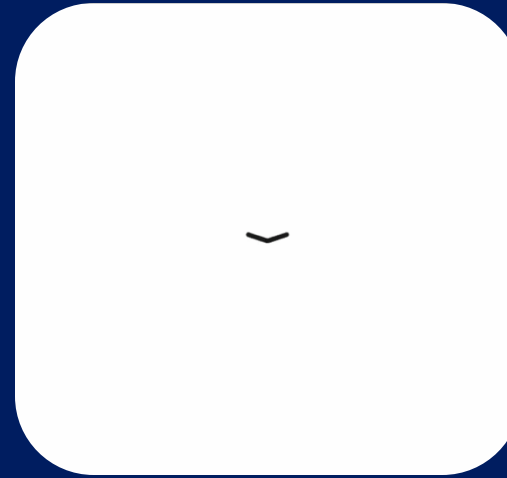
Engage



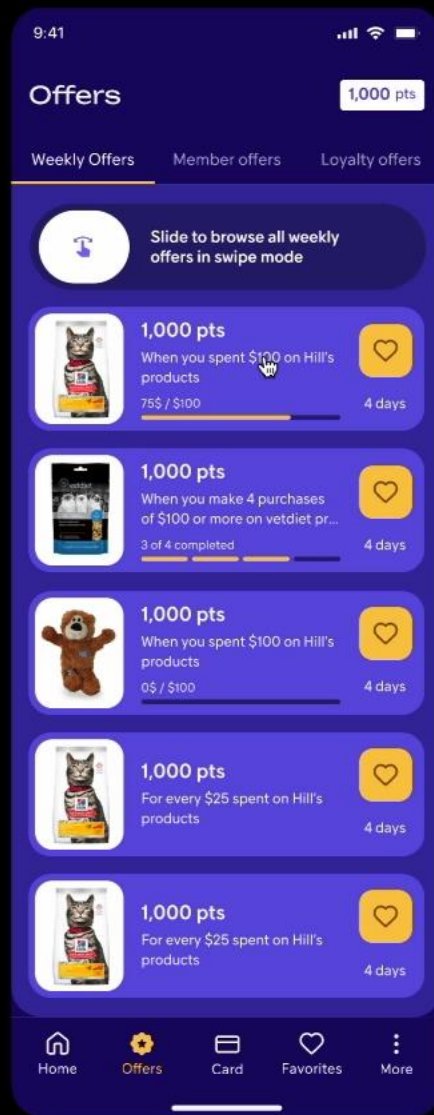


# Micro-animation

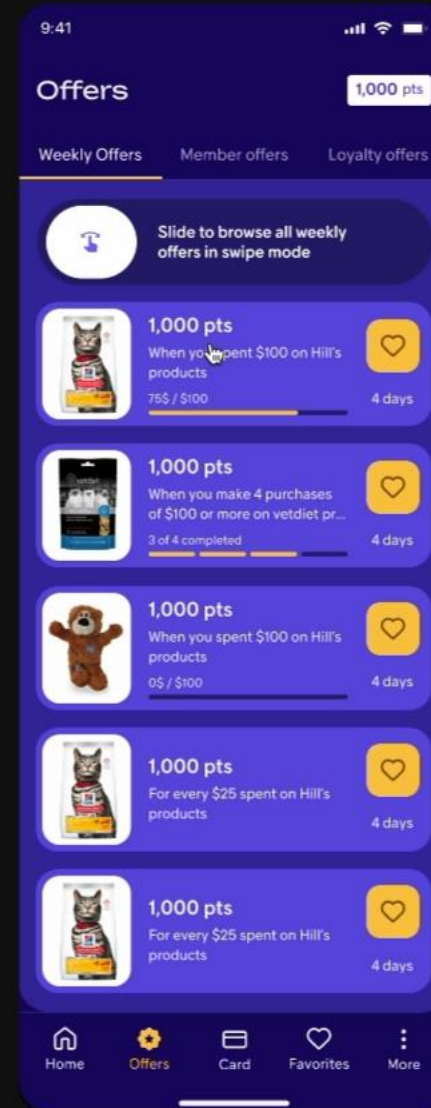
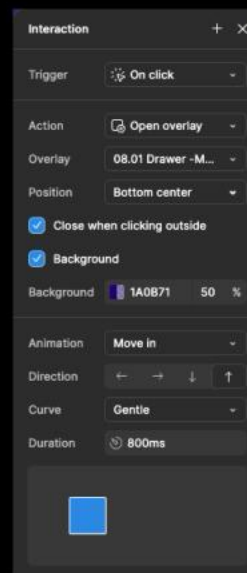
- Provide feedback
- Confirm an action
- Multiple options like **Lottie** or **Rive**



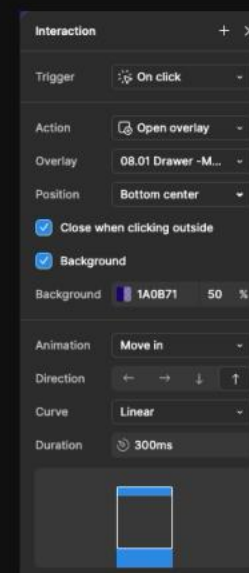
# Easing & speed



Animation: Gentle



Animation: Linear



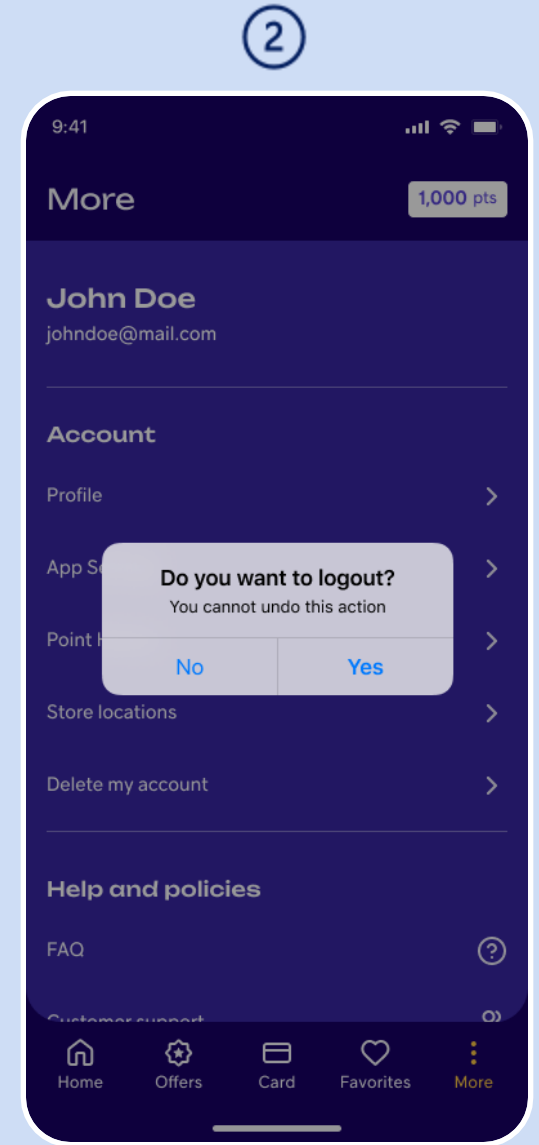
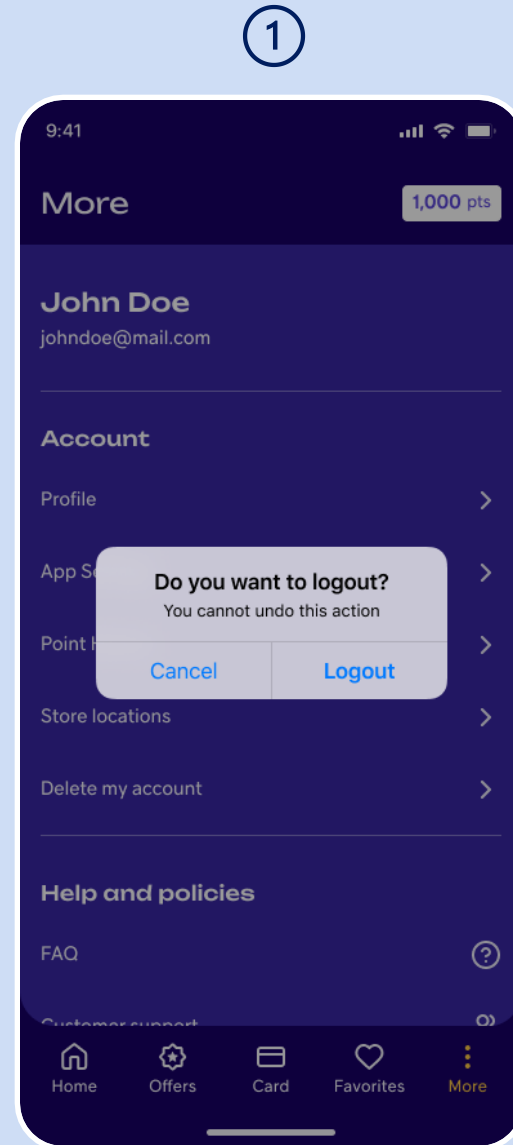
The background is a solid dark blue. On the left side, there are two overlapping white circular arcs. On the right side, there are also two overlapping white circular arcs, mirroring the ones on the left.

