React Native
Module – Touchables

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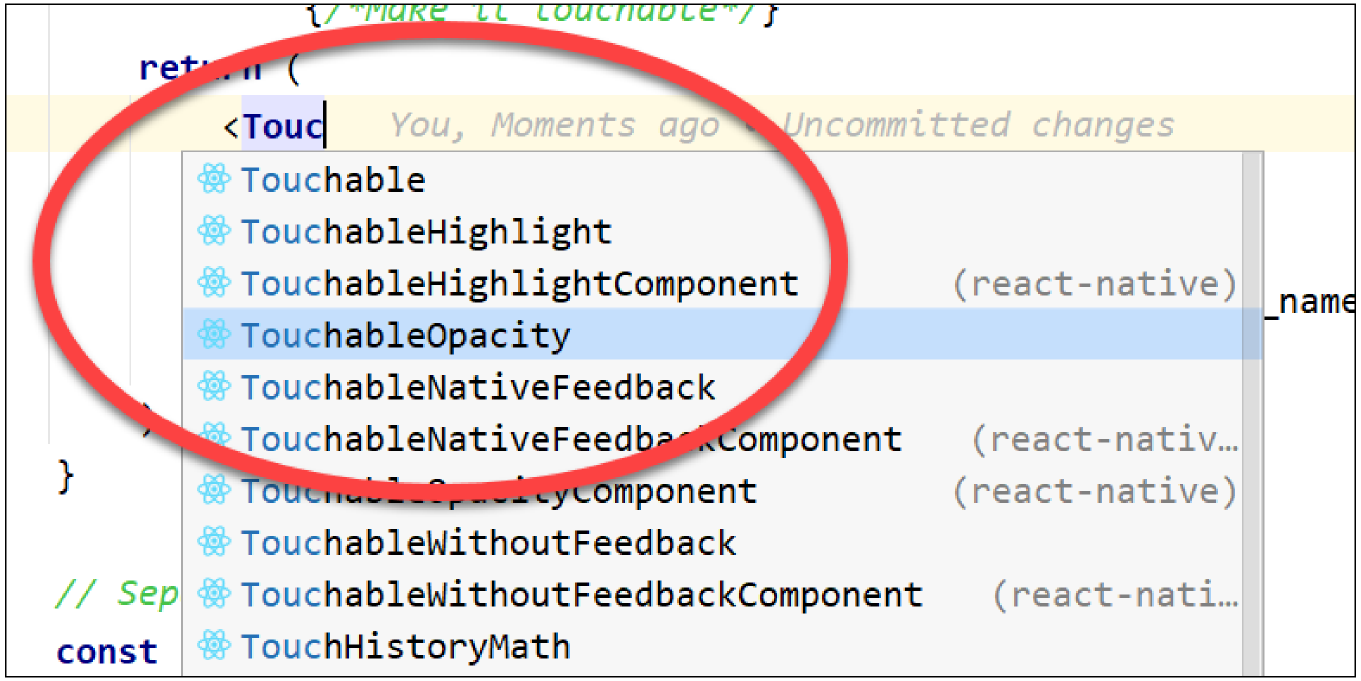
Touchables

Reacting to touches or presses on your UI-elements

Basic <Touchable> – reacting to click events

- Use <TouchableOpacity> for default presses/touches
- Lots of variants available:



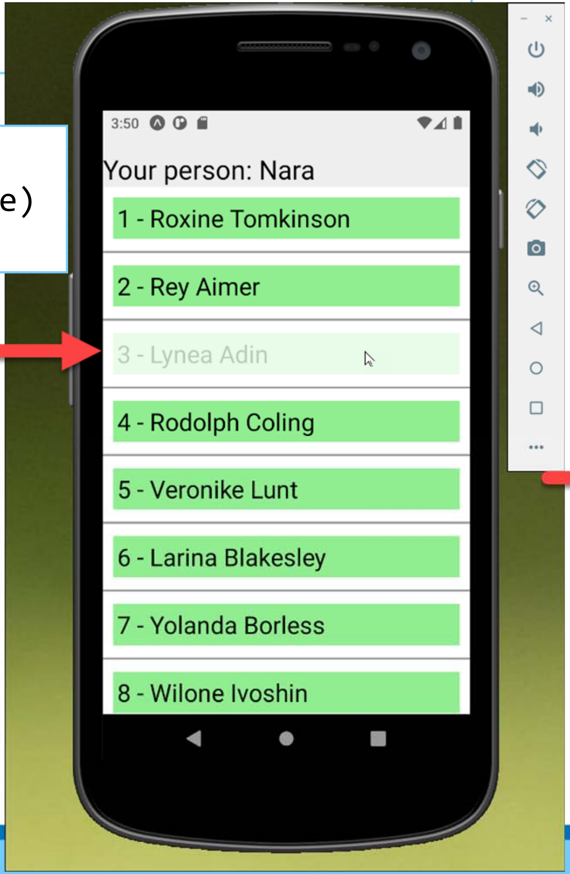
```
{/*Make it touchable*/}
return (
    <Touc    You, Moments ago • Uncommitted changes
}

// Sep
const
```

```
Touchable
TouchableHighlight
TouchableHighlightComponent         (react-native)
TouchableOpacity
TouchableNativeFeedback
TouchableNativeFeedbackComponent    (react-nativ…
TouchableOpacityComponent           (react-native)
TouchableWithoutFeedback
TouchableWithoutFeedbackComponent   (react-nati…
TouchHistoryMath
```

For instance: using TouchableOpacity

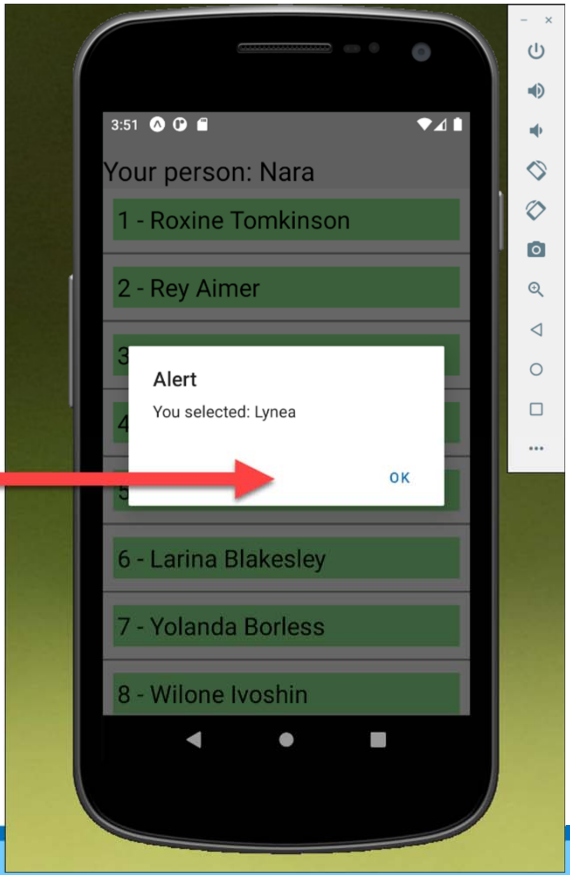
```
const renderItem = (person) => {
    return (
        <TouchableOpacity onPress={() => showPerson(person)}>
            <Text style={styles.person}>
                {person.id} - {person.first_name} {person.last_name}
            </Text>
        </TouchableOpacity>
    )
}
```

```
const showPerson = (person) =>{
    alert('You selected: ' + person.first_name)
}
```



Your person: Nara

1 - Roxine Tomkinson
2 - Rey Aimer
3 - Lynea Adin
4 - Rodolph Coling
5 - Veronike Lunt
6 - Larina Blakesley
7 - Yolanda Borless
8 - Wilone Ivoshin



