



Accessibility — Up to 11!

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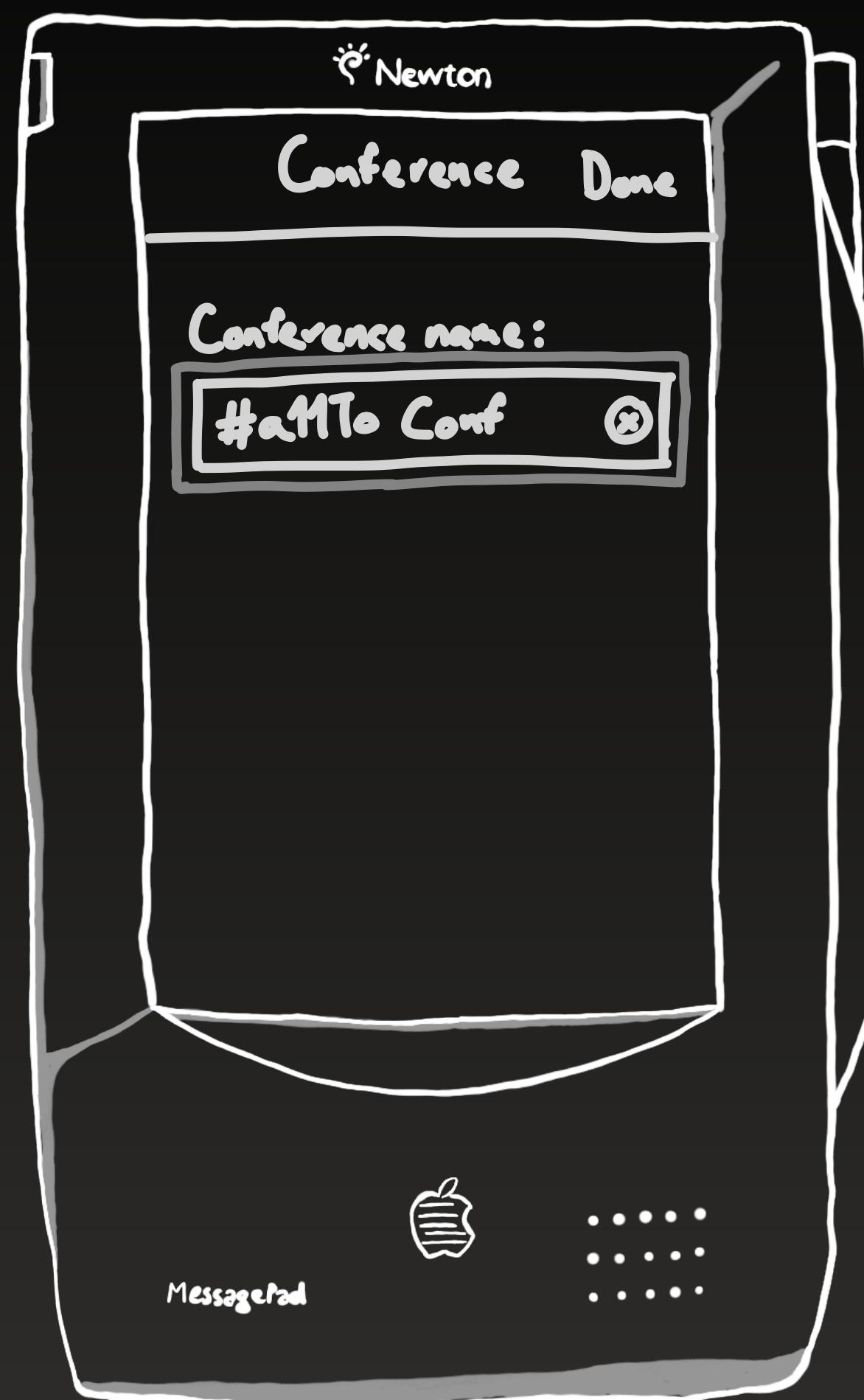


THE NUMBERS ALL GO UP TO 11!

#accessibilityUpTo11

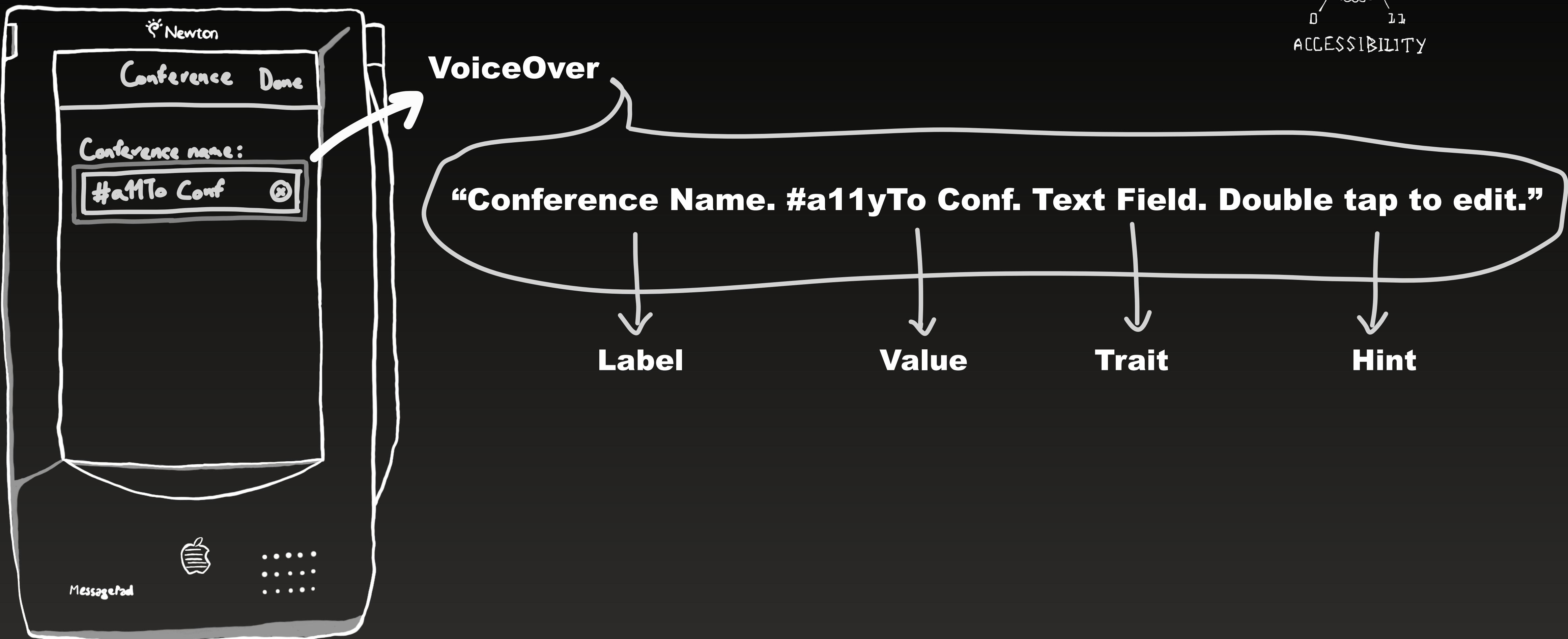


0 - Starting from zero



#accessibilityUpTo11

0 - Starting from zero



#accessibilityUpTo11

0 - Starting from zero



```
accessibleView.isAccessibilityElement  
= true  
  
accessibleView.accessibilityLabel =  
NSLocalizedString("stringKey",  
comment: "")  
  
accessibleView.accessibilityTraits =  
UIAccessibilityTraitButton  
  
accessibleView.accessibilityValue =  
"A value"  
  
accessibleView.accessibilityHint =  
"Does something."
```



1 - Labelling Correctly

4d

“Four d” ✗

“Four days ago” ✓

3h 24m

“Three h twenty-four meters” ✗

“Three hours twenty-four minutes” ✓

Mon

“Mon” ✗

“Monday” ✓

Most read

“Most read” ✗

“Most red” ✓



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* YODA IS A CHARACTER FROM LUCASFILM

1 - Labelling Correctly



Paella

#accessibilityUpTo11

1 - Labelling Correctly



```
let attributes: [NSAttributedString.Key: Any] =  
[.accessibilityIPANotation: "pa'eʎa"]
```

```
recipeTitle.accessibilityAttributedLabel =  
NSAttributedString(string: "Paella", attributes: attributes)
```



Paella

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1 - Labelling Correctly



```
let attributes: [NSAttributedString.Key: Any] =  
[.accessibilitySpeechLanguage: "es-Es"]
```

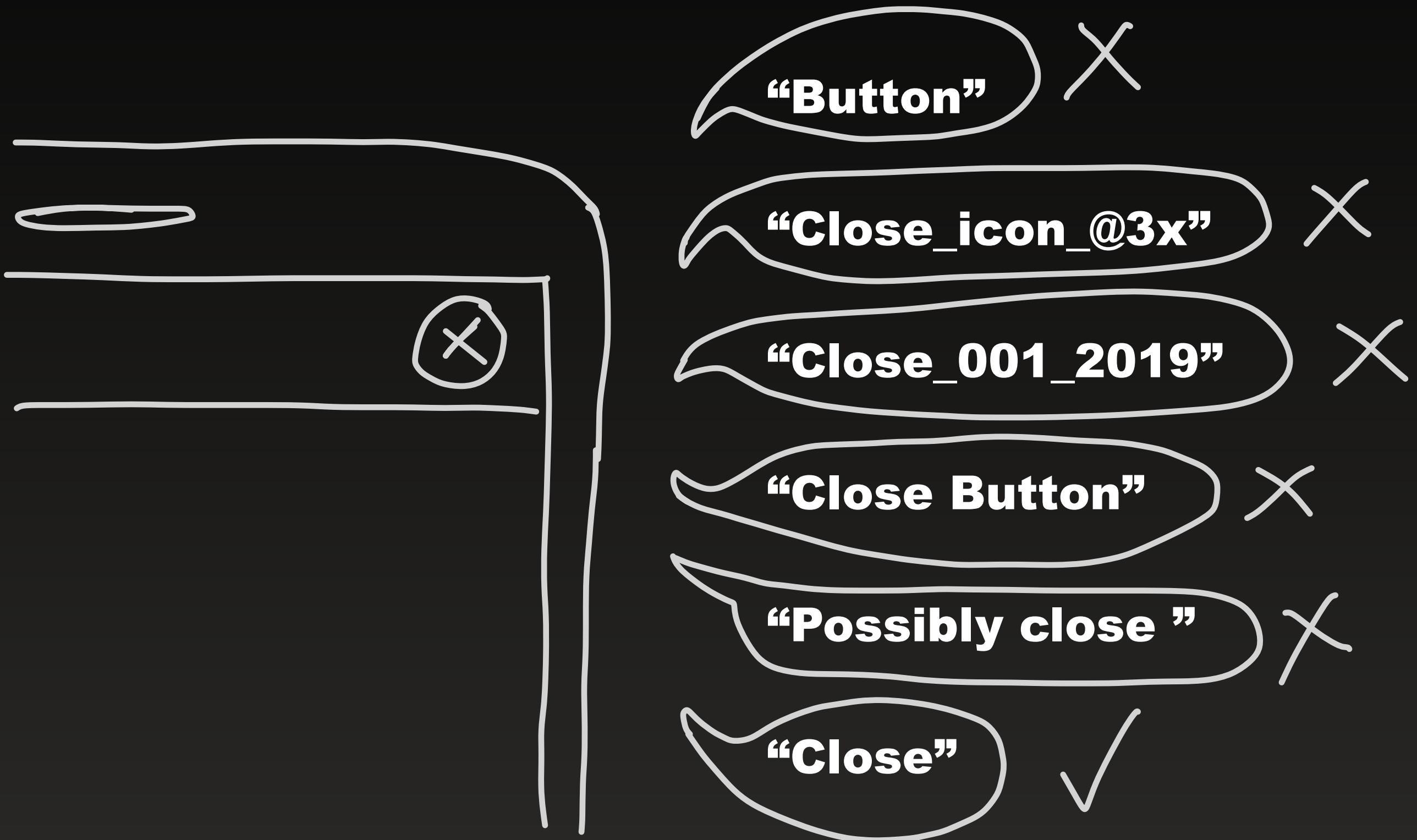
```
recipeTitle.accessibilityAttributedLabel =  
NSAttributedString(string: "Paella", attributes: attributes)
```



Paella

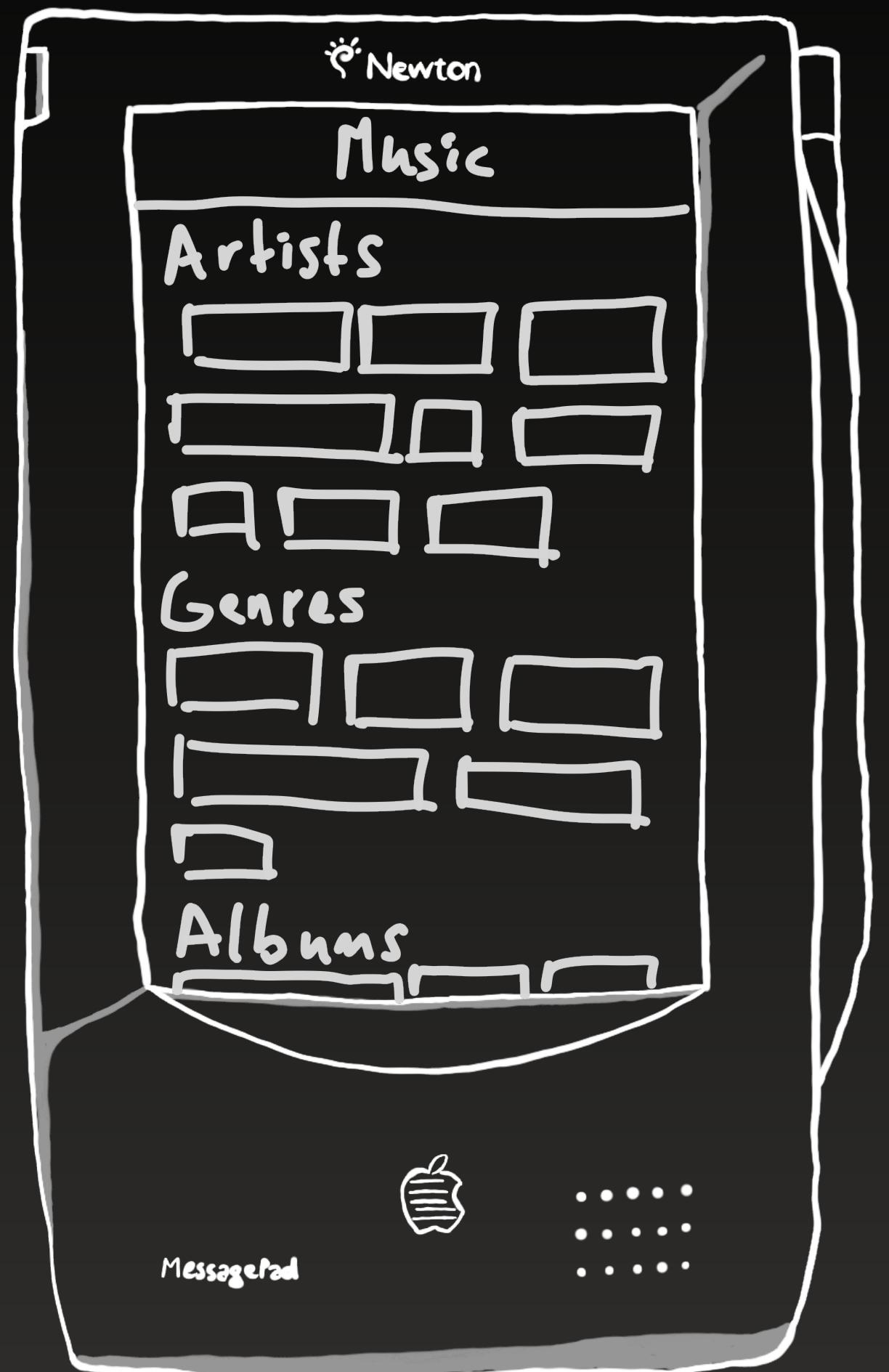
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1 - Labelling Correctly

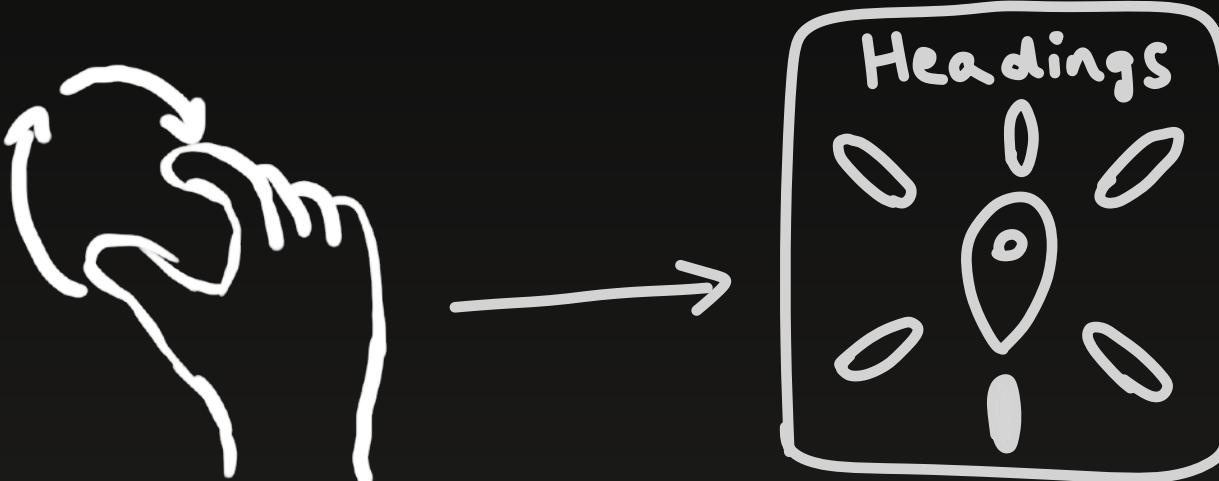


#accessibilityUpTo11

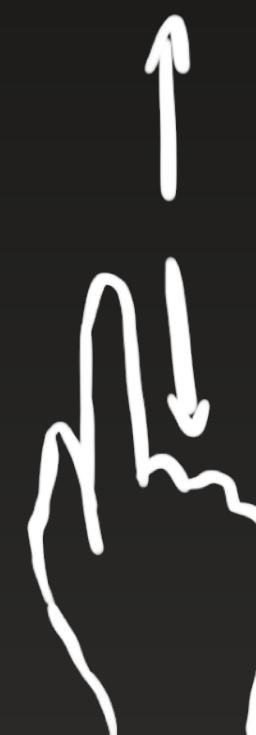
2 - Go to Section Two...