Dialog

**Quiz time!**

## Dialog Quiz 1

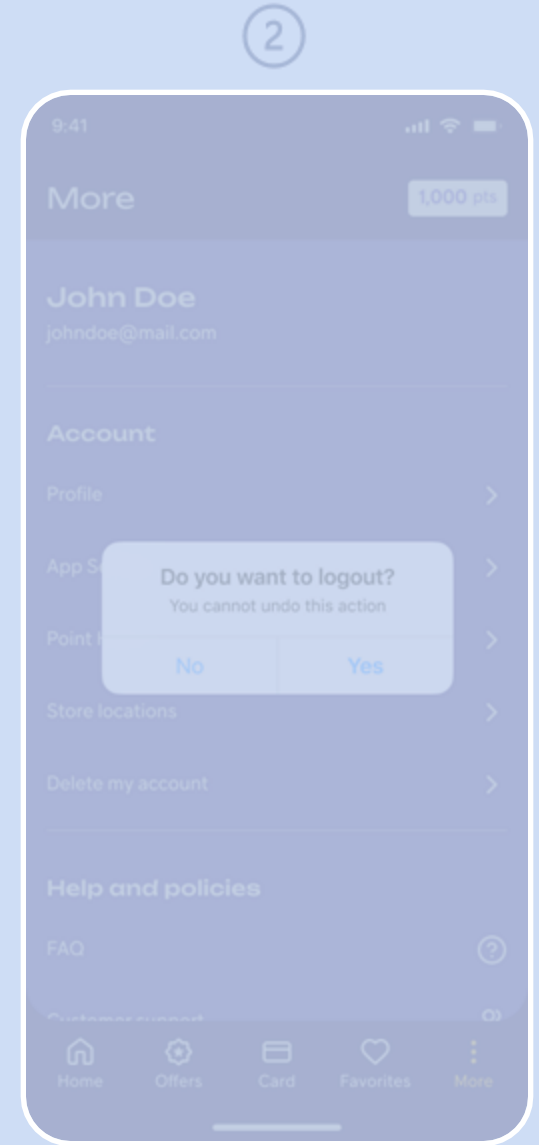
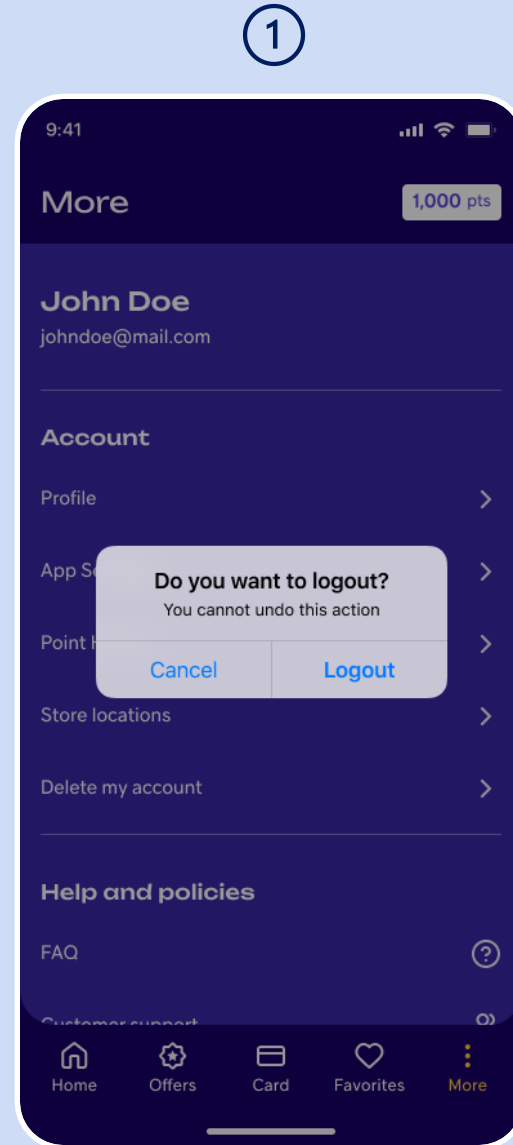
Which screen is better?