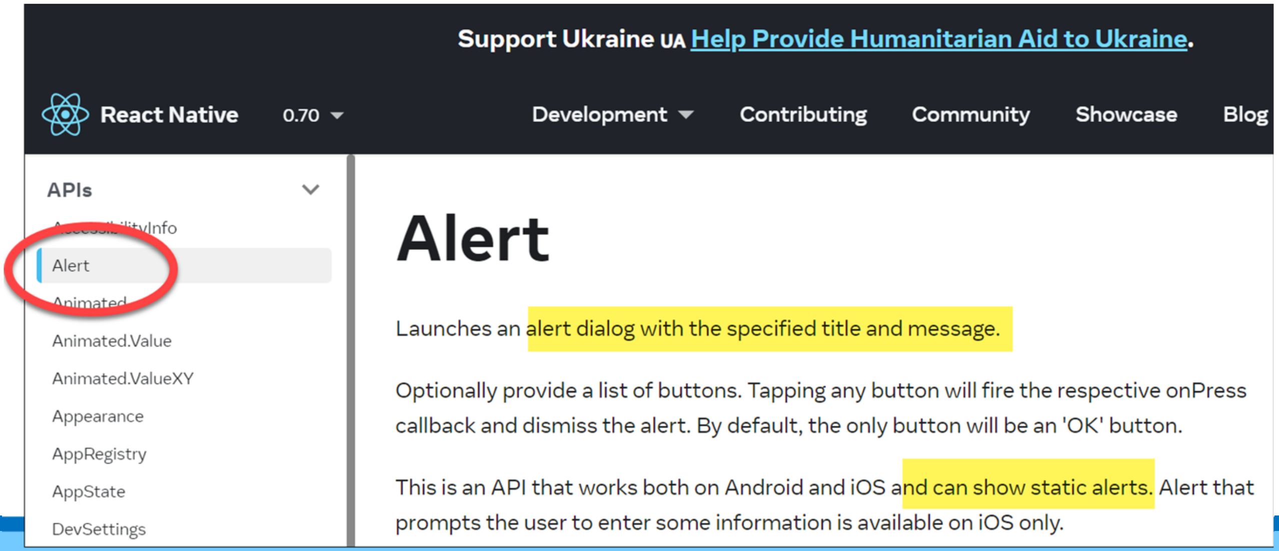
Your person: Nara

1 - Roxine Tomkinson
2 - Rey Aimer
6 - Larina Blakesley
7 - Yolanda Borless
8 - Wilone Ivoshin

Alert
You selected: Lynea
OK

On alerts

- In the previous code, we used the default `alert()` function from the device
- React Native also has an `<Alert />` component
  - It has more configuration options
  - In serious applications this is preferred over default `alert()`.



Alert

Launches an alert dialog with the specified title and message.

Optionally provide a list of buttons. Tapping any button will fire the respective onPress callback and dismiss the alert. By default, the only button will be an 'OK' button.

This is an API that works both on Android and iOS and can show static alerts. Alert that prompts the user to enter some information is available on iOS only.

https://reactnative.dev/docs/alert

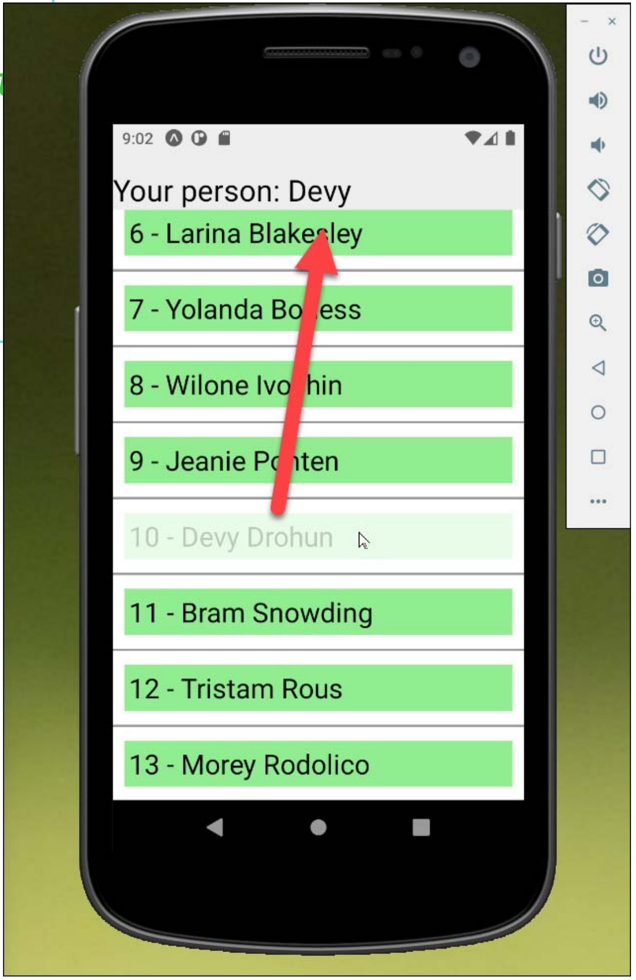
React principle – Lifting state up

- It is best practice – just as in React Web – to handle state in a parent component
  - Pass a function down to child, handle state in parent

```
const selectPerson = (person) =>{
    setSelectedPerson(person)
}

return (
    <View style={styles.container}>
        <Text style={styles.heading}>Your person: {selectedPerson.first_name}</Text>
        {/*2. Persons as Touchables */}
        <PersonFlatList select={(person)=>selectPerson(person)} />
    </View>
);
```