Step 1 - Show the Rotor



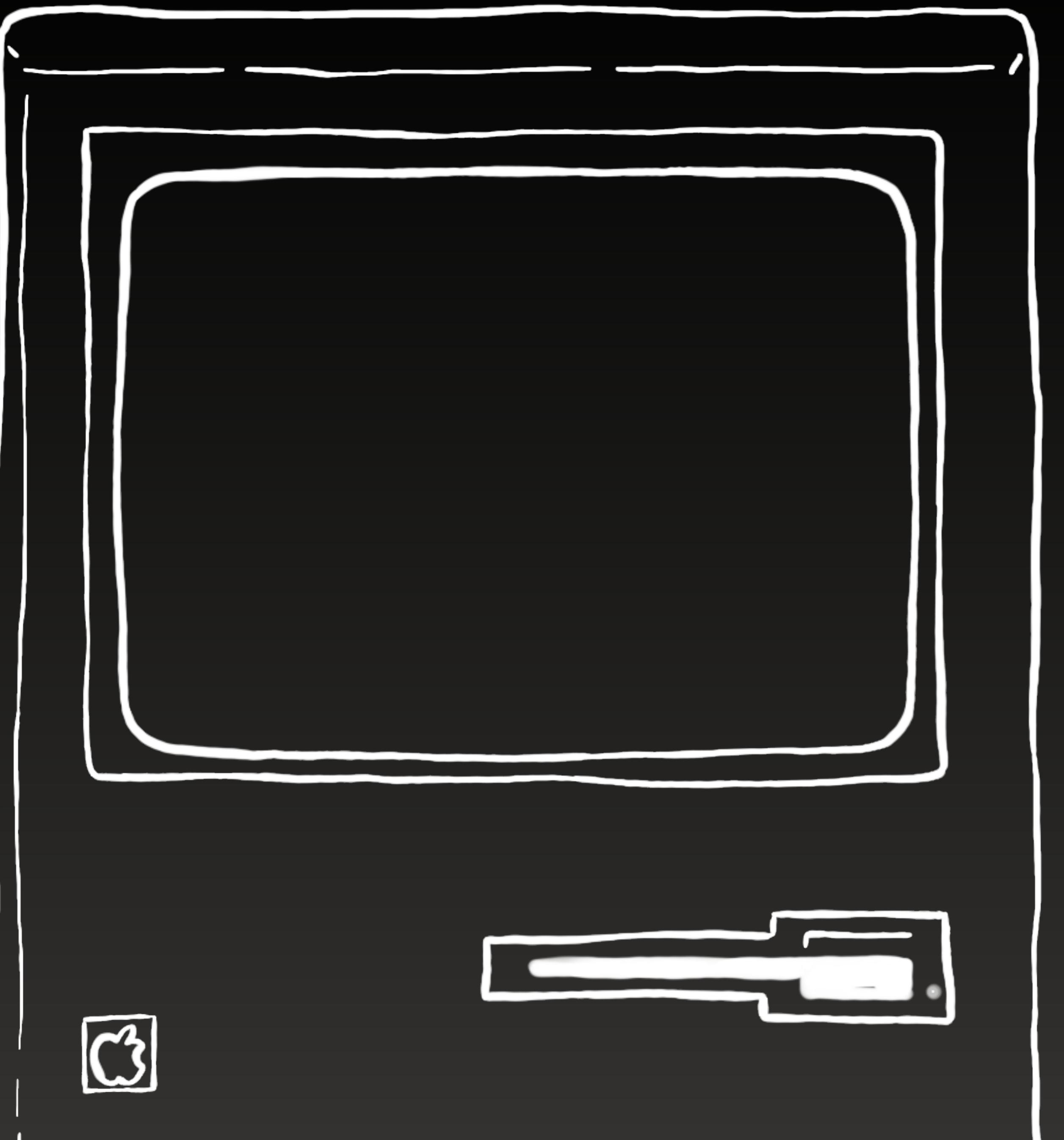
Step 2 - Navigate



**From Artists to Genres:
10 flicks to the right vs 1 swipe down**



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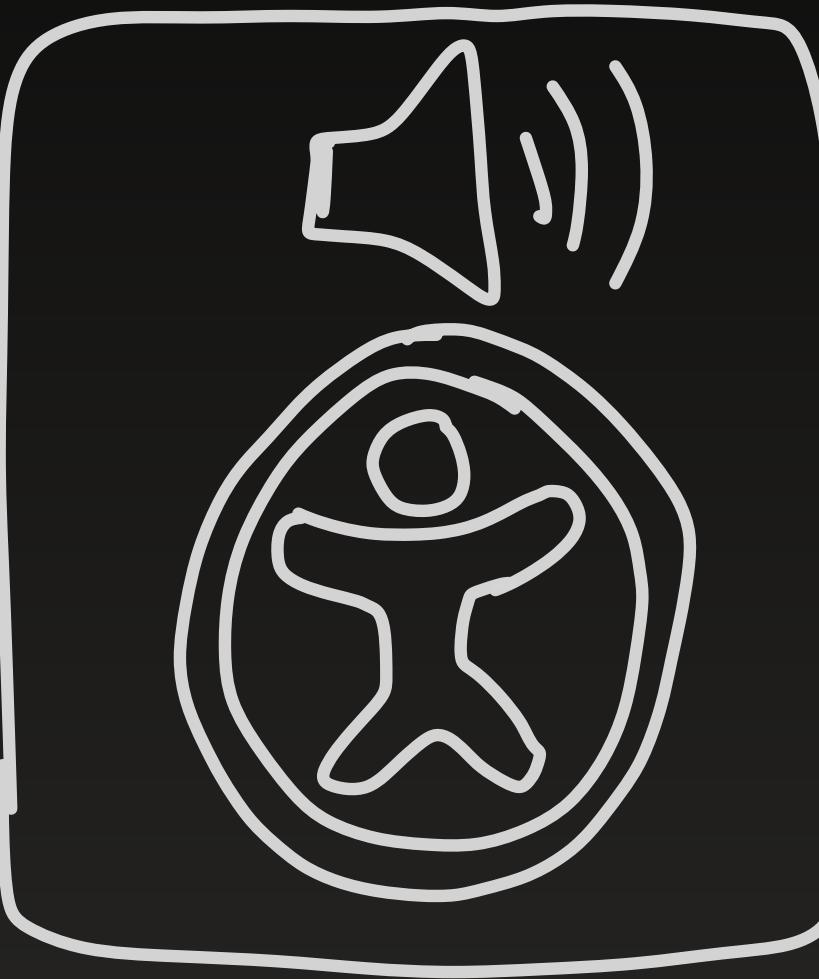




3 - Notifications

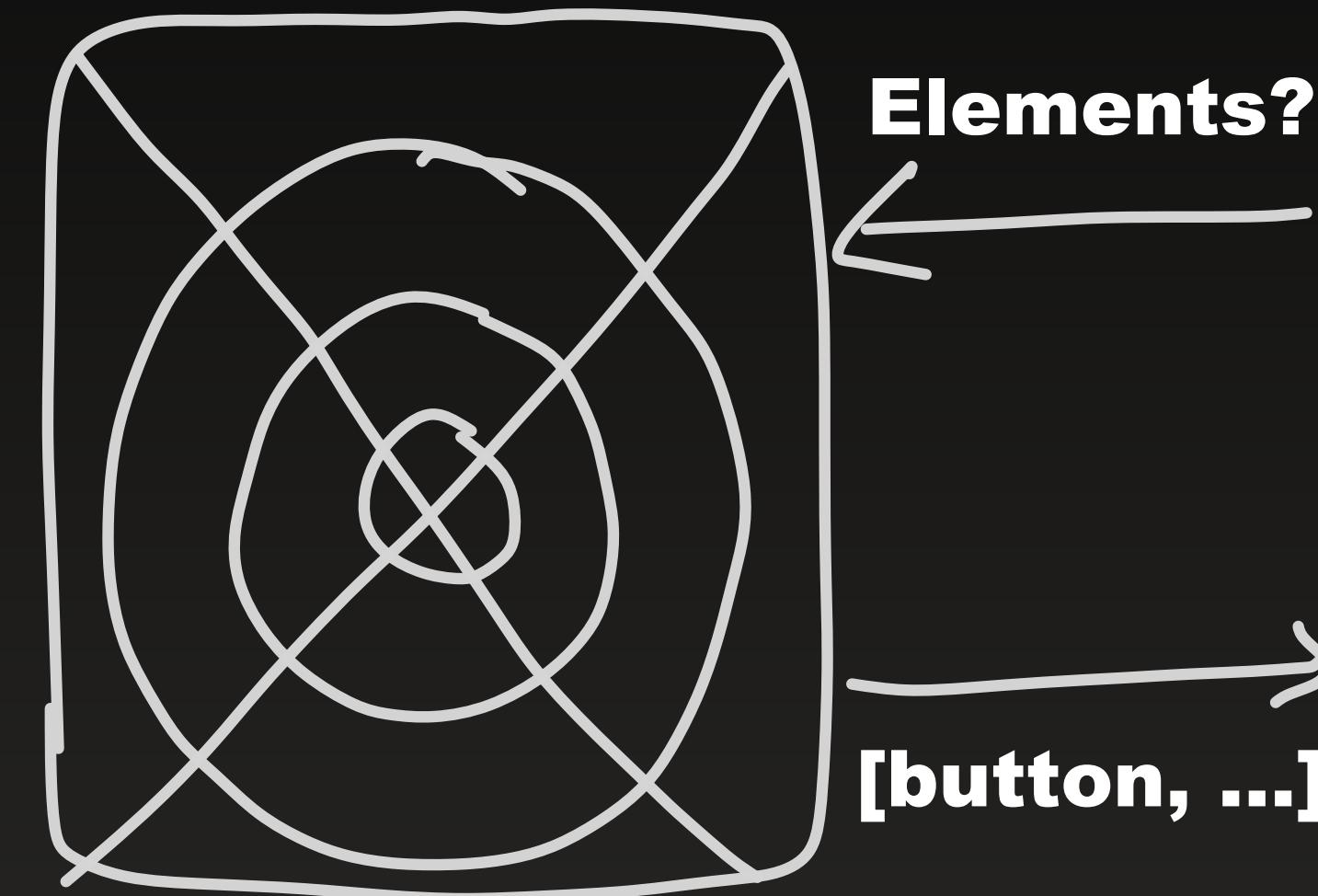


Elements?
[button, ...]