## Dialog Quiz 1

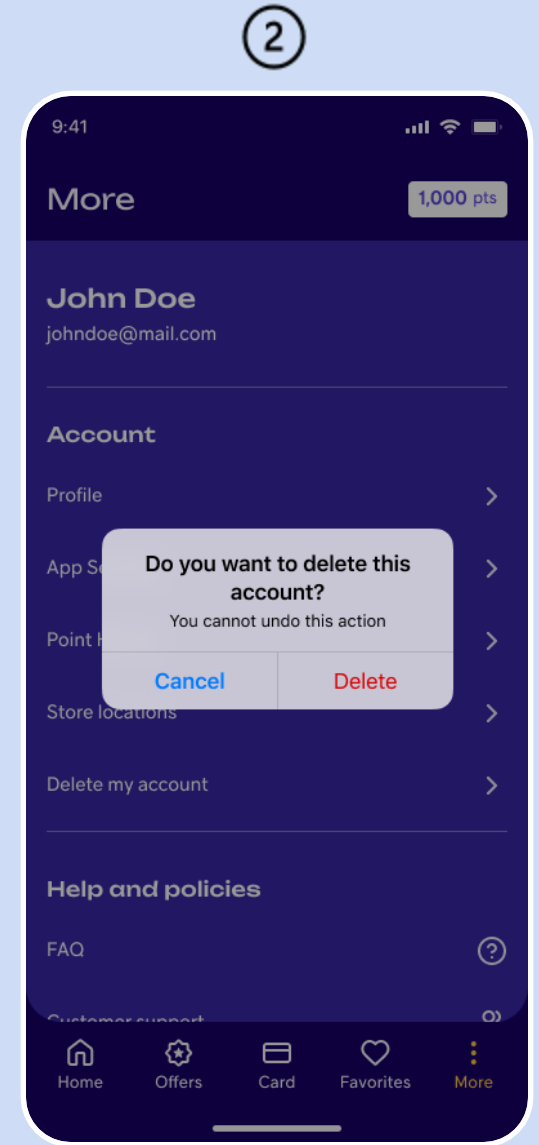
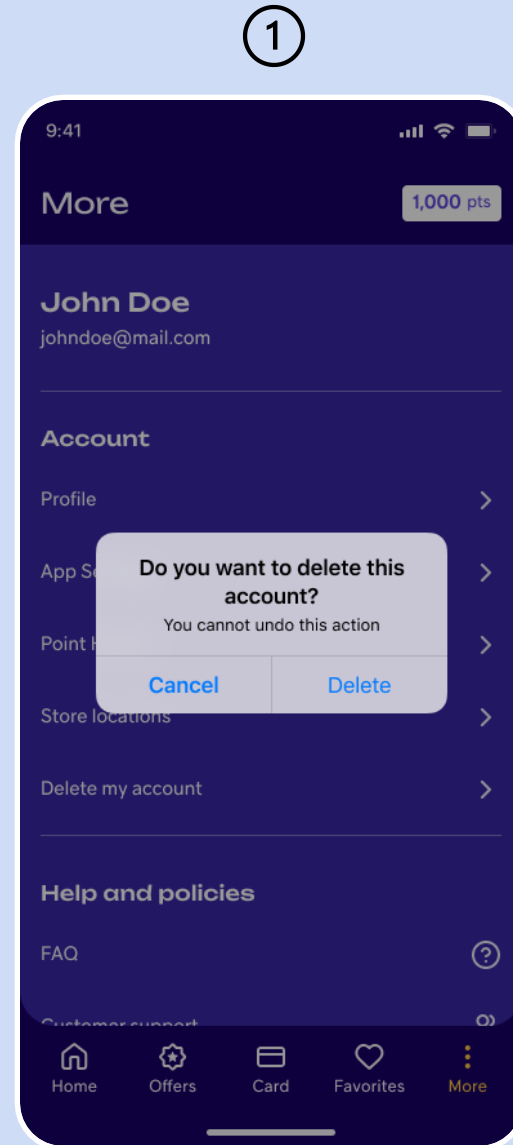
Avoid “Yes” and “No.”  
Always use “Cancel” to title  
a button that cancels the  
alert’s action

- Apple Human Interface Guidelines



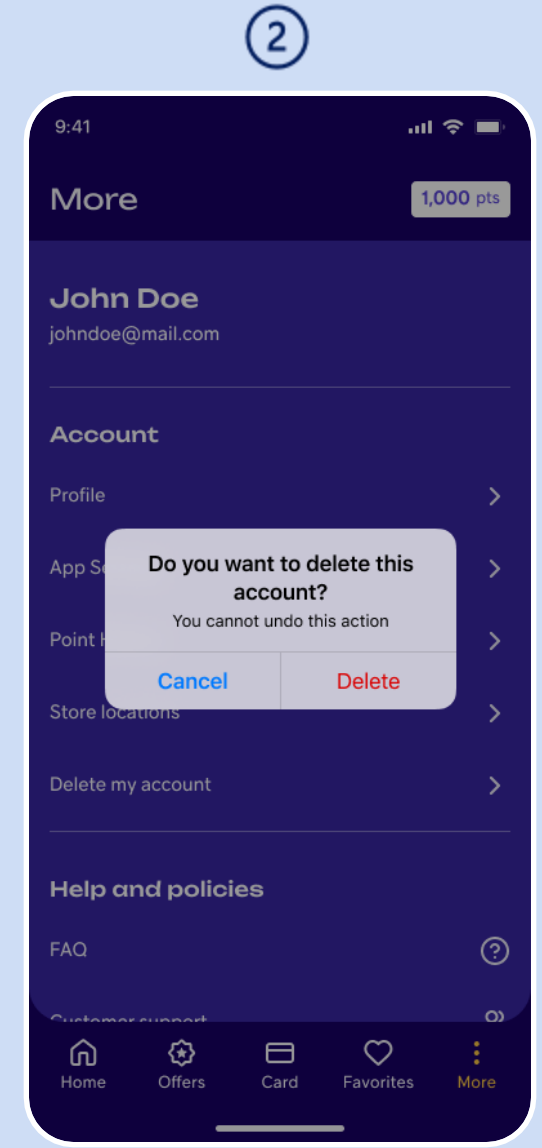
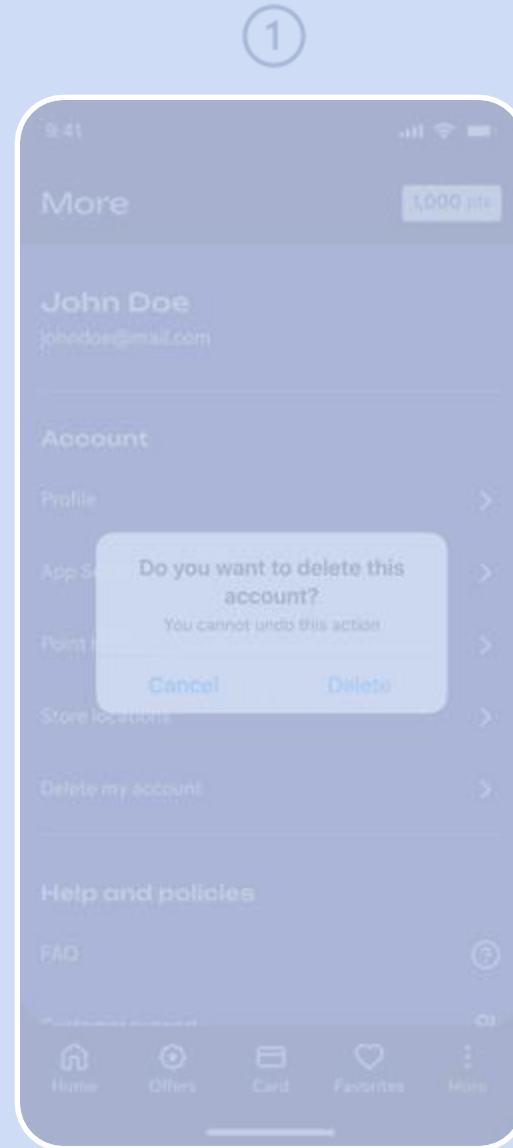
## Dialog Quiz 2

Which screen is better?