And in PersonFlatList component:

```
const PersonFlatList = ({select}) => {

    const showPerson = (person) =>{
        // Handle pressed person in the parent componen
        select(person)
    }
…
}
```



9:02

Your person: Devy

6 - Larina Blakesley

7 - Yolanda Bo ess

8 - Wilone Ivo hin

9 - Jeanie Po ten

10 - Devy Drohun

11 - Bram Snowding

12 - Tristam Rous

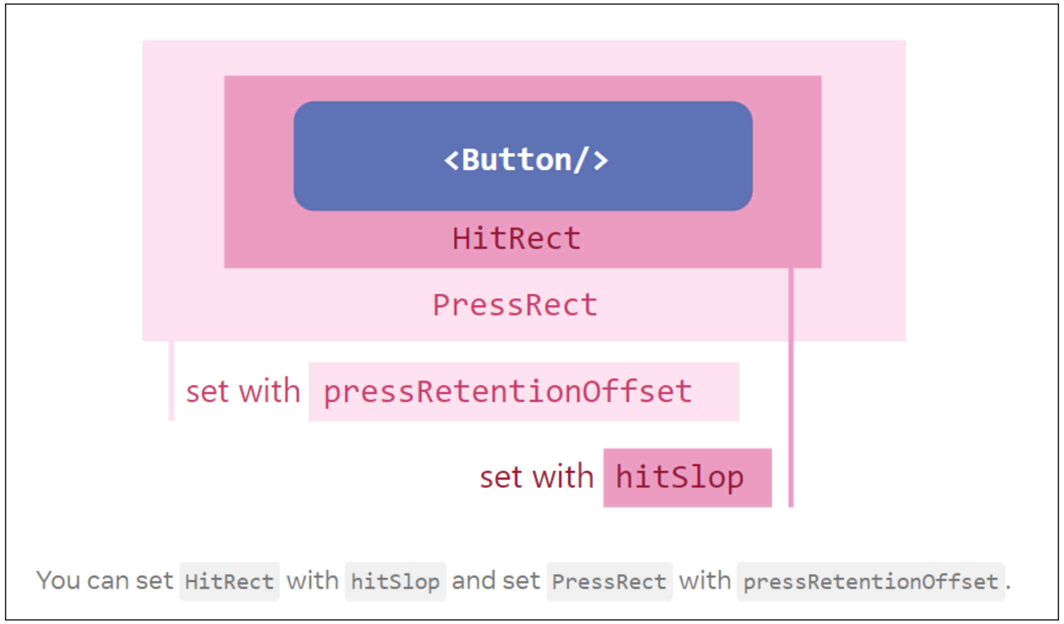
13 - Morey Rodolico

Pressable

Old(er) applications will likely use `Touchable`, but `Pressable` is the way to go for new applications