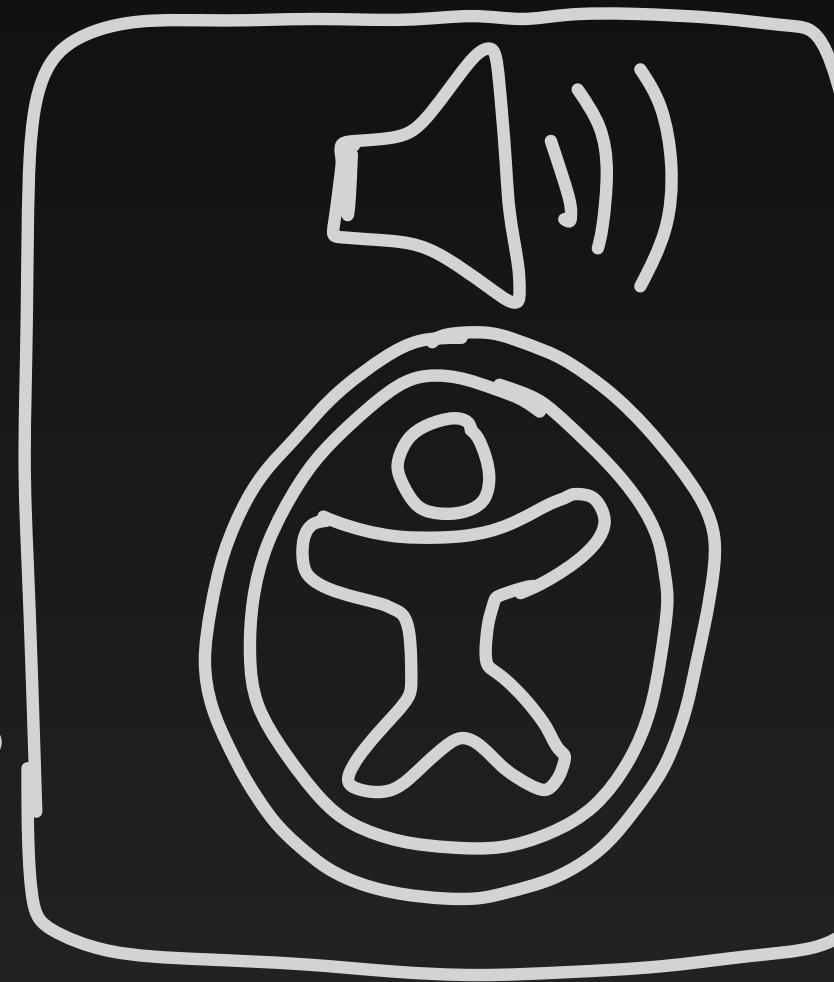


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3 - Notifications



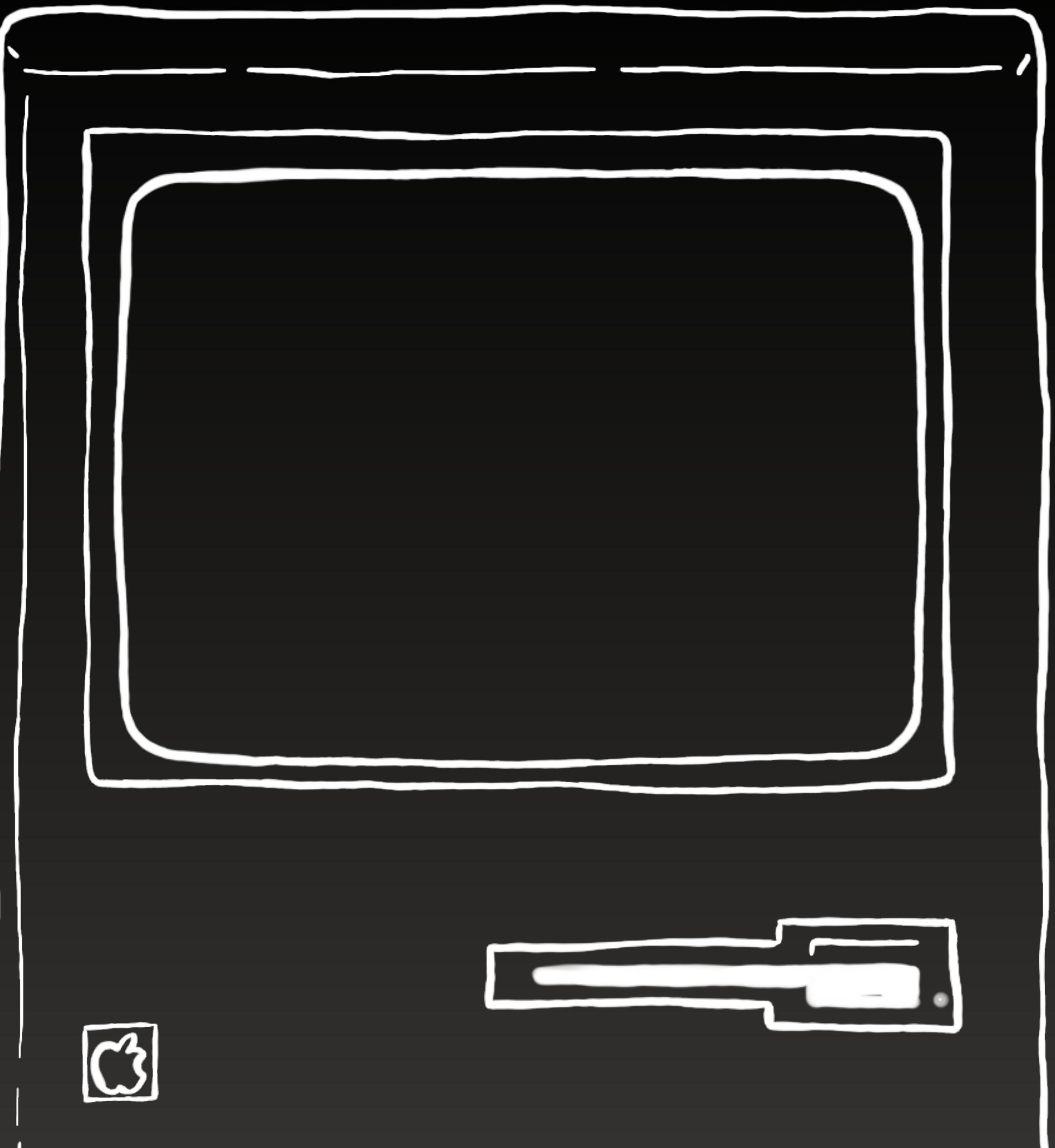
Your App



VoiceOver



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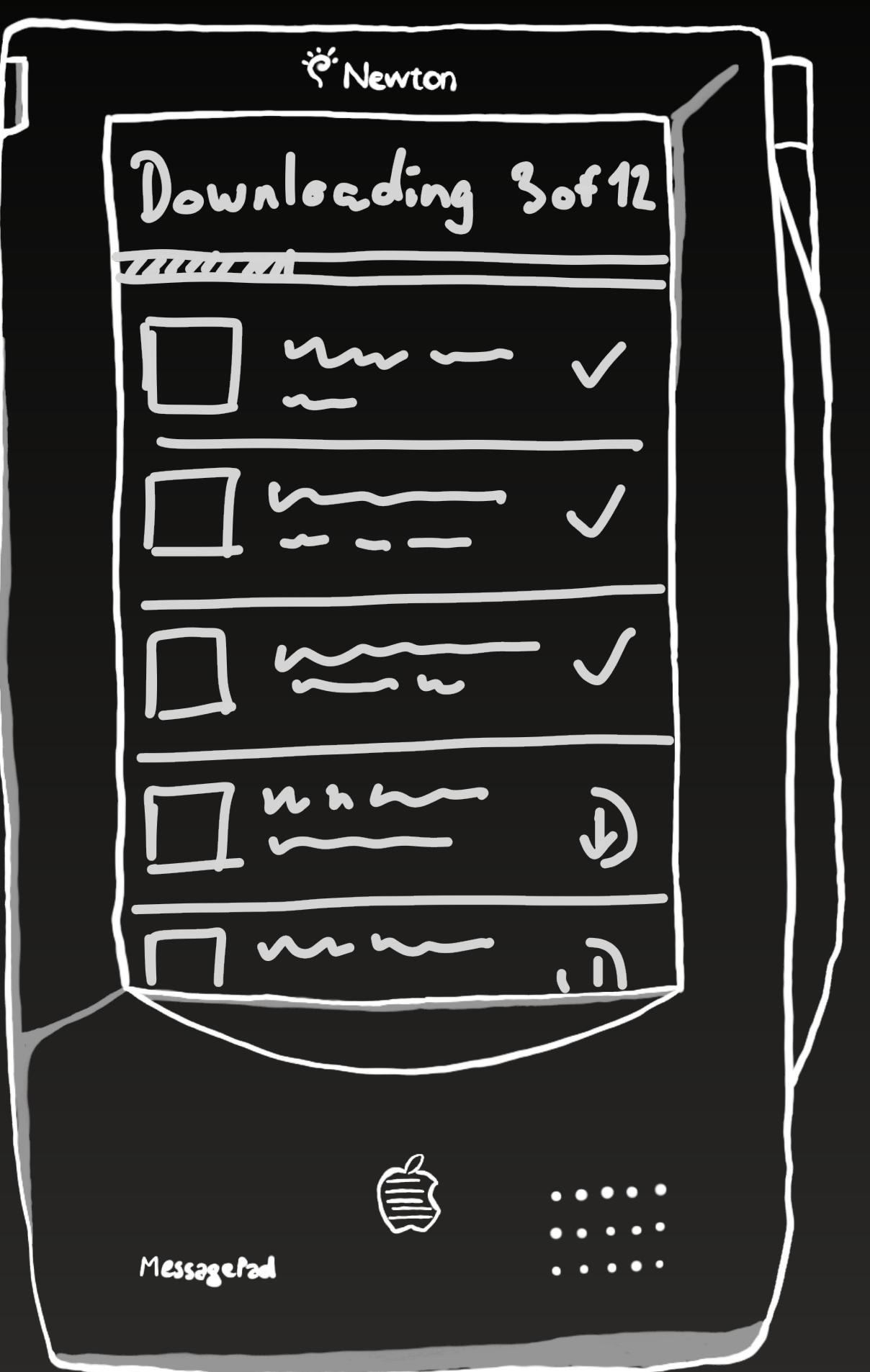
```
UIAccessibility.post(  
    notification: .screenChanged,  
    argument: customModalView)
```

```
UIAccessibility.post(  
    notification: .layoutChanged,  
    argument: infoView)
```

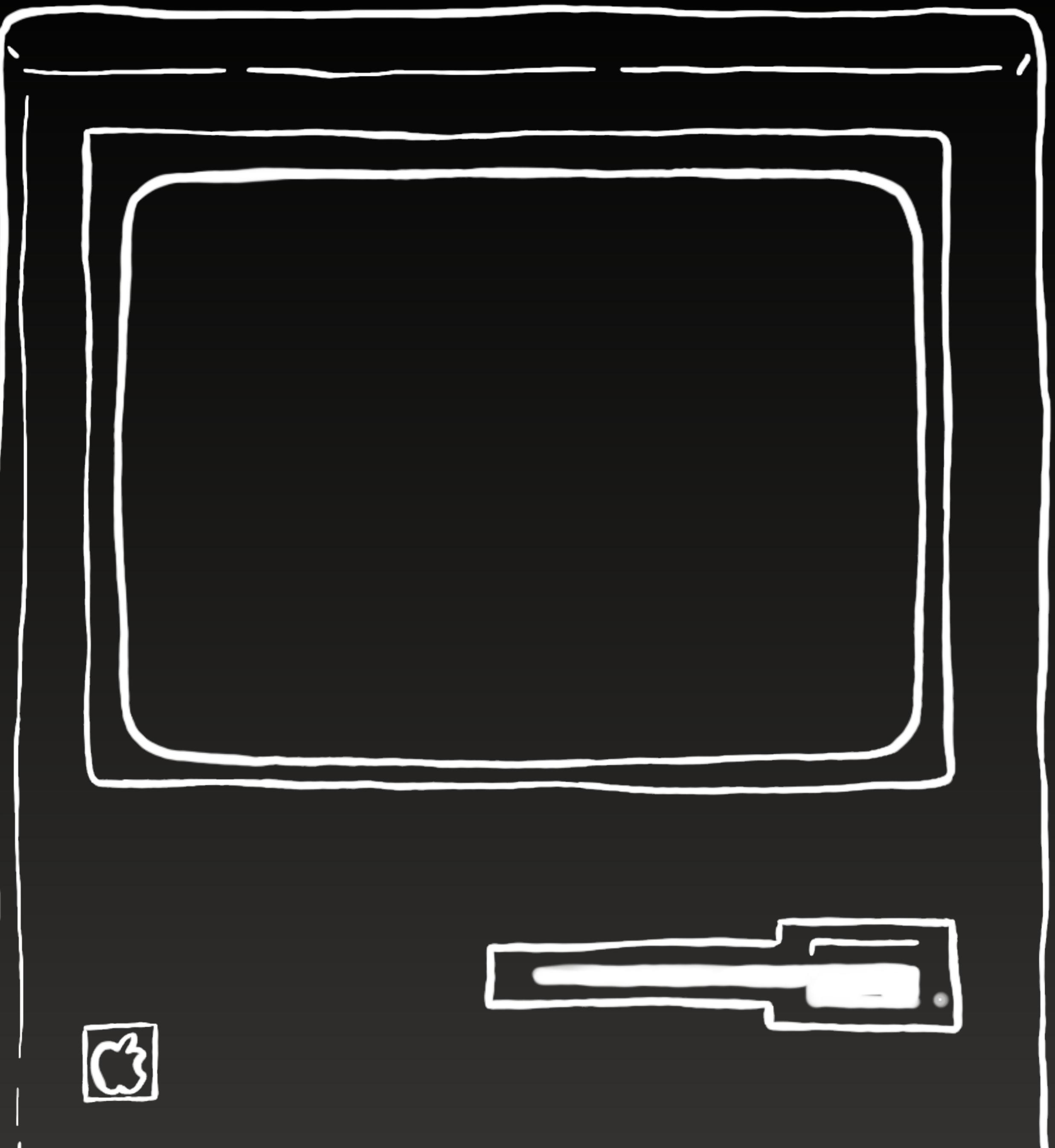
```
view.accessibilityViewIsModal = true
```



3 - Notifications



#accessibilityUpTo11





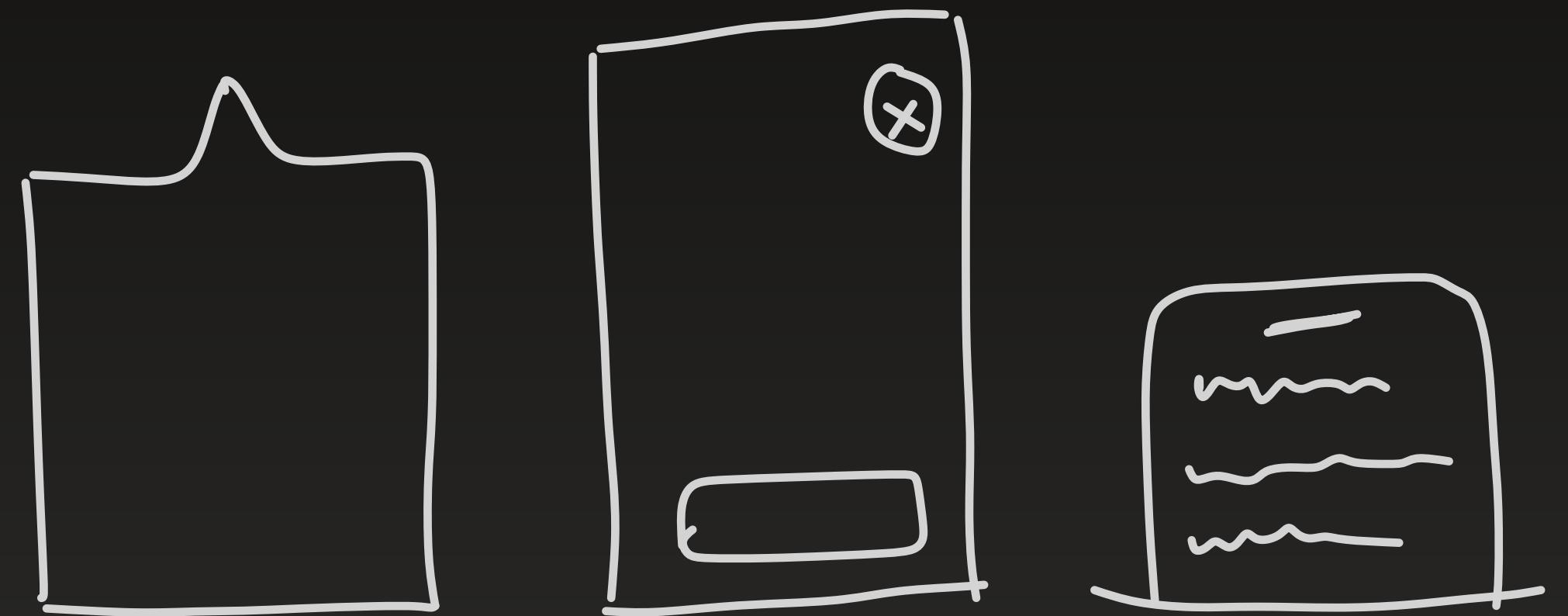
```
let announcementAttributes =  
[NSAttributedString.Key.accessibility  
SpeechQueueAnnouncement: true]  
  
let announcementString =  
NSAttributedString(string:  
notificationView.accessibilityLabel,  
attributes: announcementAttributes)  
  
UIAccessibility.post(notification:  
.announcement, argument:  
announcementString)
```



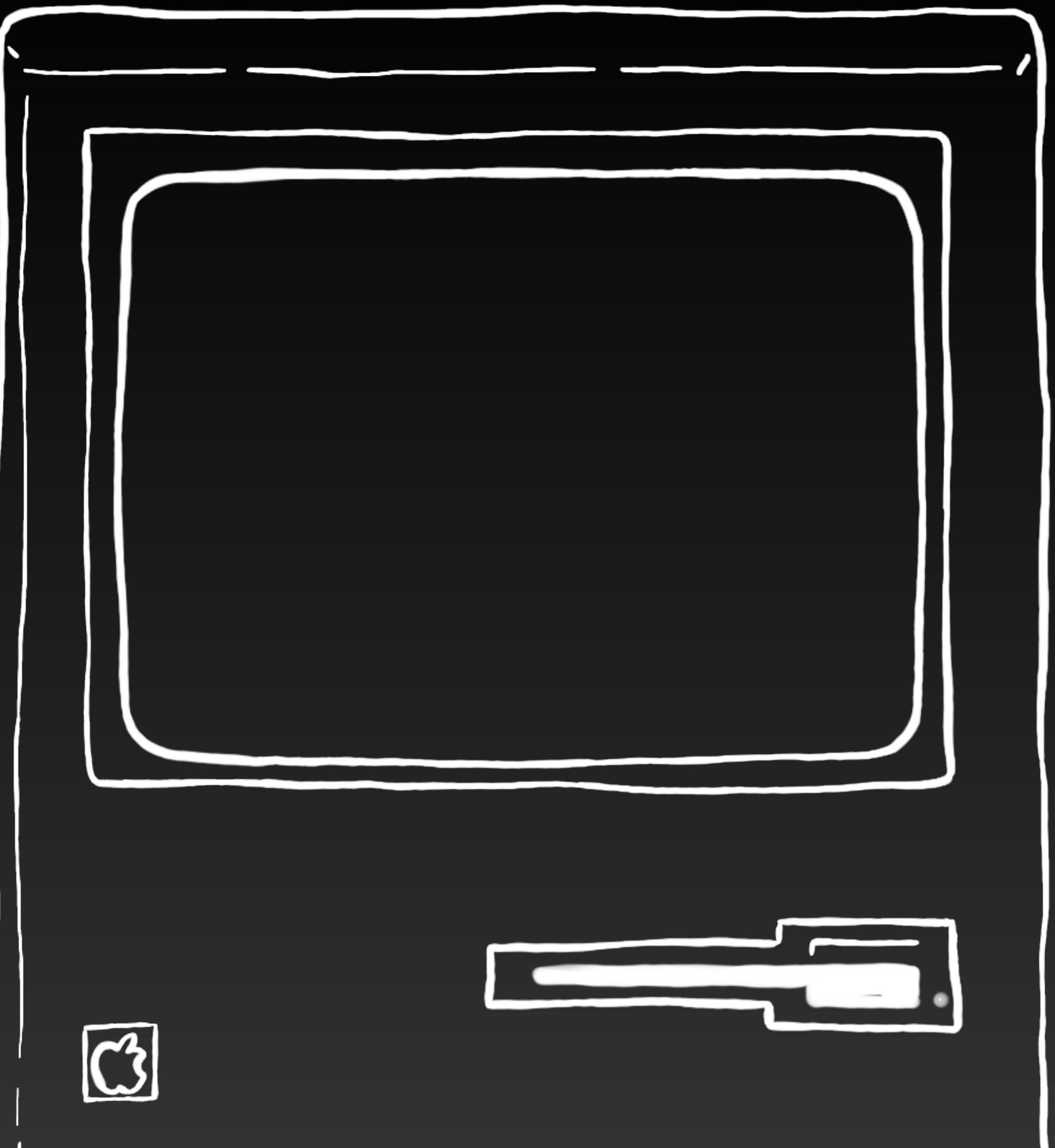
4 - Advanced Gestures



The escape room



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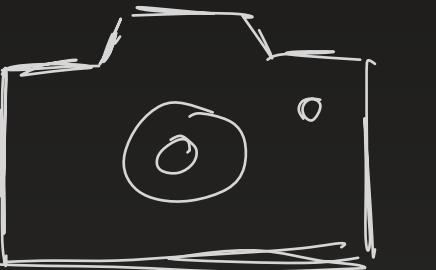
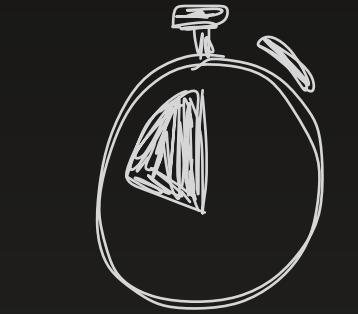
```
override func  
accessibilityPerformEscape()  
-> Bool {  
    self.dismiss(animated: true,  
                completion: nil)  
    return true  
}
```