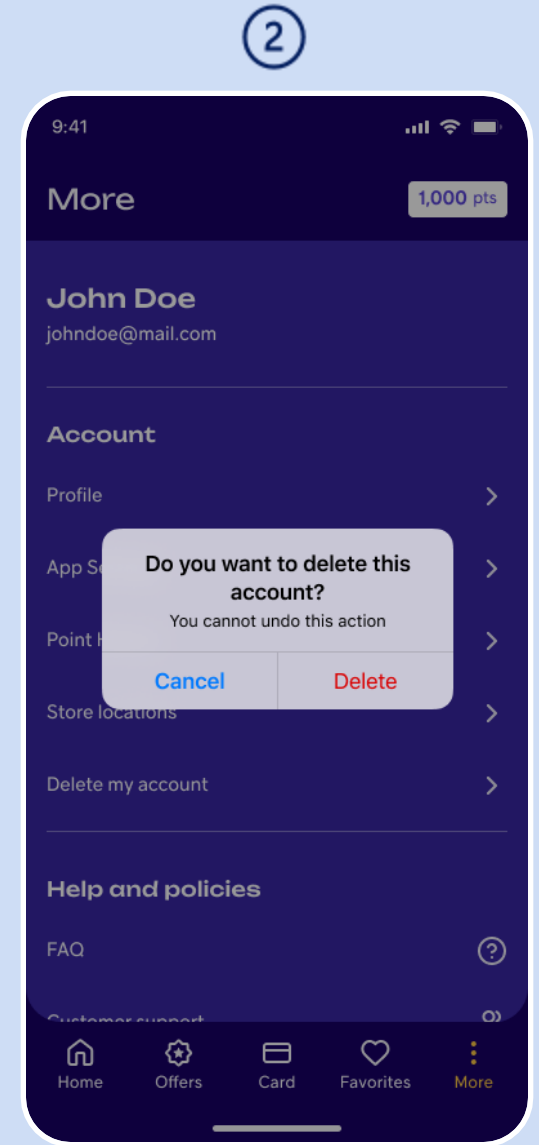
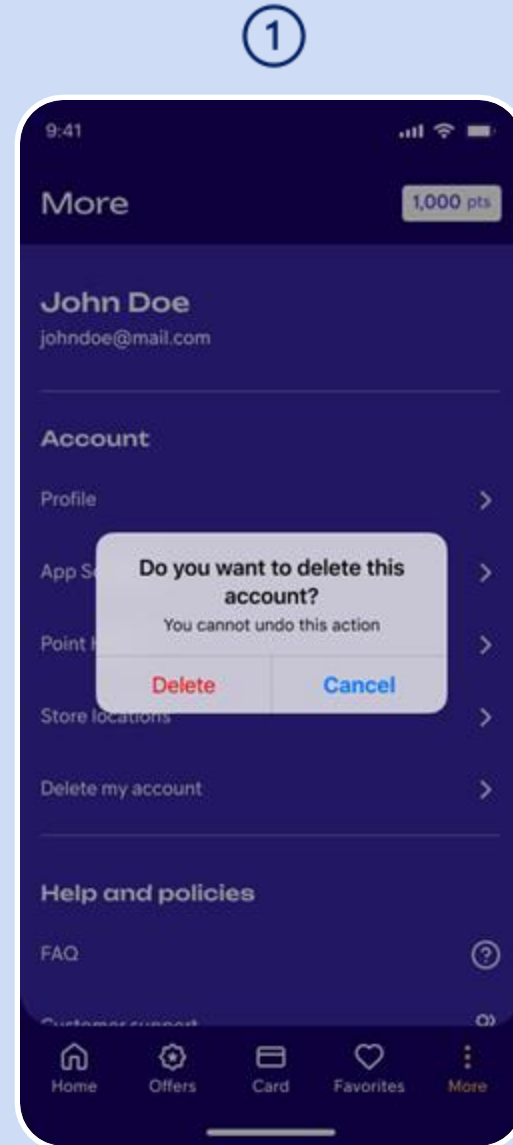
## Dialog Quiz 2

For an uncommon destructive action, use a different style of button to draw attention.



## Dialog Quiz 3

Which screen is better?