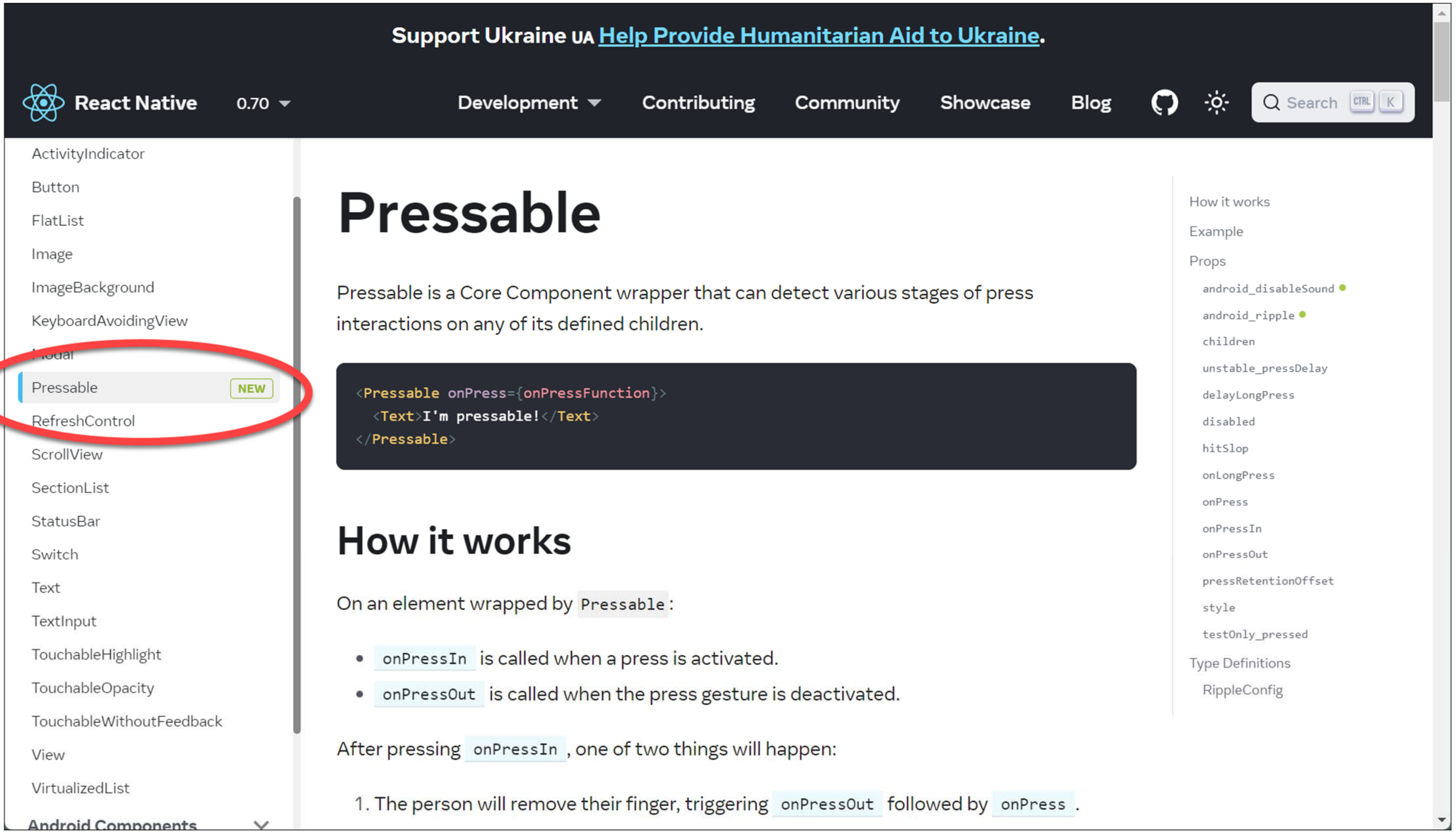
Touchable works fine, however...

- Touchable and Pressable are interchangable
- However, Pressable has a more extensive API
  - onPressIn, onPressOut, onLongPress
  - HitRect, PressRect (for inprecise presses)
  - android_disableSound
  - android_ripple
  - And more...



You can set HitRect with hitSlop and set PressRect with pressRetentionOffset.

Refer to the official docs



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Pressable

Pressable is a Core Component wrapper that can detect various stages of press interactions on any of its defined children.

```
<Pressable onPress={onPressFunction}>
  <Text>I'm pressable!</Text>
</Pressable>
```

How it works

On an element wrapped by `Pressable`:

- `onPressIn` is called when a press is activated.
- `onPressOut` is called when the press gesture is deactivated.