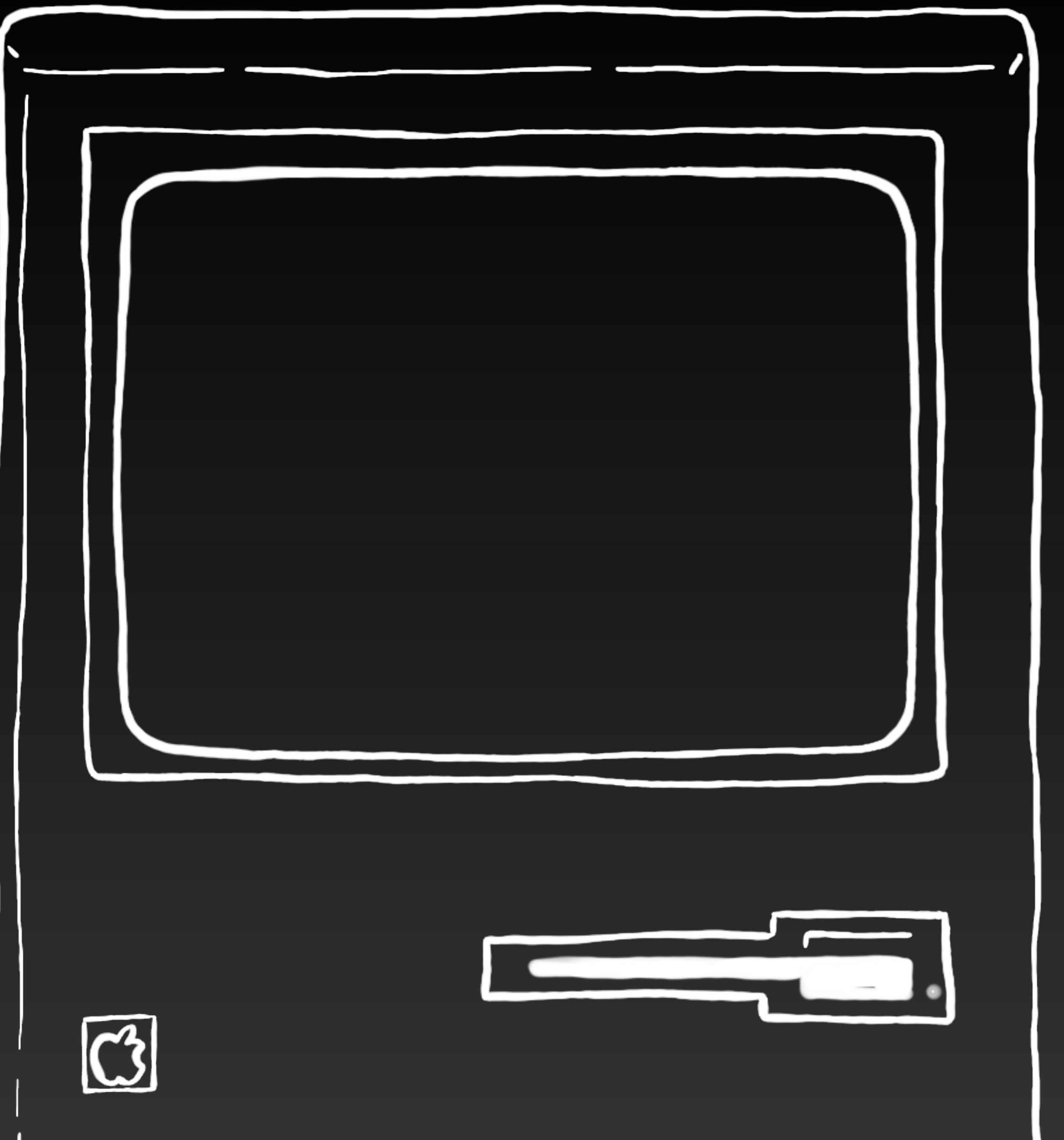
4 - Advanced Gestures



It's a kind of magic



#accessibilityUpTo11





```
override func  
accessibilityPerformMagicTap() ->  
Bool {  
    if player.isPlaying {  
        player.pause()  
    } else {  
        player.play()  
    }  
    return true  
}
```

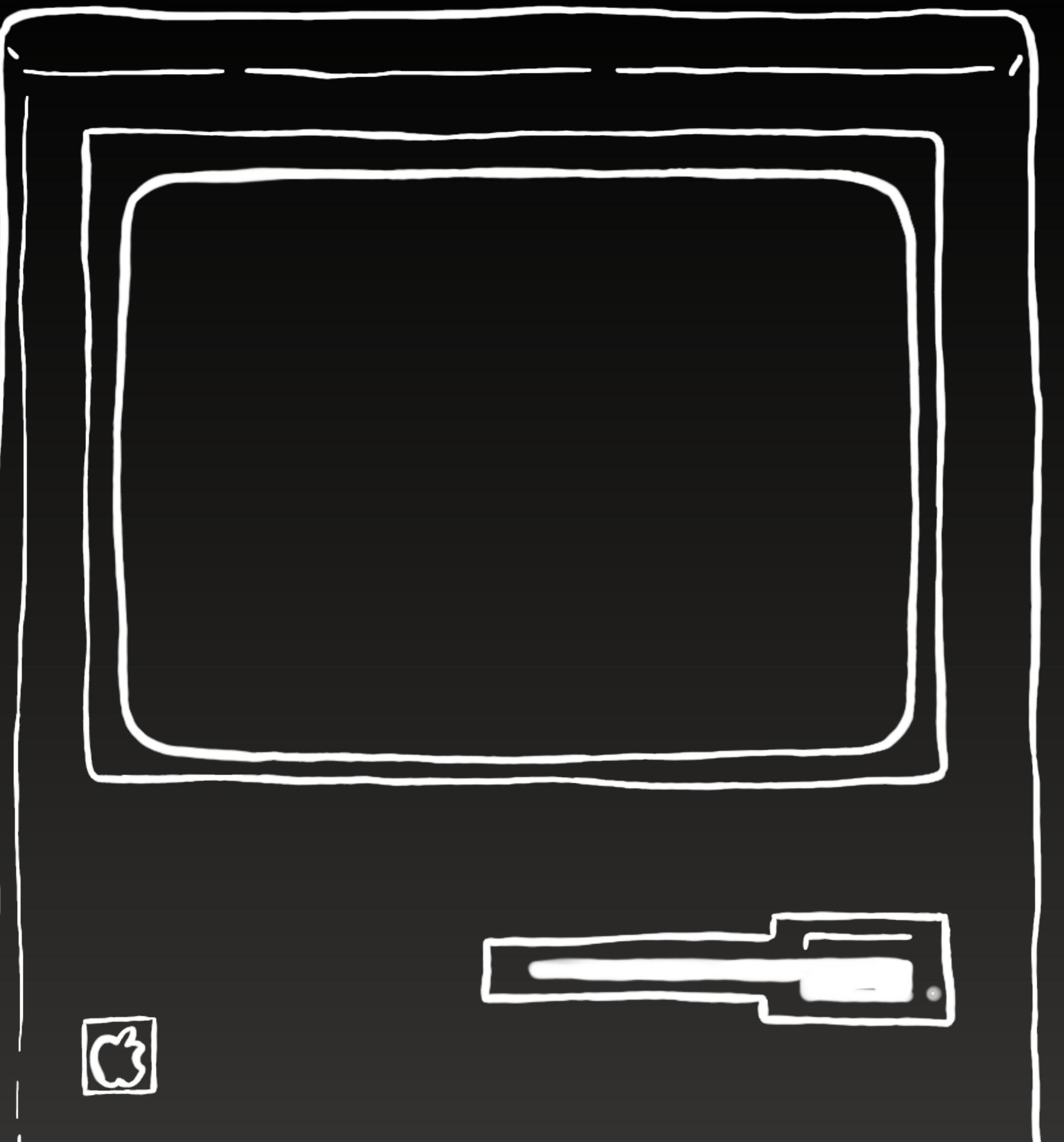


5 - Accessibility Customizations



#accessibilityUpTo11

*INSPECTOR GADGET IS A CHARACTER
FROM DIC ENTERTAINMENT





```
if UIAccessibility.  
shouldDifferentiateWithoutColor {  
    addColorSymbolsToCards()  
}  
  
NotificationCenter.default.  
addObserver(self, selector:  
#selector(addColorSymbolsToCards),  
name: NSNotification.Name(rawValue:  
UIAccessibility.  
differentiateWithoutColorDidChangeNo  
tification), object: nil)
```



5 - Accessibility Customizations



Prefer Cross-Fade Transitions

Bold Text

Reduce Transparency

Reduce Motion

Button Shapes

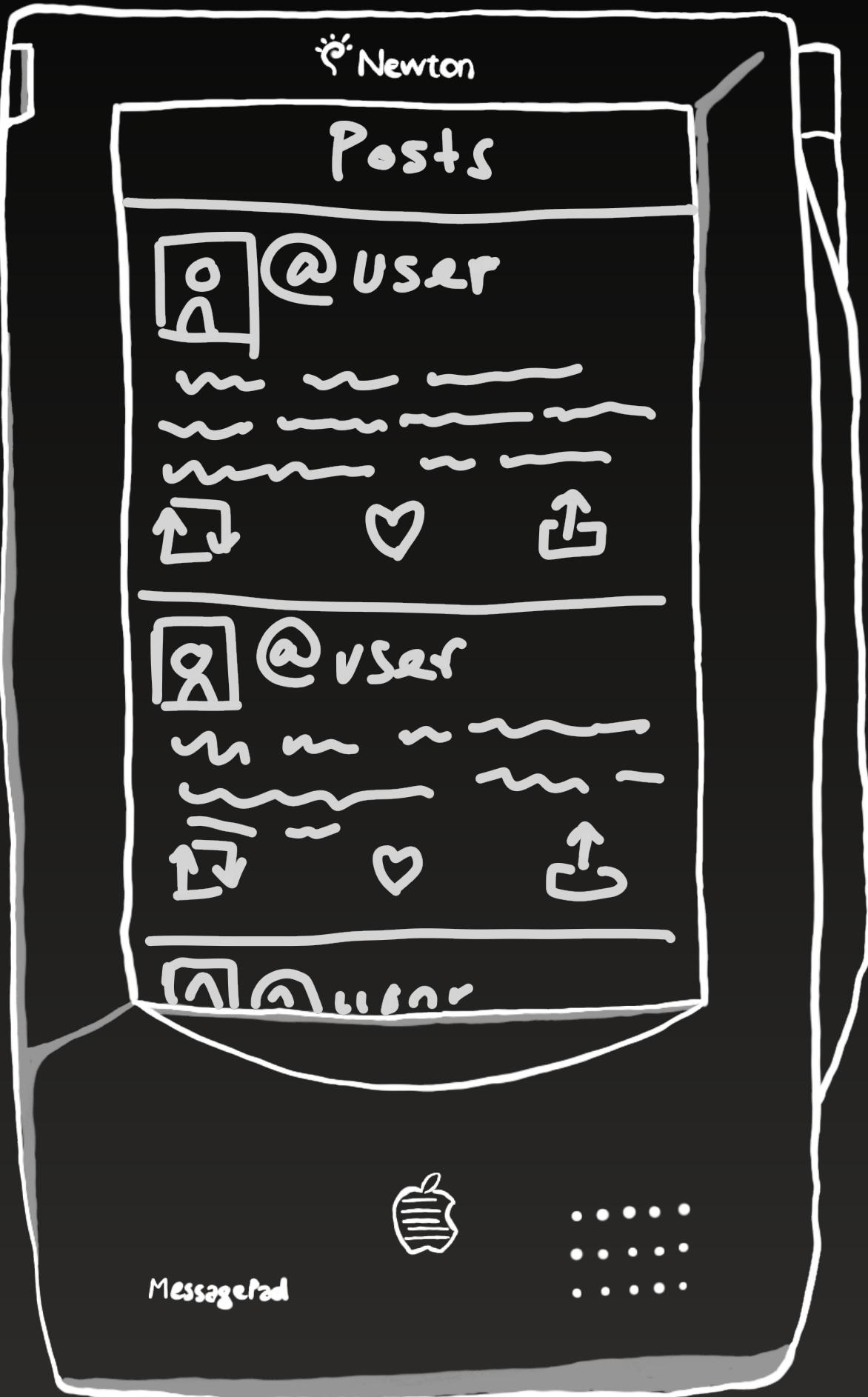
On/Off Switch Labels



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*INSPECTOR GADGET IS A CHARACTER
FROM DIC ENTERTAINMENT

6 - Custom Actions



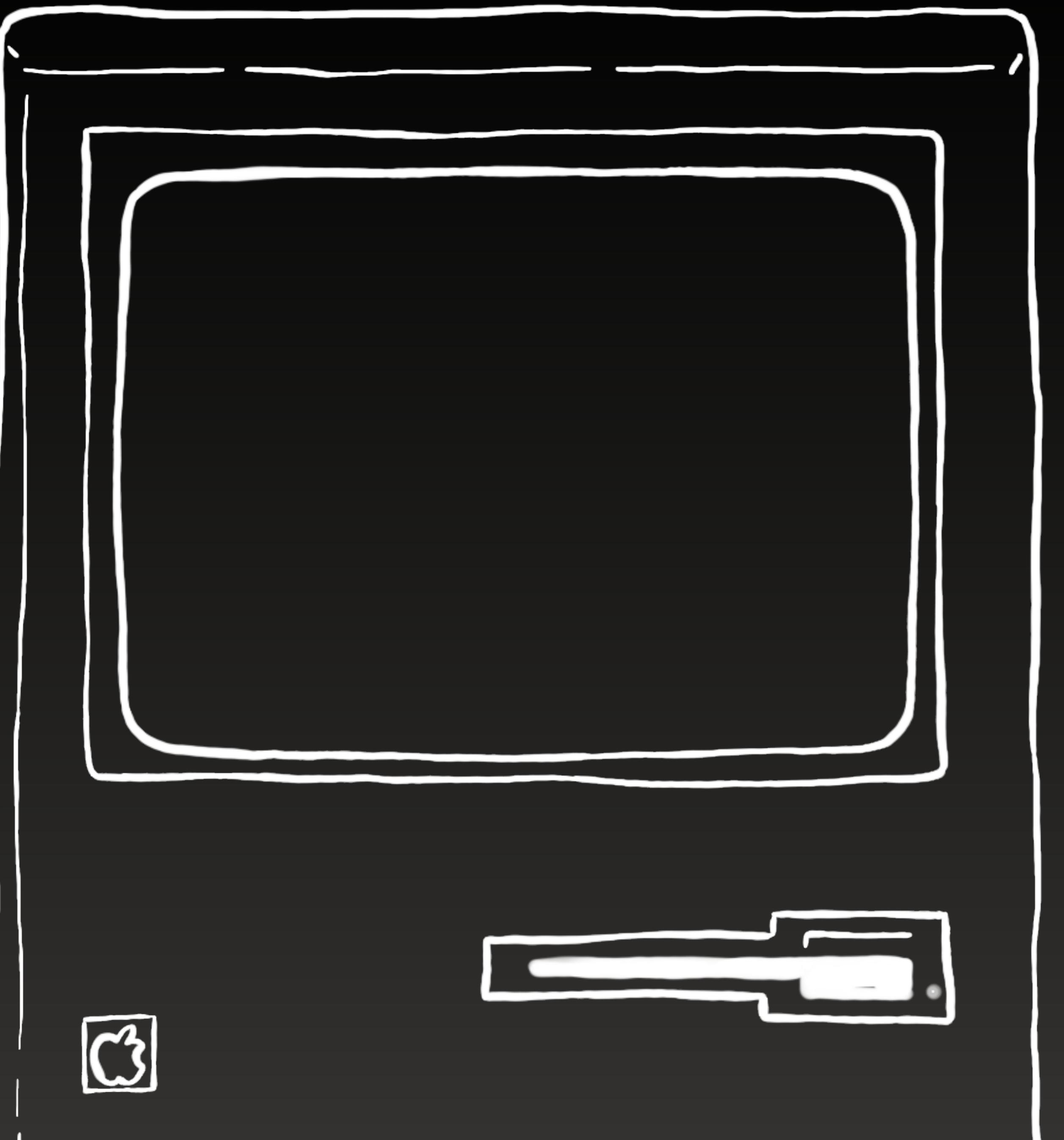
From 1st post to 3rd post:

- **User**
 - **Text**
 - **Repost**
 - **Like**
 - **Share**
 - **User**
 - **Text**
 - **Repost**
 - **Like**
 - **Share**
 -
- vs**
- **User + Text**
 - **User + Text**
 -