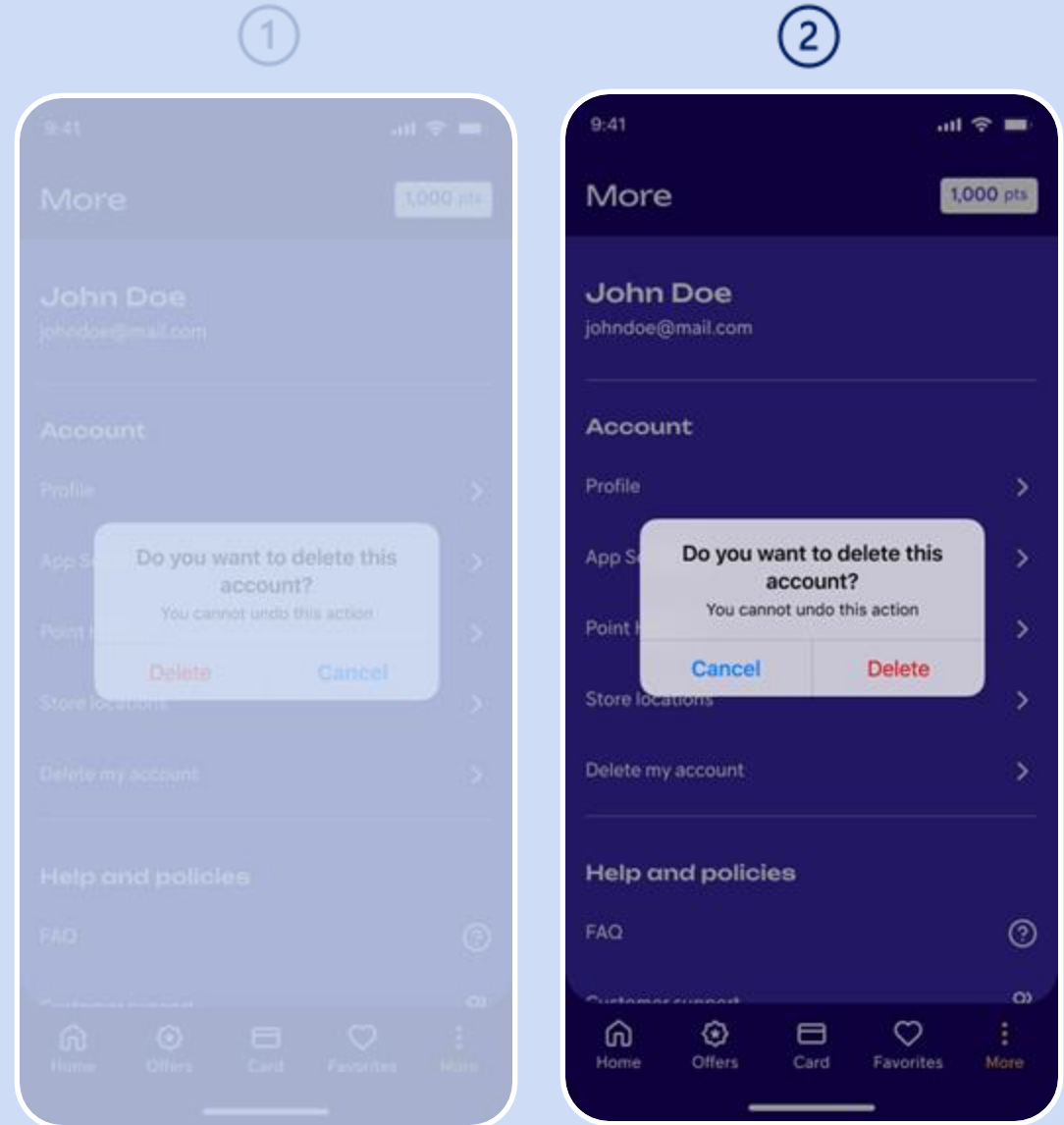
## Dialog Quiz 3

Cancel buttons are typically on the leading side of a row

– Apple Human Interface Guidelines

Don't place dismissive actions to the right of confirming actions

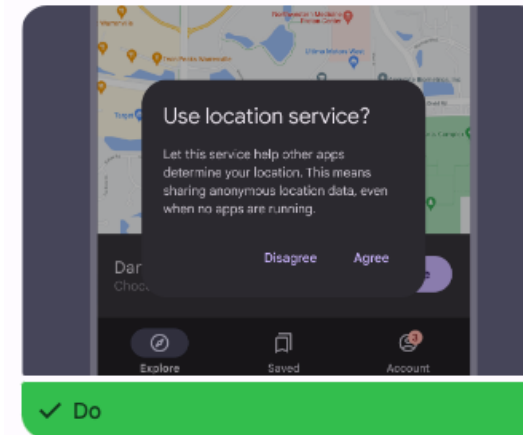
–m3.material.io



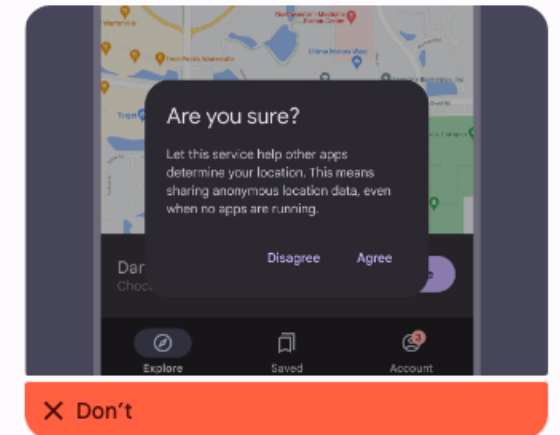
# Read through Apple and Google's guidelines

Apple Human Interface Guidelines

<https://m3.material.io/>



This dialog title poses a specific question, concisely explains what's involved in the request, and provides clear actions



Don't use dialog titles that pose an ambiguous question

# Icons

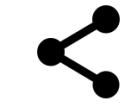
→ Platform-specific icons

→ Share is special



- Save
- Share via
- Not interested
- Unfollow GDG Montreal
- Report post

- Save
- Share via
- Not interested
- Unfollow GDG Montreal
- Report post



Android



Apple  
(since iOS 7)



Means share on both!

## Image filters | Observable Flutter #53

7.3K views · 4d ago · Observable Flutter · ...more



Flutter 584K

Subscribe



240



Share



Download



## Centre Bell

4.5 ★★★★★ (23,625) · 27 min

Arena ·



Share



Website



Post

## Centre Bell



Save



Share



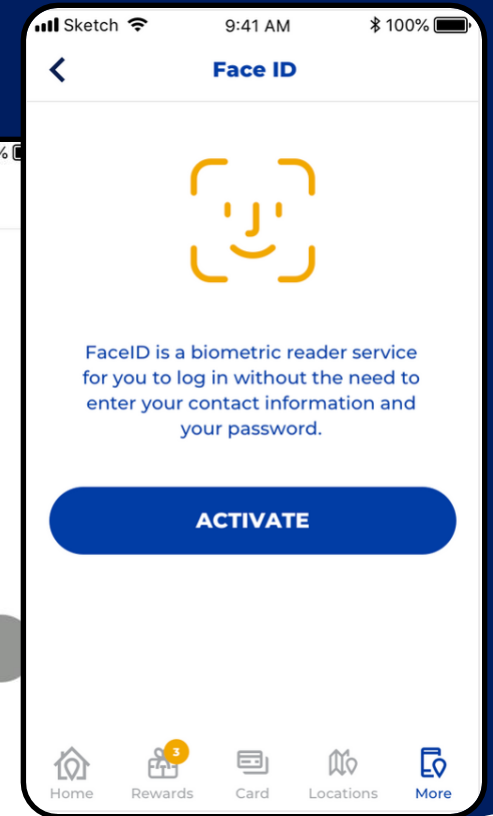
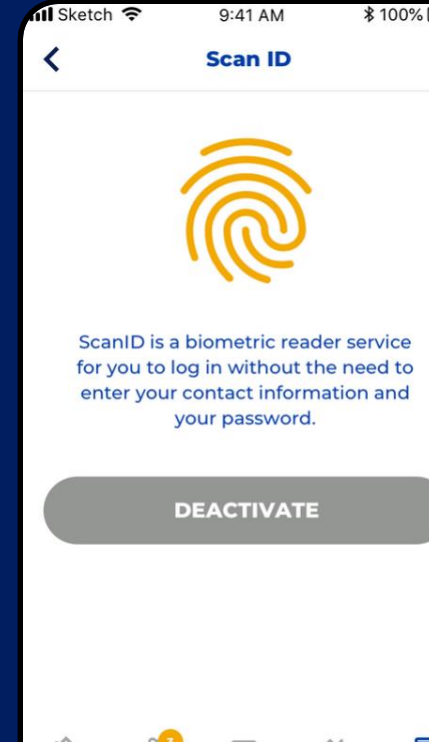
Post



Edit

# Icons

- Show proper icon based on hardware
- Avoid FaceID icon on Android.



```
final List<BiometricType> availableBiometrics =  
    await _localAuth.getAvailableBiometrics();  
  
bool hasFaceId = availableBiometrics  
    .contains(BiometricType.face);  
  
bool hasFingerprint = availableBiometrics  
    .contains(BiometricType.fingerprint);
```





# App Ratings



79%

Users read one  
review before  
installing

# Key stats : Audiences



Core Haters

<1%

of people who have crashes, can't install the app, don't like your monetization, product or your customer support, etc.



Core Reviewers

<1%

of people who believe in giving good or balanced reviews.



Non-Reviewers

98%

of people are non-reviewers: they are enjoying the app or have quit already.

# Key stats : Audiences

Now lets mix 50 reviews from core haters (1) with 50 reviews from core reviewers (4.5).  
You have just ended up with a 2.75 average.



Conclusion: **Nudge non reviewers into action and drown out the core haters.**



# The importance of ratings & reviews

Here are 5 reasons why we shouldn't overlook the significance of app ratings and reviews in the overall app marketing strategy.



## Increase number of installations

App reviews can influence about 70% of users to install the app on Apple devices.



## Improve user retention

Retention rate can be increased by improving navigation, user experience and user interface, among others.



## Increase in-app revenue

Positive ratings will influence visitors to download the app. Moreover, it will attract more marketing opportunities.



## Increase in-app visibility

The main advantage of app ratings is that they will help your app rank higher on search engines.