After pressing `onPressIn`, one of two things will happen:

1. The person will remove their finger, triggering `onPressOut` followed by `onPress`.

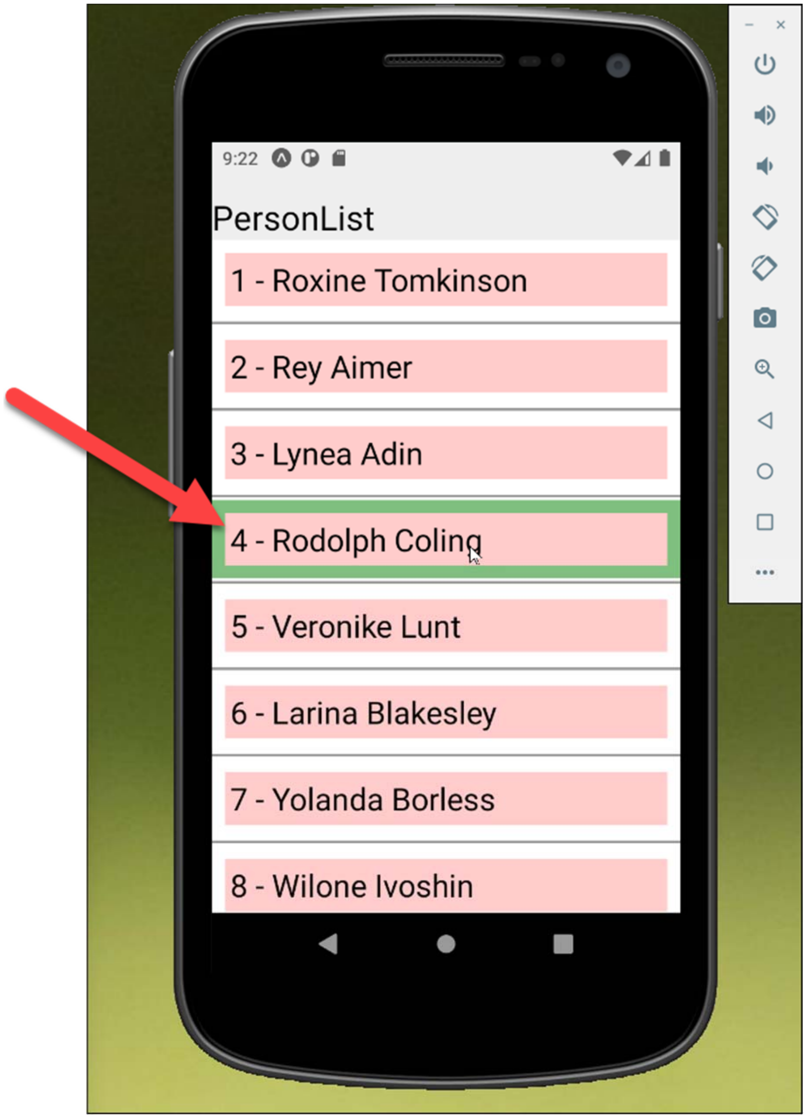
https://reactnative.dev/docs/pressable

Example

- We can just switch TouchableOpacity with Pressable and it works
- We added `android_ripple` here also

```
const renderItem = (person) => {
    return (
        <Pressable onPress={() => showPerson(person)}
                   android_ripple={{color: 'green'}}>
            <Text style={styles.person}>
                {person.id} - {person.first_name} {person.last_name}
            </Text>
        </Pressable>
    )
}
```

Result


9:22

PersonList

1 - Roxine Tomkinson

2 - Rey Aimer

3 - Lynea Adin

4 - Rodolph Coling

5 - Veronike Lunt

6 - Larina Blakesley

7 - Yolanda Borless

8 - Wilone Ivoshin

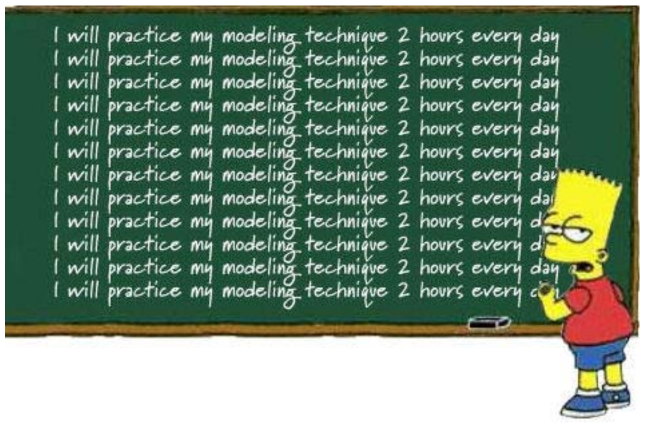
You can handle state and props in a parent component as before. This hasn't changed.