11 Swipes (+ redundant information) vs 3 Swipes



#accessibilityUpTo11

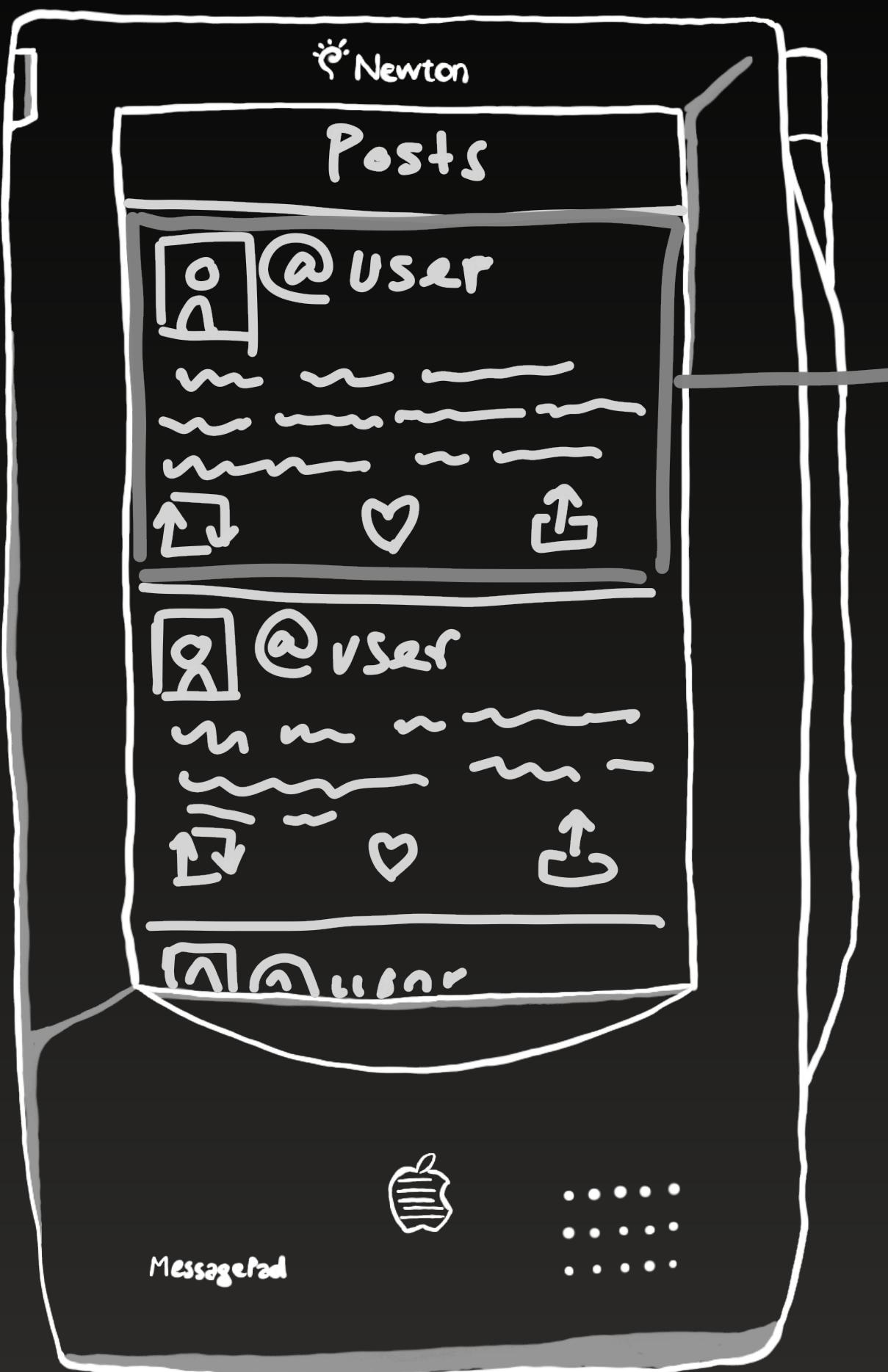




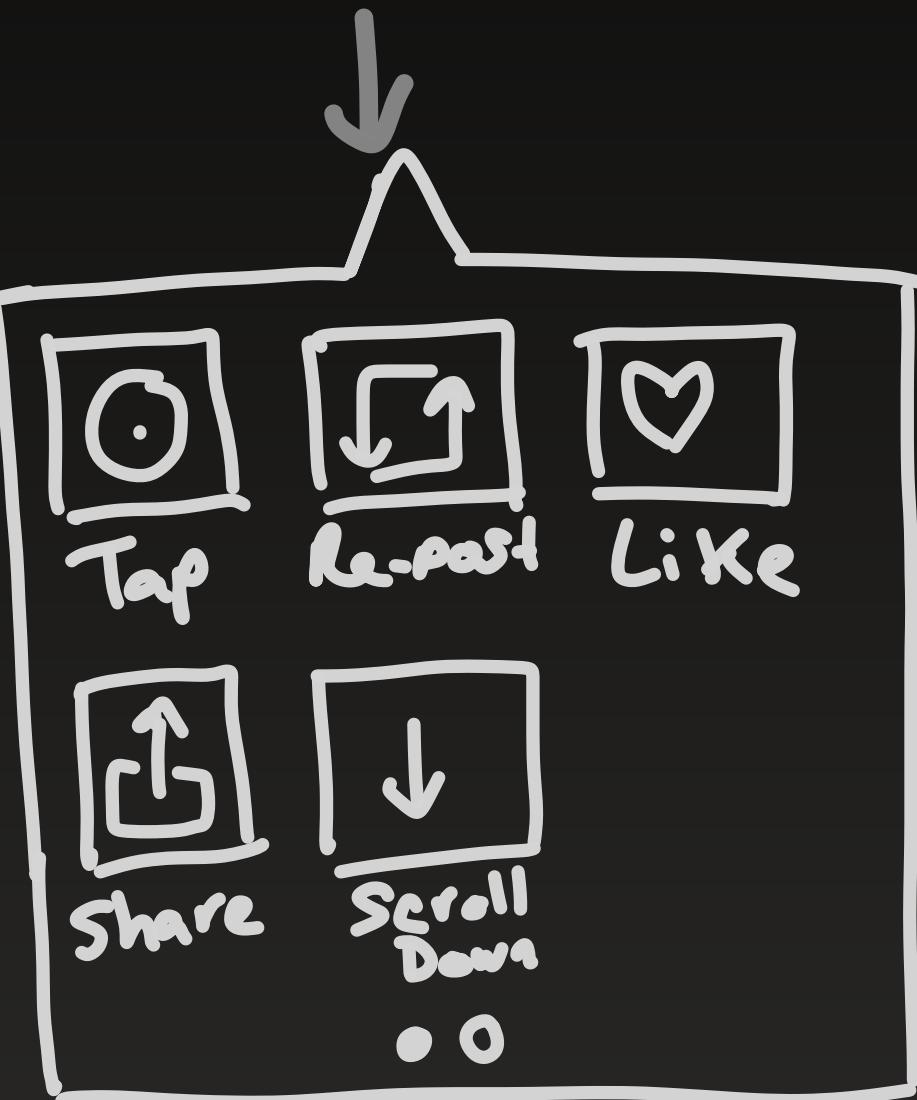
```
accessibilityCustomActions =  
[UIAccessibilityCustomAction(name:  
like, target: self, selector:  
#selector(likeButtonPressed(_:))),  
  
UIAccessibilityCustomAction(name:  
share, target: self, selector:  
#selector(shareButtonPressed(_:)))]
```



6 - Custom Actions

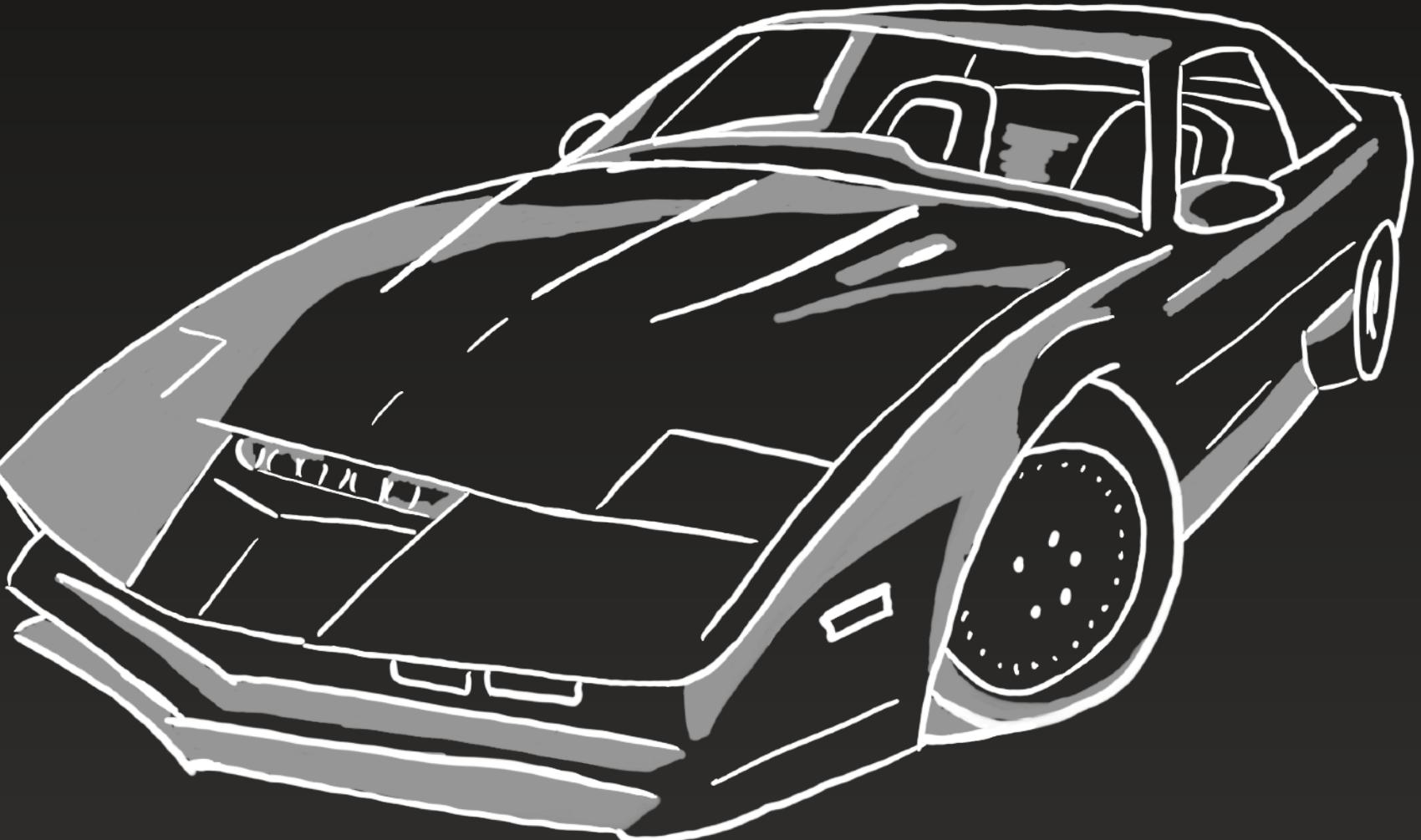
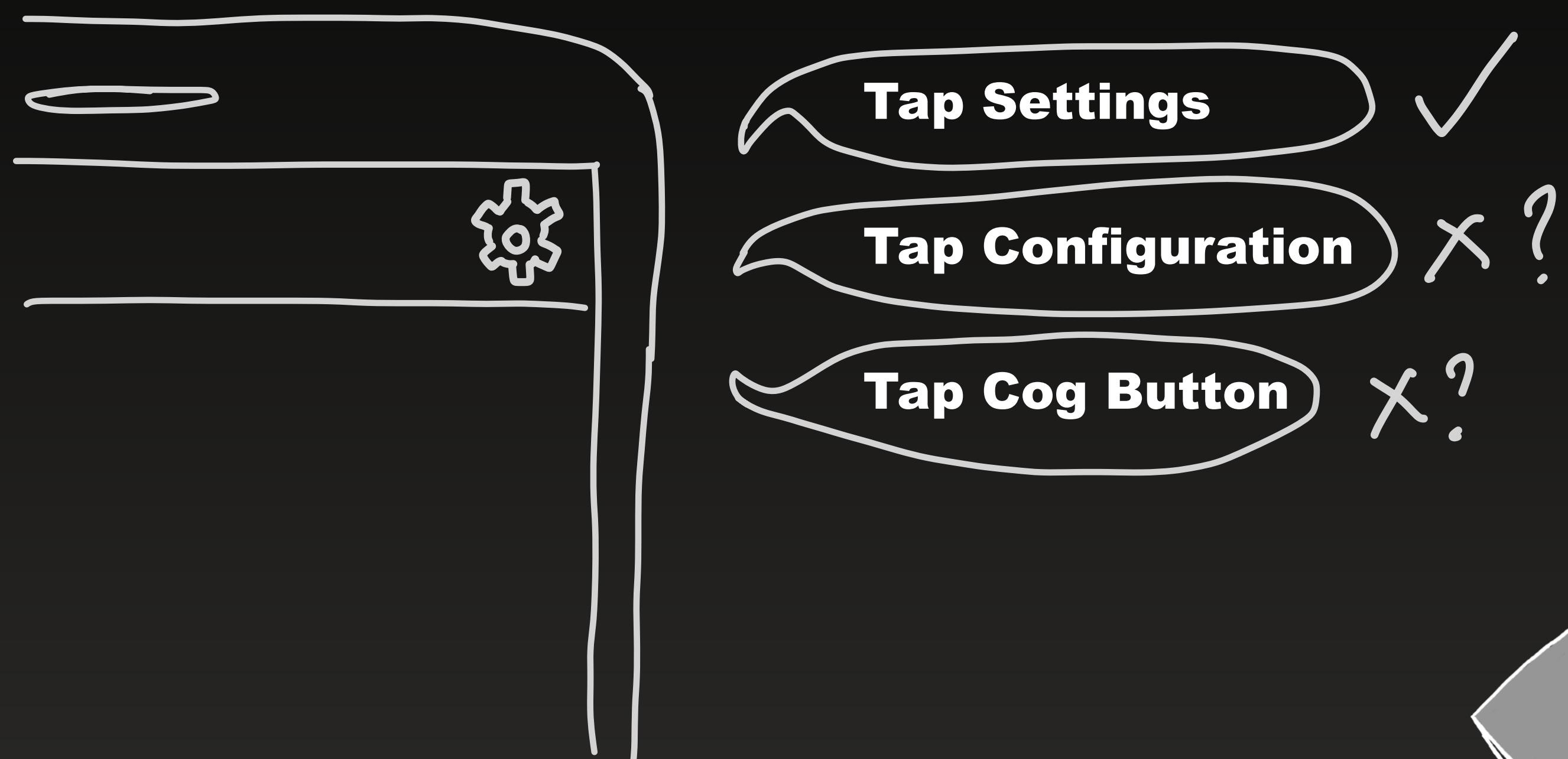