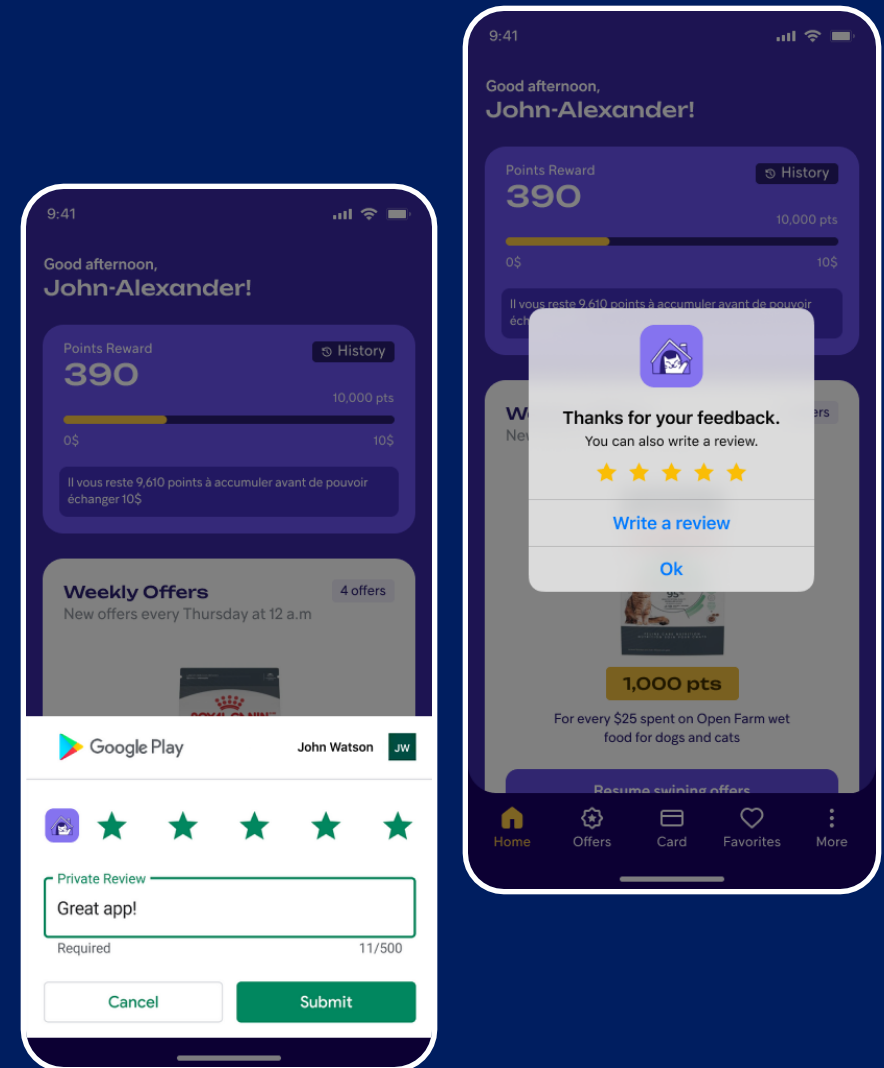


## Better conversation rate

Ratings and reviews of an app play a significant role in establishing its social credibility.

# In app rating

- Find positive moments to prompt the user
  - After “X” successful significant actions
  - Games will prompt after a win or lucky event
- Don't prompt repetitively or too early.
- Remember, your goal is volume.
- Use feature-flag to stop prompting if the app is unstable



# Config example

- > 3 application launches.
- > 3 completed primary actions.
- > 10 days since the first application launch.
- > 30 days since the last review request.



Firebase Remote Config

- Feature flag

```
var reviewService = ReviewService<ReviewSettings>(
    logger: Logger(),
    reviewPrompter: reviewPrompterMock,
    reviewSettingsSource: reviewSettingsSource,
    reviewConditionsBuilder: ReviewConditionsBuilder
        .defaultBuilder()
        .minimumApplicationLaunchCount(3)
        .minimumElapsedTimeSinceApplicationFirstLaunch(Duration(days: 15))
        .minimumPrimaryActionsCompleted(3)
        .minimumElapsedTimeSinceLastReviewRequest(Duration(days: 30))
);
```

```
// Track this action.
await _reviewService.trackPrimaryActionCompleted();
```

```
await _reviewService.tryRequestReview();
```



# Accessibility

**~30%** of users changed  
their text size  
setting



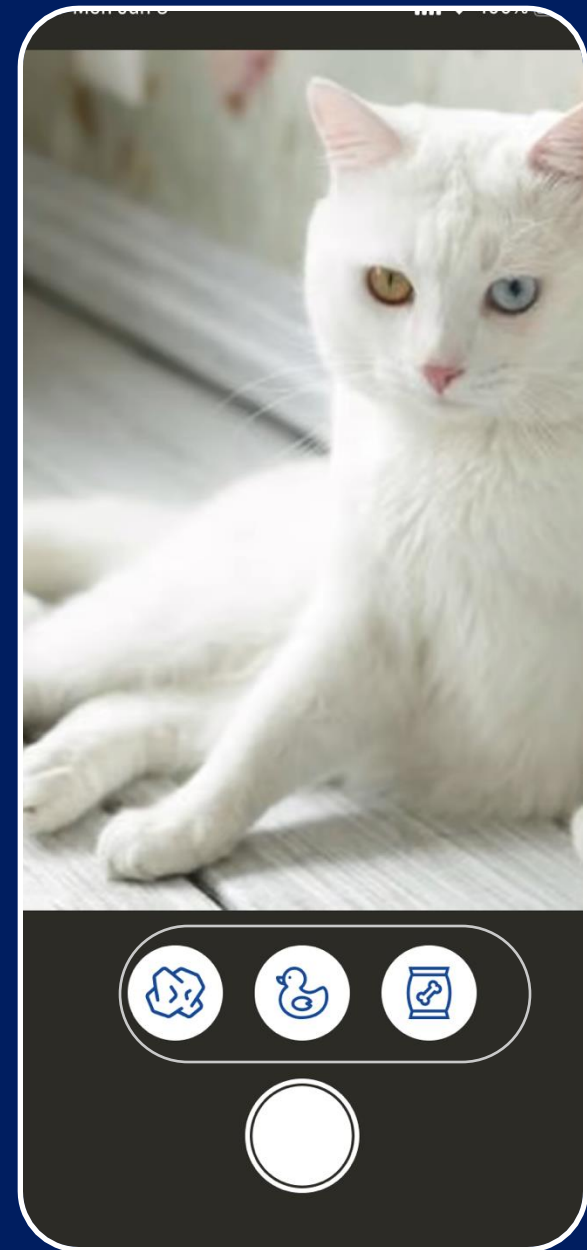
Leverage what a phone offers

# Mobile Experience Accelerators



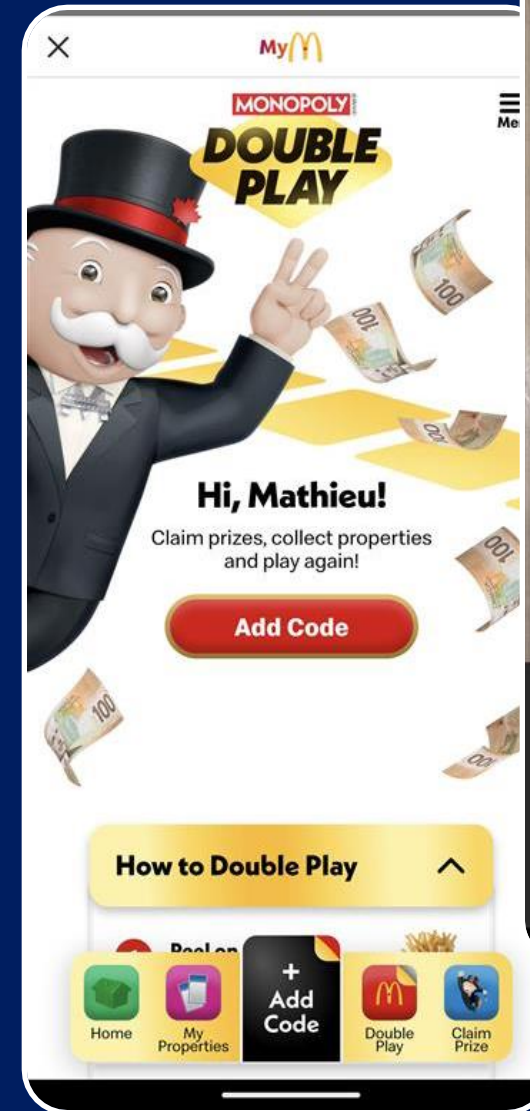
# Phone speaker and camera

- Registering your pet with a veterinary hospital.
- Taking a “profile” picture of a dog or a cat is hard!
- Make noises with the phone speakers, so the pet looks at the camera.