Switch Control



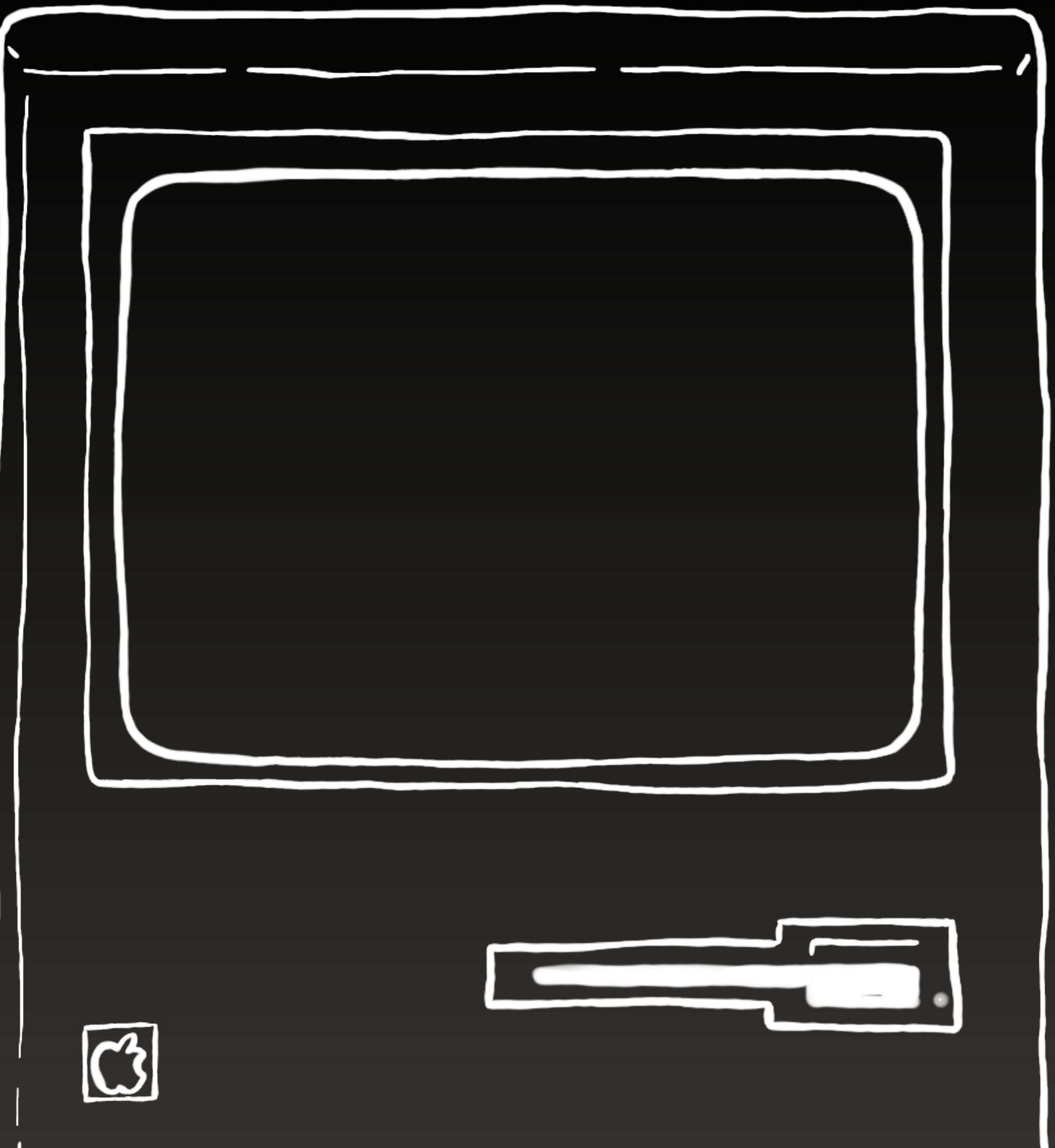
#accessibilityUpTo11

7 - Voice Control



#accessibilityUpTo11

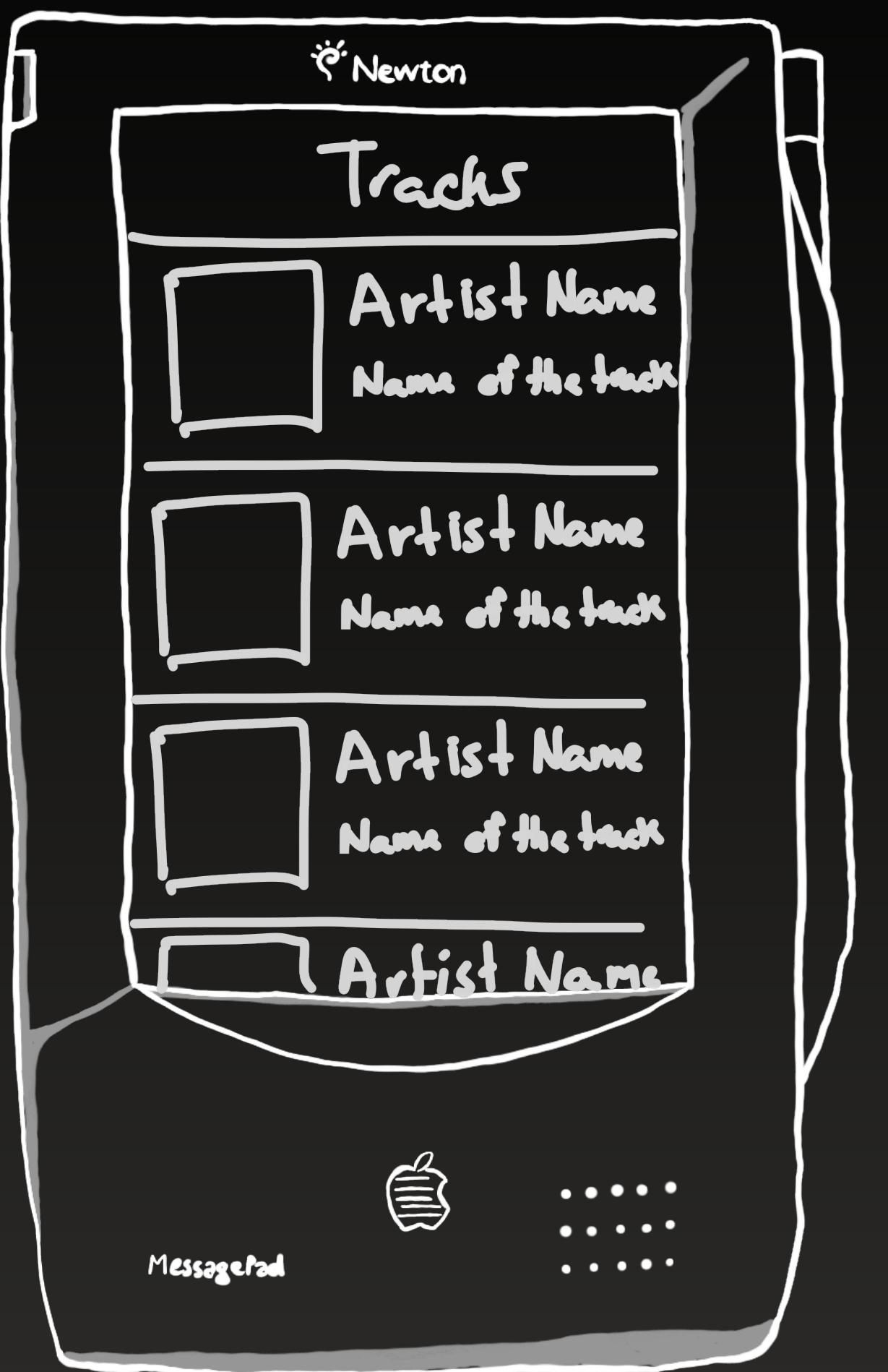
* KNIGHT RIDER IS A TV SHOW FROM NBC



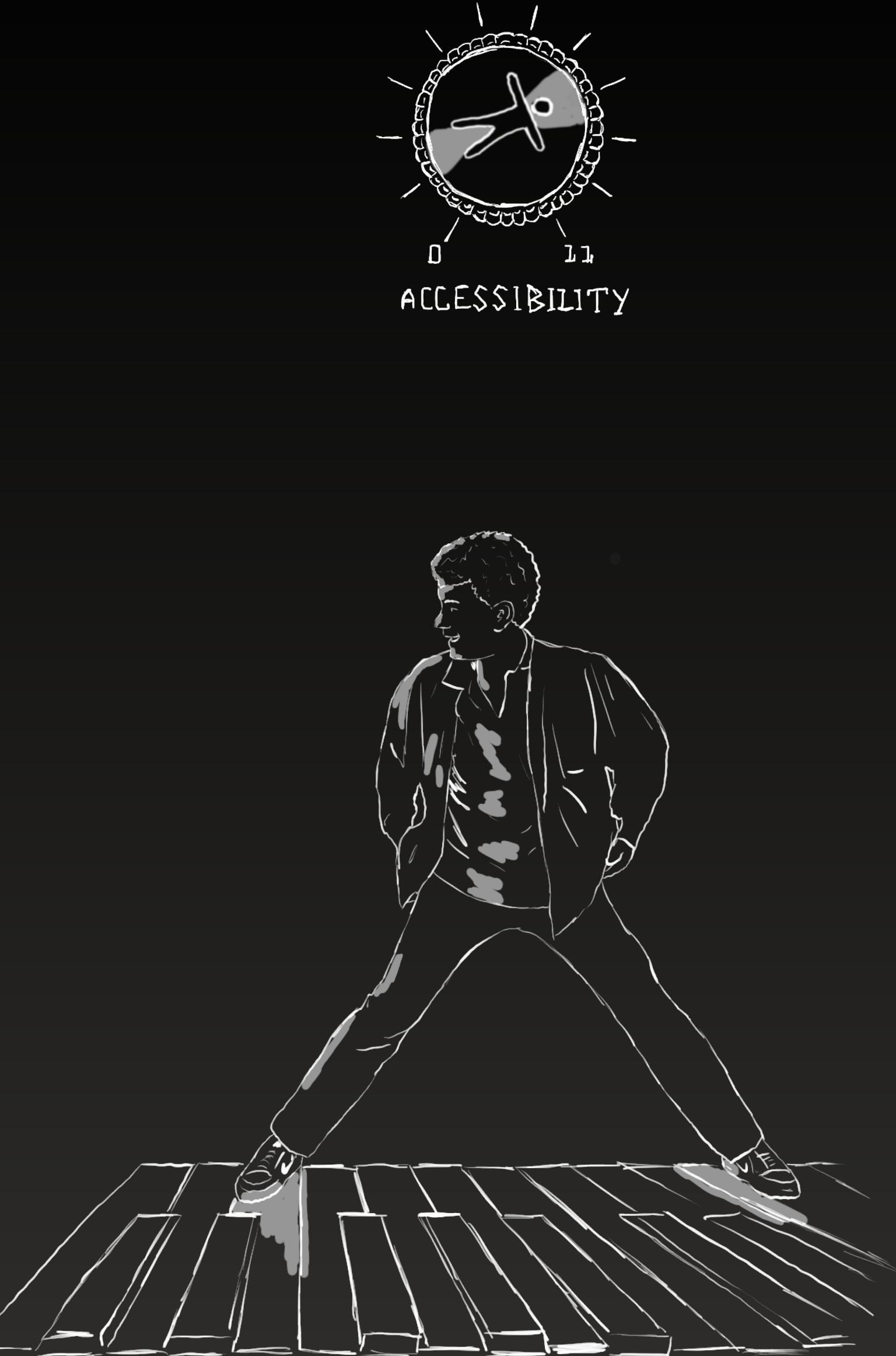
```
settingsButton.  
accessibilityUserInputLabels =  
["settings", "configuration", "cog"]
```

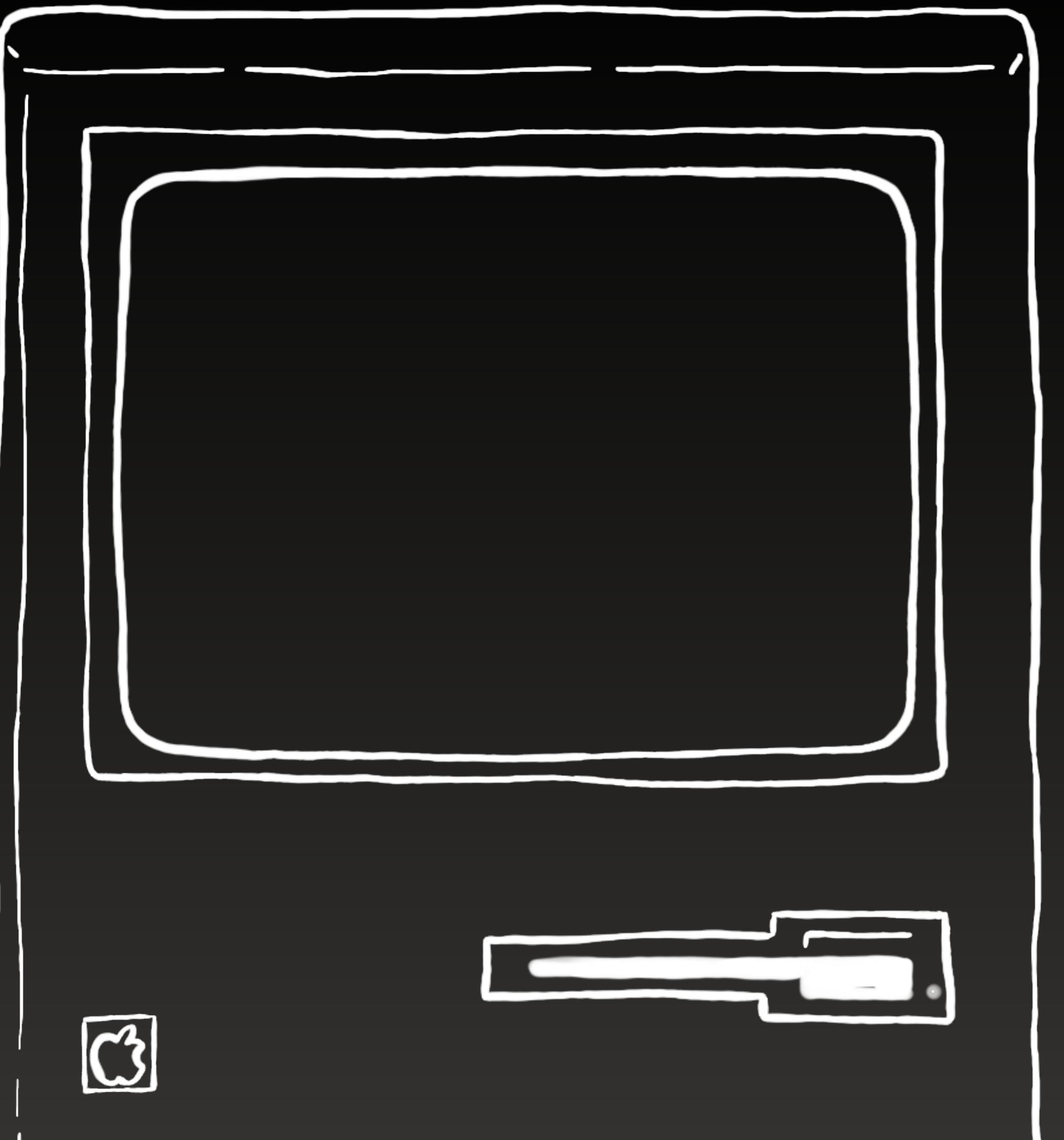


8 - Big



#accessibilityUpTo11

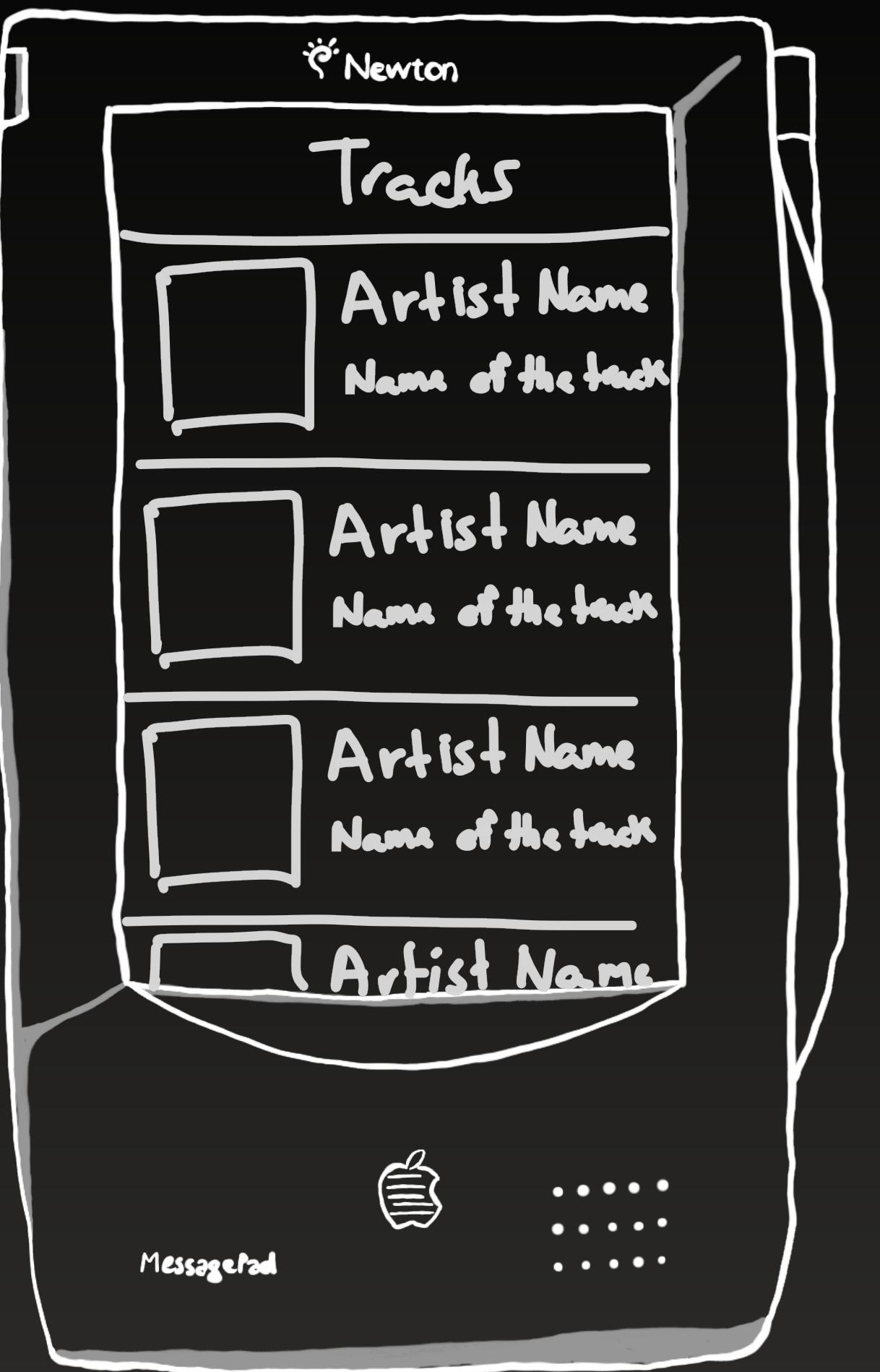




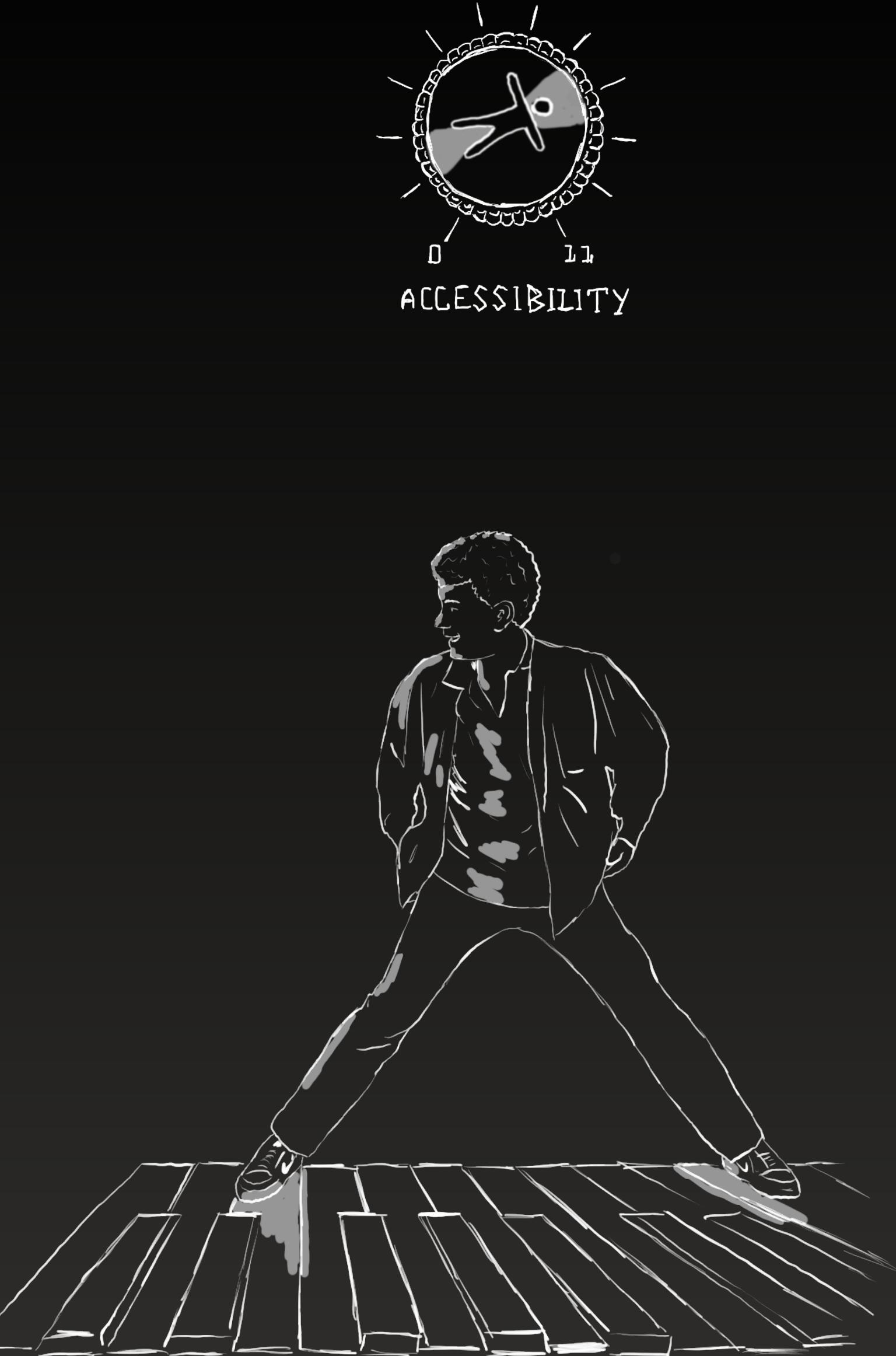
```
subtitleLabel.font =  
UIFont.preferredFont(forTextStyle:  
.body)  
  
subtitleLabel  
.adjustFontContentSizeCategory =  
true  
  
subtitleLabel.numberOfLines = 0  
  
titleLabel.font =  
UIFontMetrics(forTextStyle: .title1)  
.scaledFont(for: customFont)
```



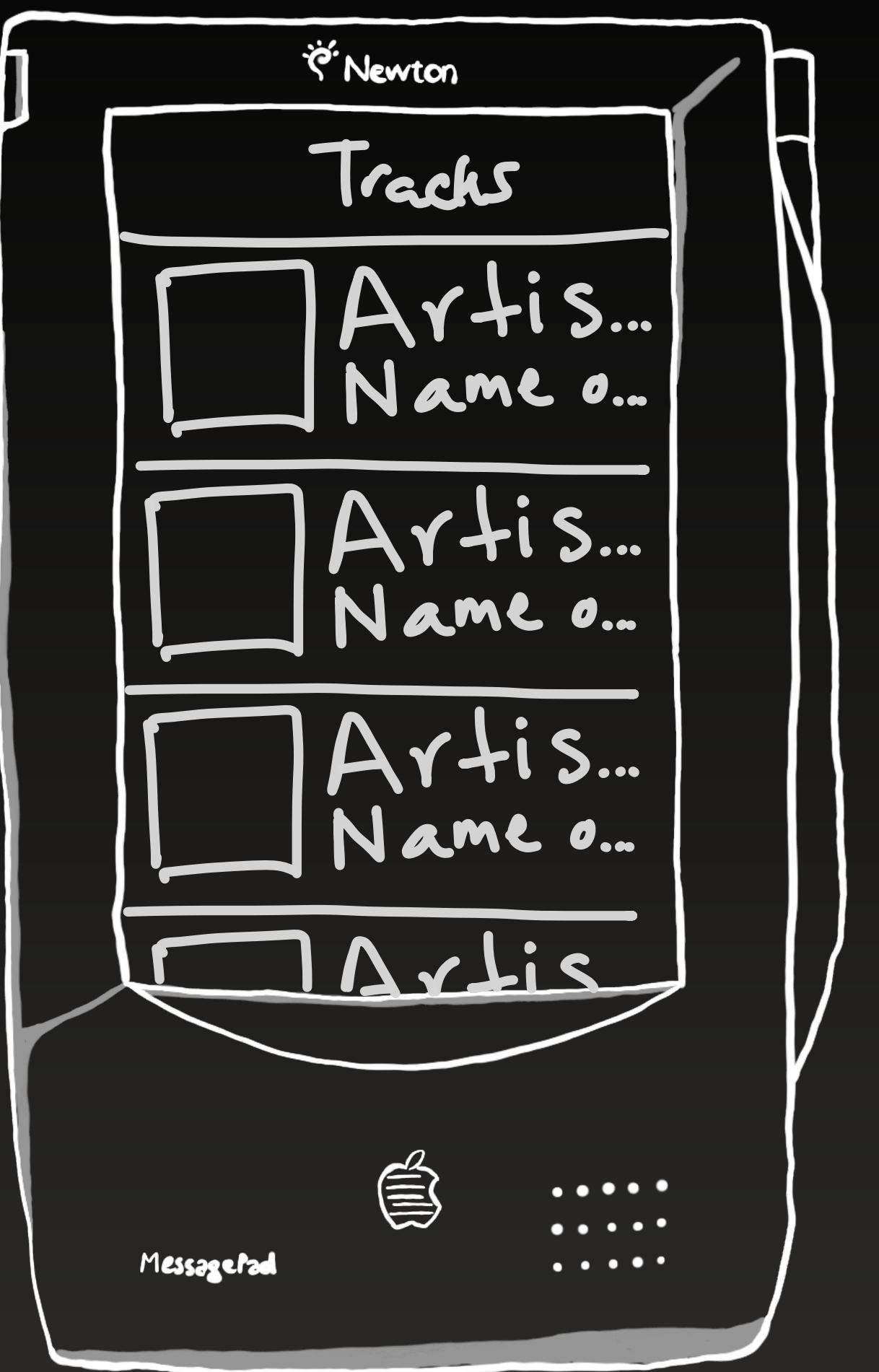
8 - Big



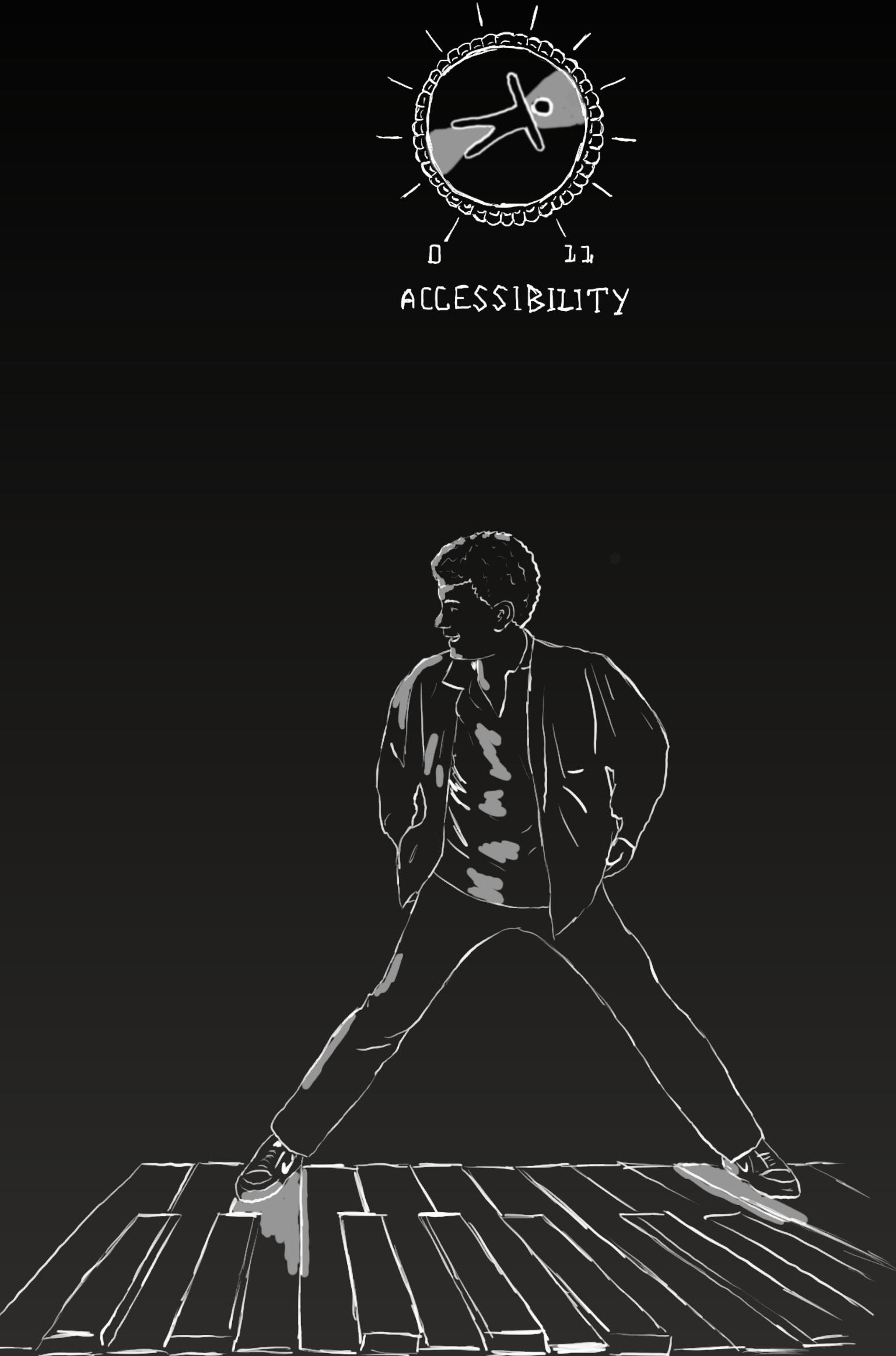
#accessibilityUpTo11



8 - Big



#accessibilityUpTo11



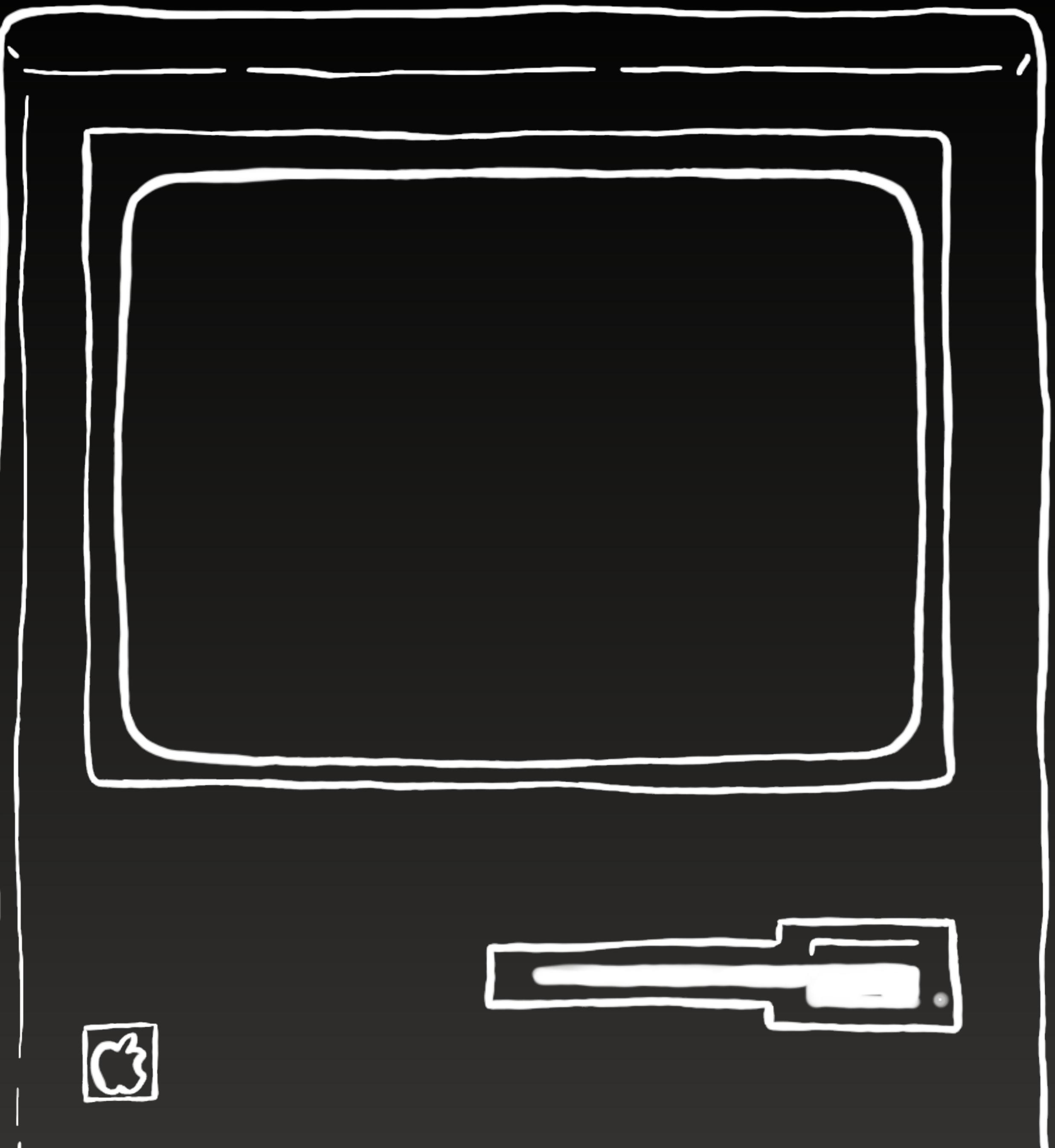
9 - Alternative Layout



#accessibilityUpTo11



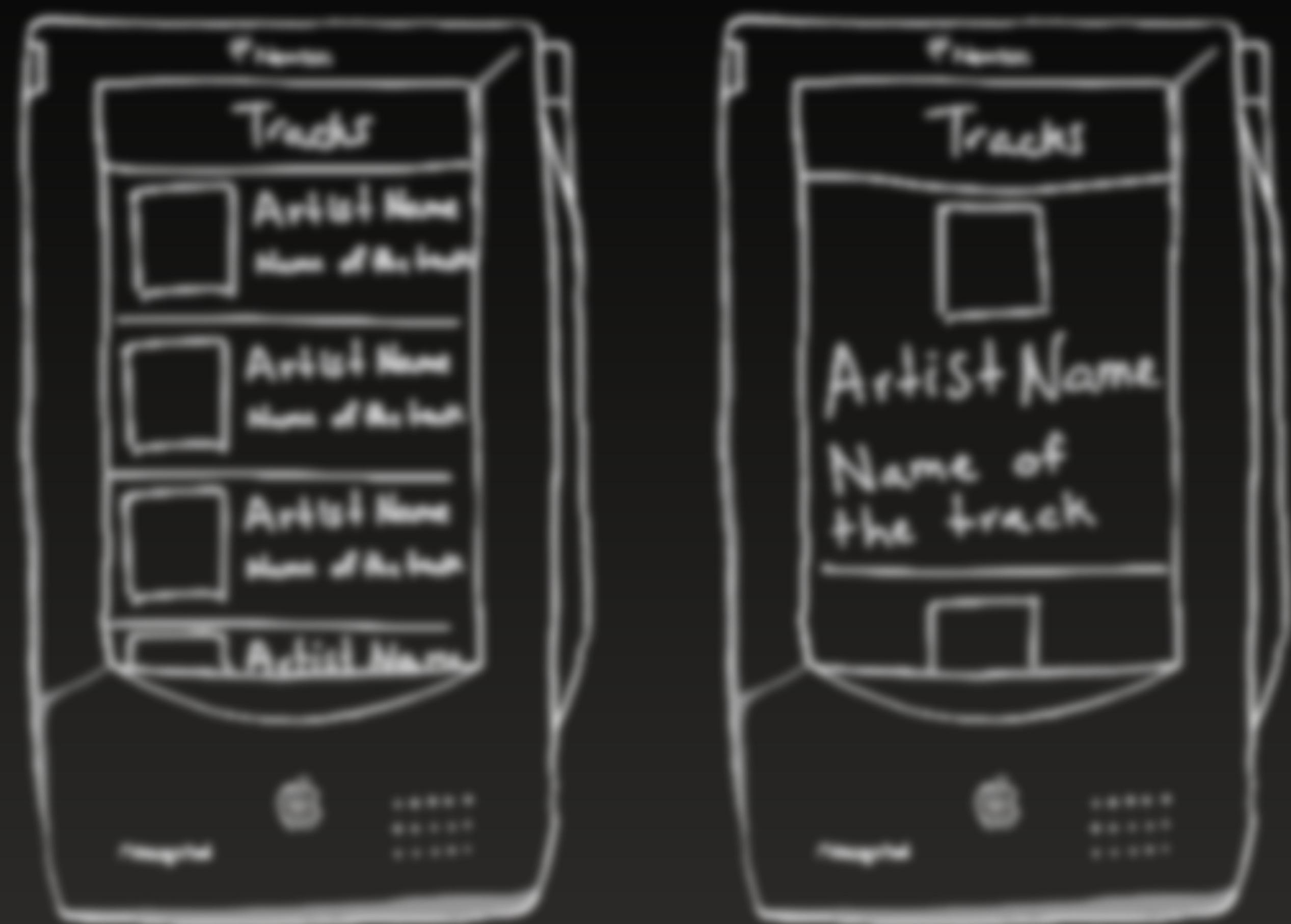
* SUPER MARIO IS A CHARACTER FROM NINTENDO



```
if traitCollection  
    .preferredContentSizeCategory  
    .isAccessibilitySizeCategory {  
    cell = tableView  
        .dequeueReusableCell(  
            withIdentifier:  
                "alternativeCellId",  
            for: indexPath)  
} else {  
    cell = tableView  
        .dequeueReusableCell(  
            withIdentifier: "defaultCellId",  
            for: indexPath)  
}
```