# Facilitate input with camera

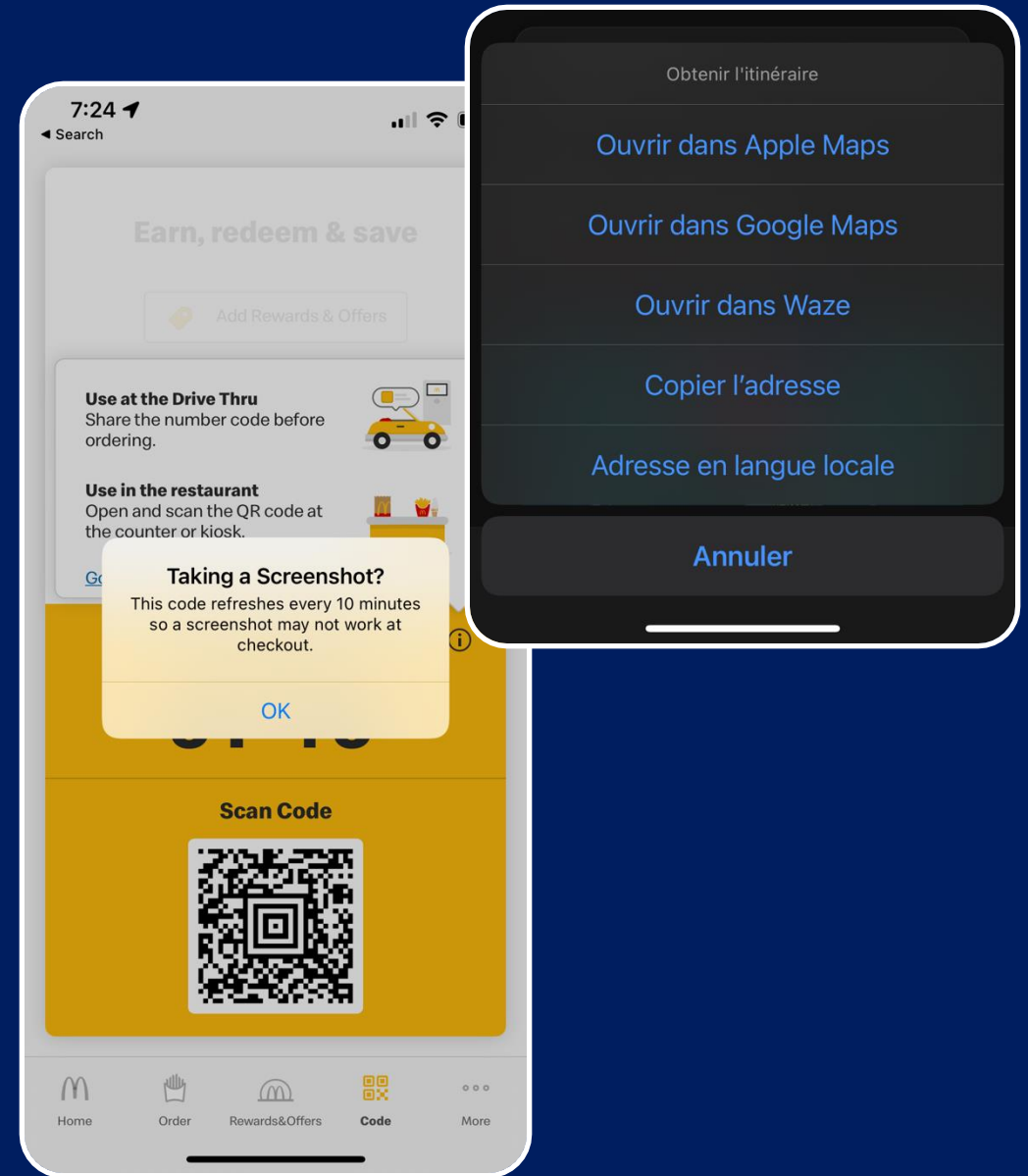
- So much quicker than typing
- Character recognition running on-device
- Barcodes and QR Codes are even easier





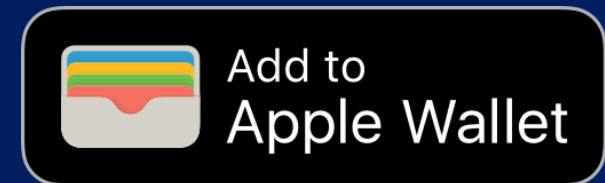
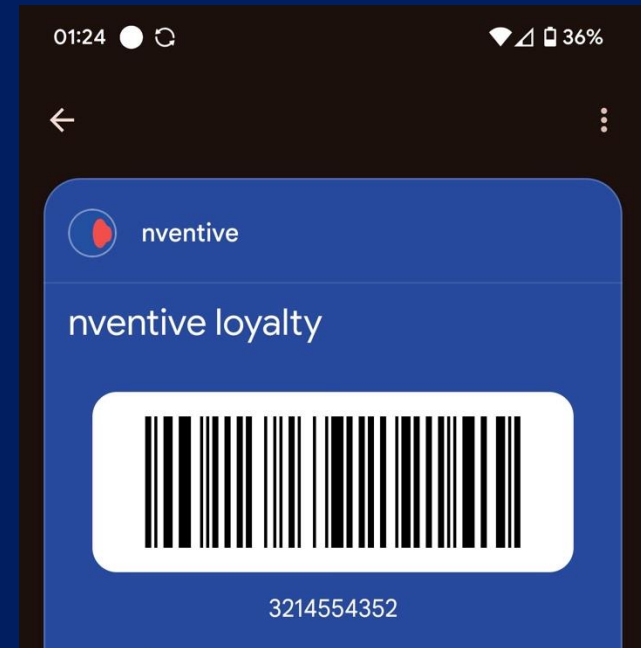
# Mobile APIs

- Think ahead of the user to prevent frustrations
- Detect screenshots
- Modify brightness
- Offer multiple app options on iOS when deeplinking, especially for maps



# Wallet integrations

- Wallet apps are not only for Credit Cards.
- Loyalty Cards, membership cards, Tickets transit passes, etc.
- \*Small backend API needed to sign “pass objects”



# Haptic feedback

→ Offer tactile feedback for an important action

- Add to cart
- Completing a form
- Message sent

→ Mobile games

→ Don't overuse it!

```
// Vibrate the device
Vibration.vibrate(duration: 250, amplitude: 128);
// or
HapticFeedback.lightImpact(); // or MediumImpact, HeavyImpact
// or
HapticFeedback.selectionClick();
```



→ Steady



→ Staggered

An action has started and is ongoing.