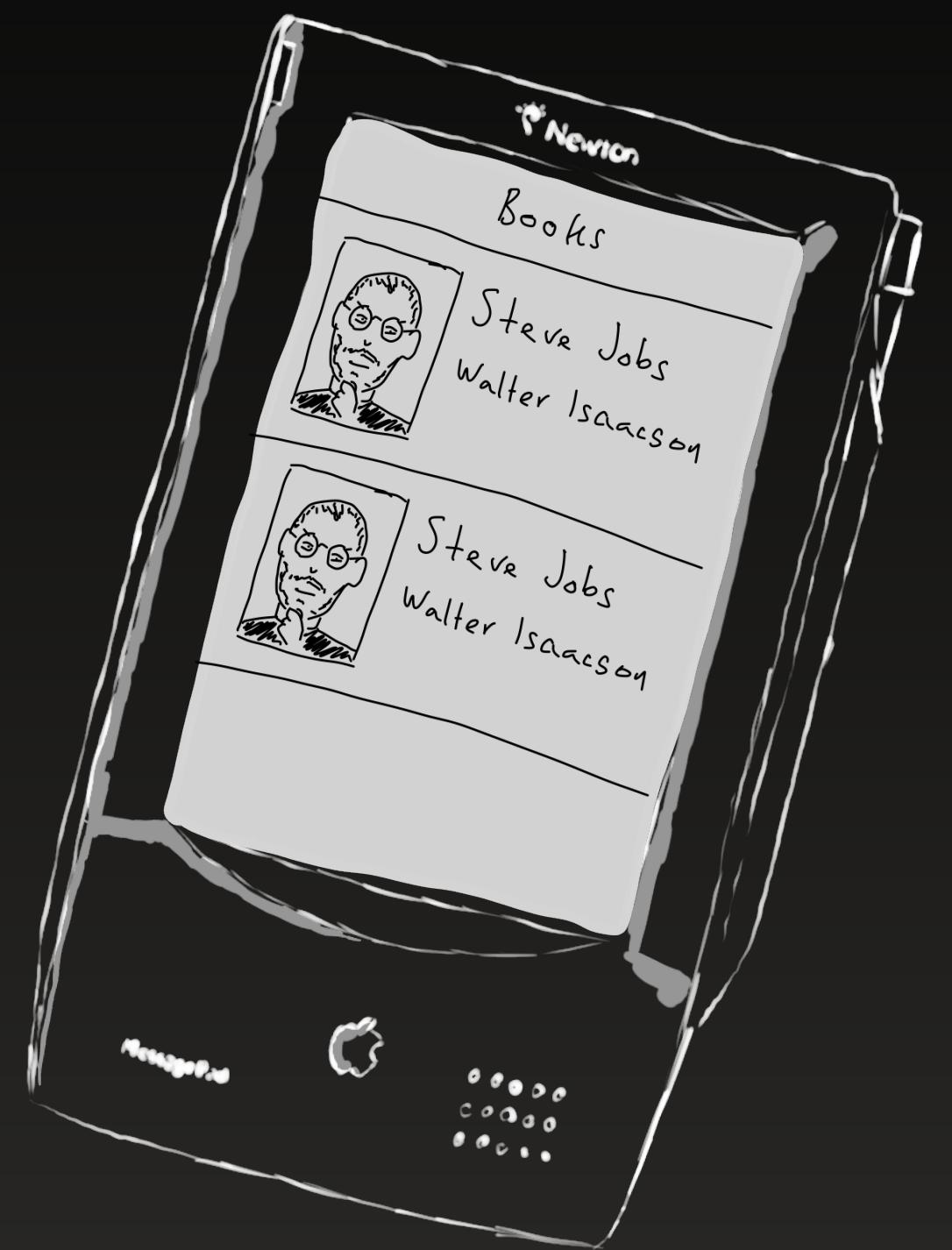


9 - Alternative Layout



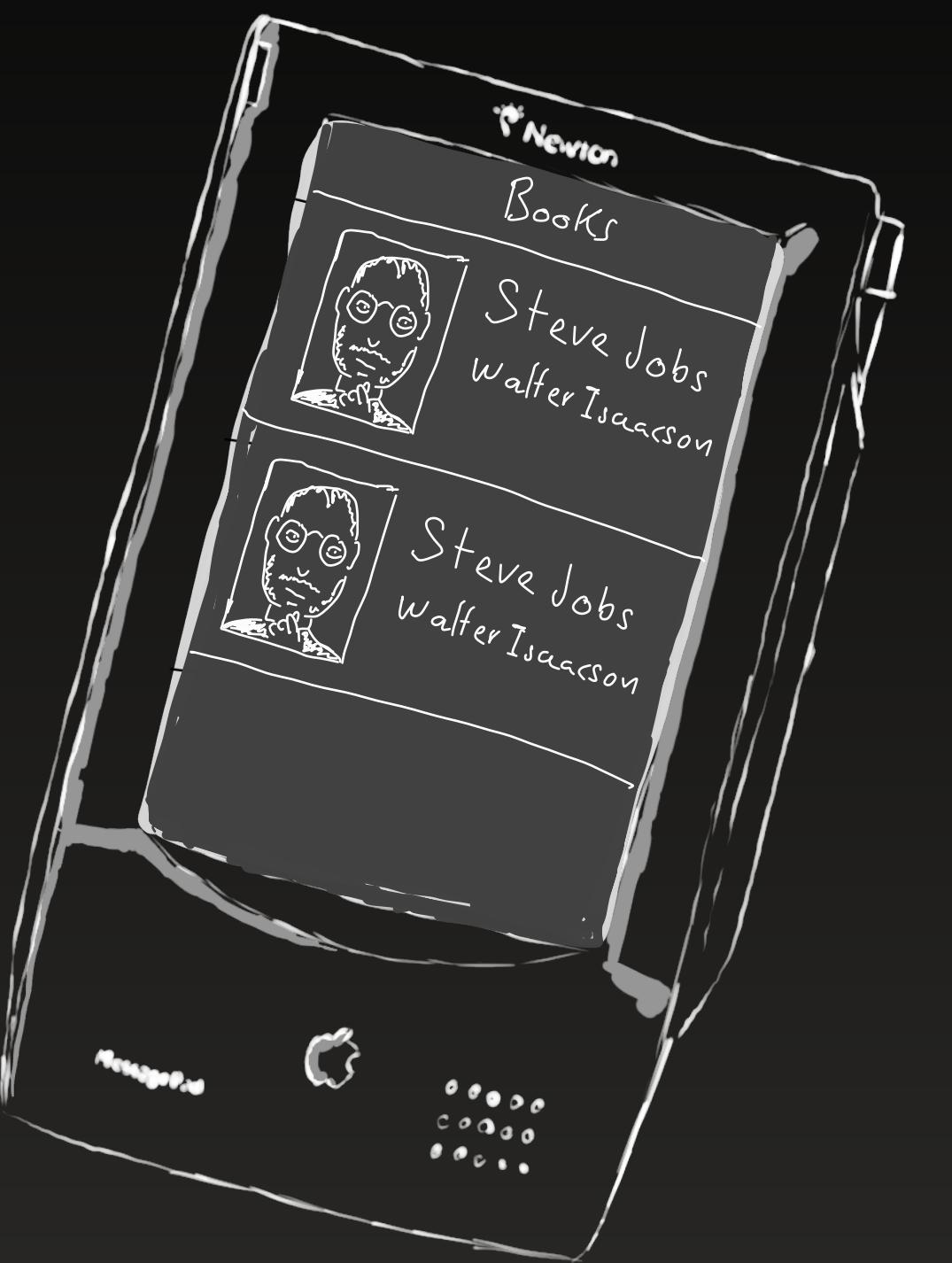
#accessibilityUpTo11

10 - Come to the Dark Side



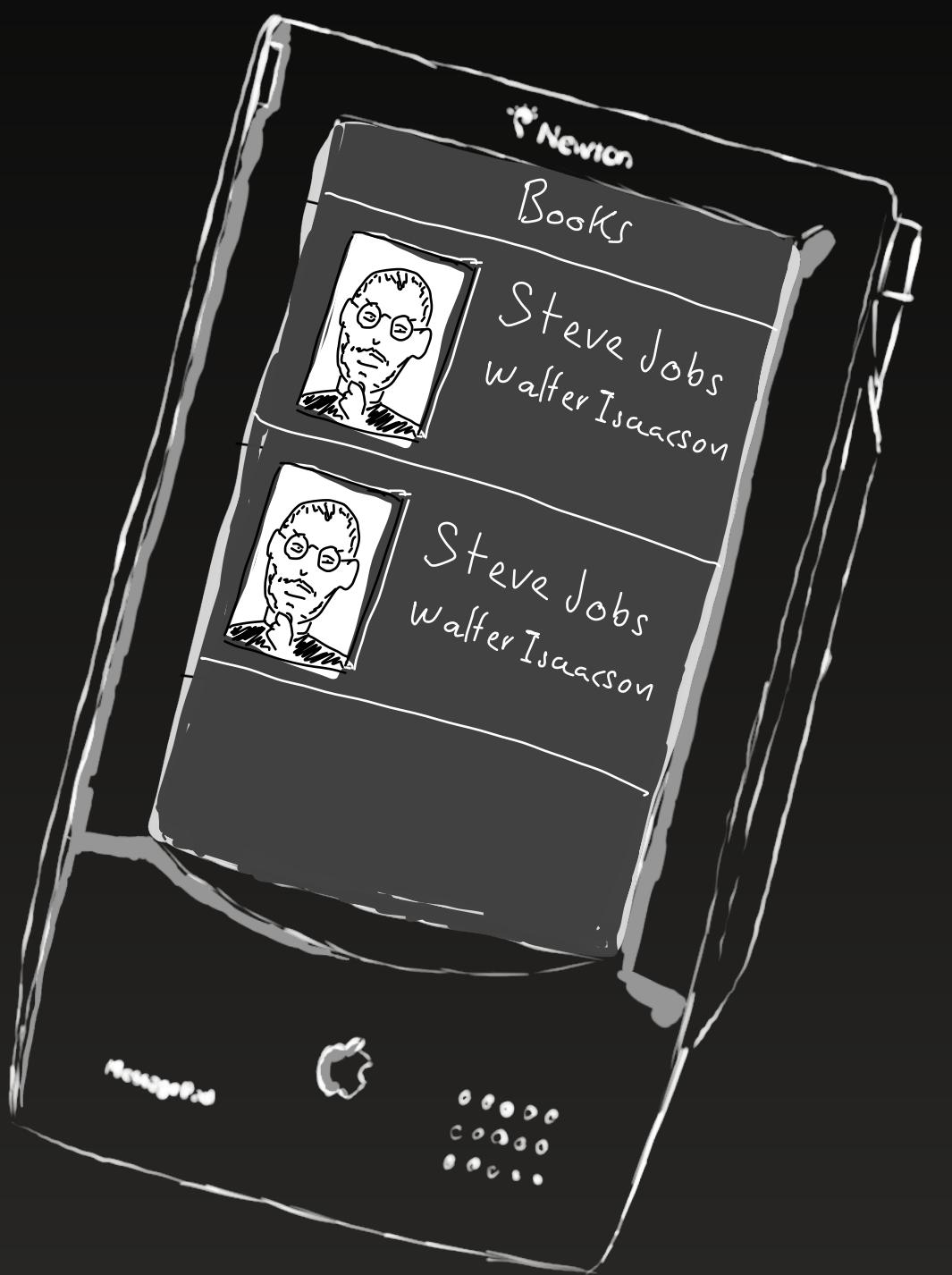
#accessibilityUpTo11

10 - Come to the Dark Side

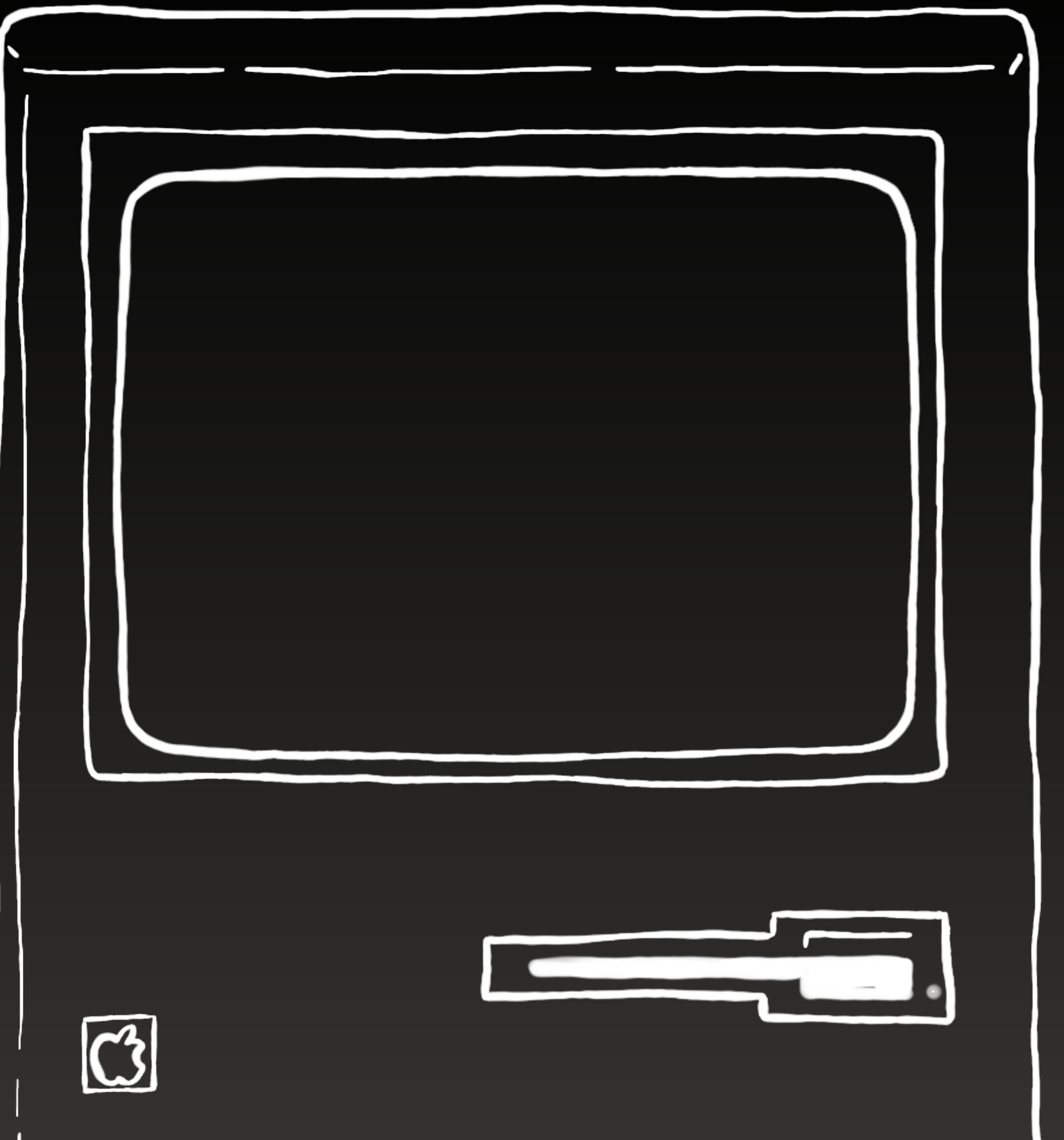


#accessibilityUpTo11

10 - Come to the Dark Side



#accessibilityUpTo11



```
imageView  
.accessibilityIgnoresInvertColors =  
true
```



11 - Test!!!



#accessibilityUpTo11

11 - Test!!!



- **Screen Curtain**
- **Environment Overrides**
- **Shortcuts**

#accessibilityUpTo11

Accessibility → Up to 11!

Dani Devesa (@dadederk)

GitHub code examples:

<https://github.com/Apress/developing-accessible-iOS-apps>

#accessibilityUpTo11



*THE LOONEY TUNES ARE
CHARACTERS FROM WARNER BROS