Ex. Holding the gas pedal in a mobile racing game.

An action has **failed**.

Ex. An image upload to Instagram did not work.

Success!



Neutral



Warning/Error



→ Ascending



→ Flat



→ Descending

An event was **successfully** completed.

An action happened.

An event was not completed.

# Extra privacy

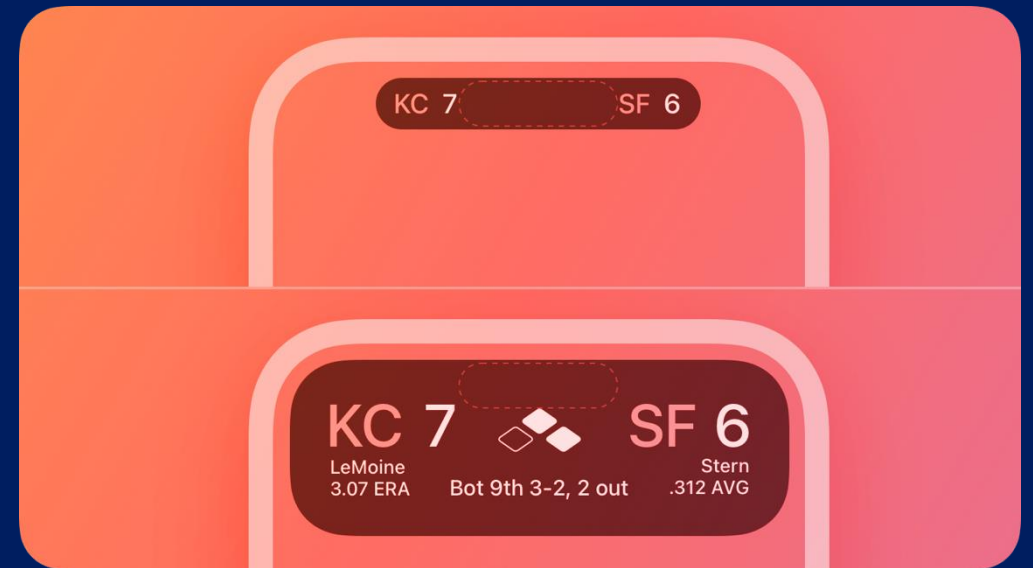
- For sensitive apps (Health, Finance, etc.)
- Mark the app as secure to prevent:
  - screenshots
  - screen recording
  - app preview when multi-tasking

```
public class MainActivity extends FlutterActivity {  
    @Override  
    protected void onCreate(Bundle savedInstanceState) {  
        super.onCreate(savedInstanceState);  
  
        // Prevents screenshots and recording  
        getWindow().setFlags(  
            WindowManager.LayoutParams.FLAG_SECURE,  
            WindowManager.LayoutParams.FLAG_SECURE);  
    }  
}
```

```
// Prevent screenshots  
if let window = UIApplication.shared.windows.first {  
    window.isSecure = true  
}
```

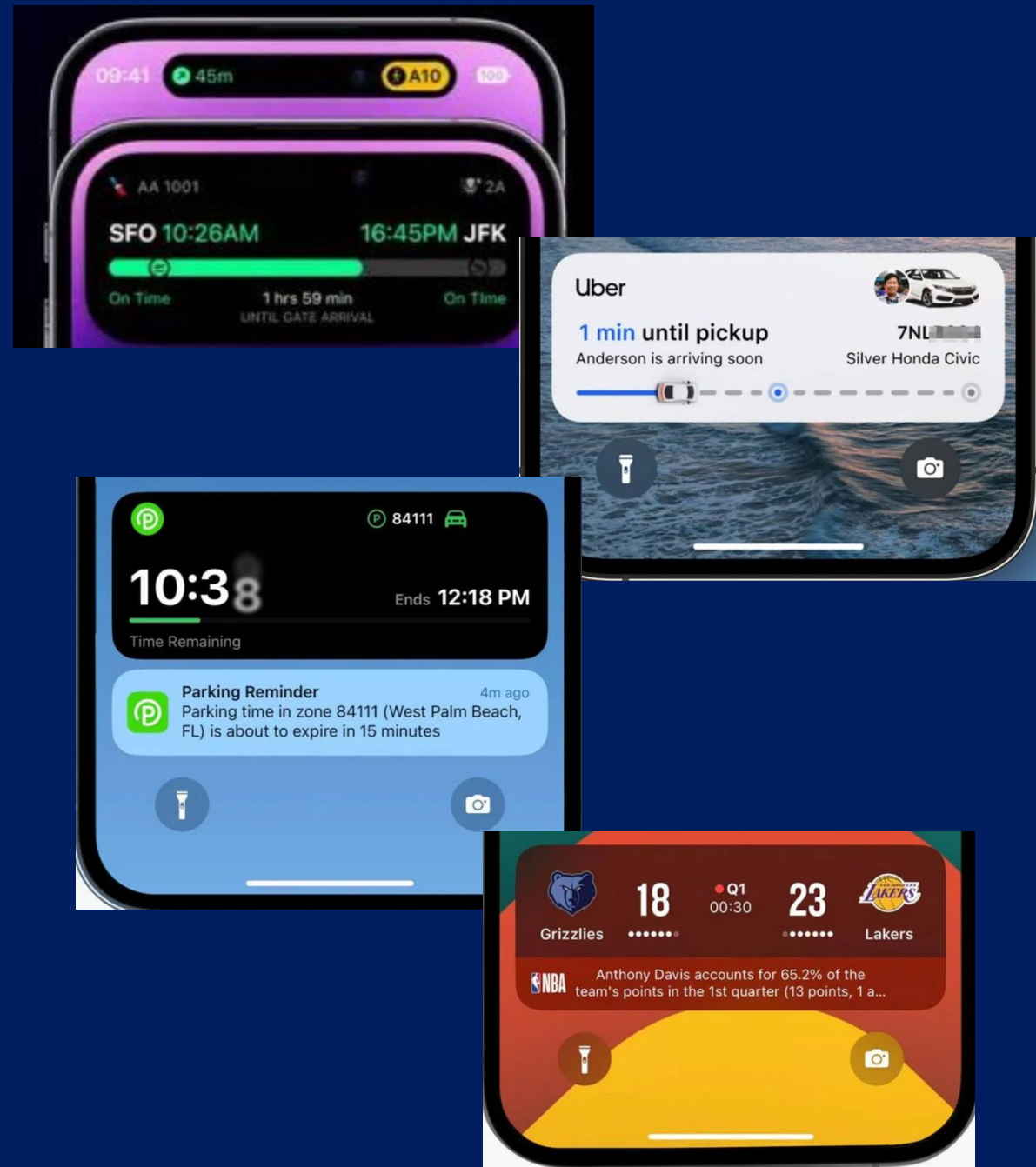
# Live Activity

- iOS offers **Dynamic Islands** and **Live Activities** to provide continuous visual feedback.
- Powered by the same push notification system behind the scene
- Possible in Flutter with a little swift !



# iOS : Live Activity

- Sports event score tracking
- Fitness activity session
- Food delivery tracking
- Track wait time for when your table is read
- Street parking reminders
- Flight status and gate changes
- ...
- Lots of possibilities!



# Ask me two questions



Mathieu Fillion





**Merci!**  
**Thank you!**