Verdict:

Older applications might use `Touchable`*. In new applications* `Pressable` *is preferred.*

Workshop

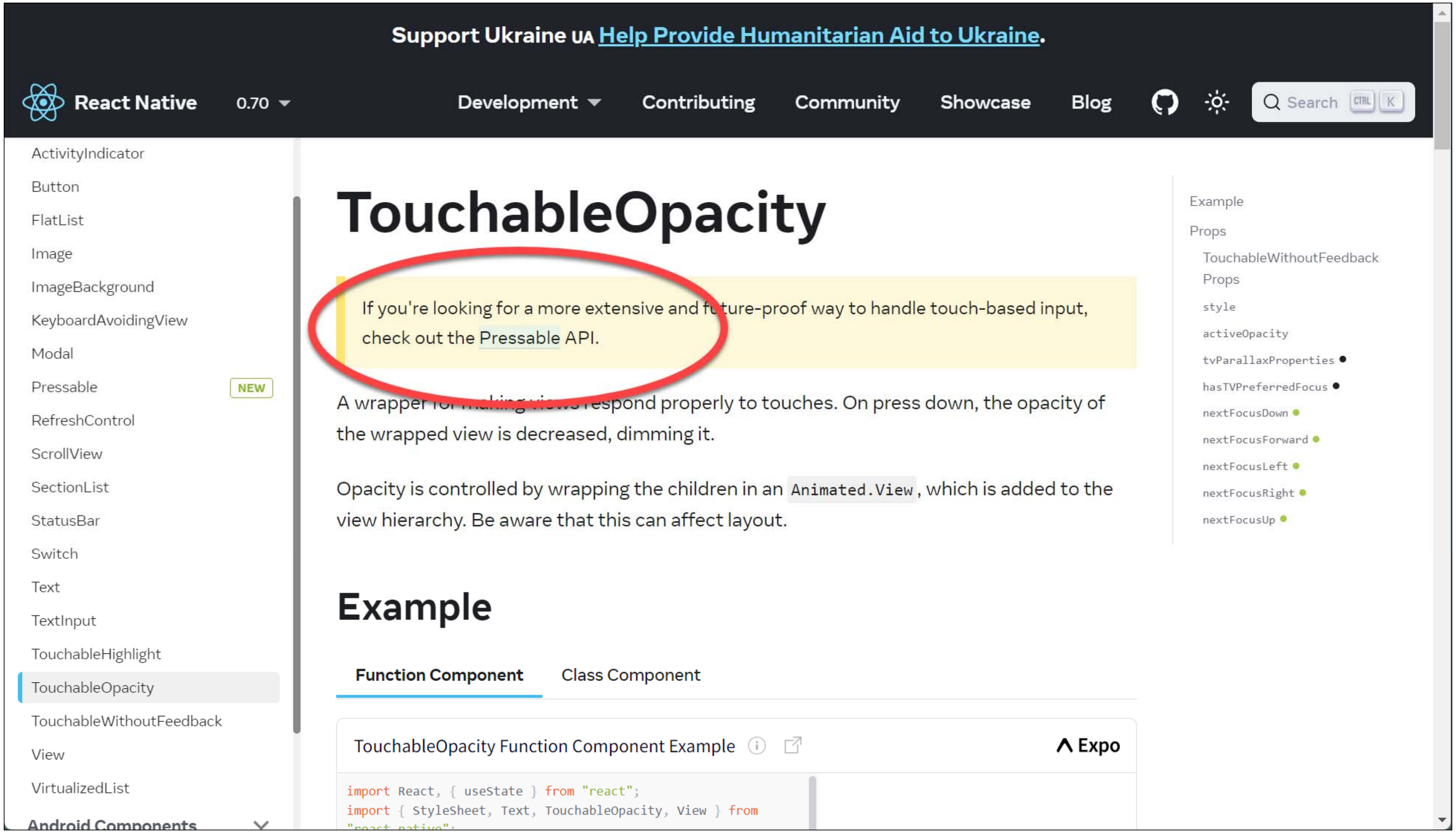
- Use your own list of (dummy) data
- Make sure the user can click/press/touch items in the list.
- Show an `alert` window with the clicked element
- Optional: pass the clicked element back to the parent component and show it in the UI component
- Example: `../60-touch-press`



More info

More info on the topics in this module

https://reactnative.dev/docs/touchableopacity



TouchableOpacity

If you're looking for a more extensive and future-proof way to handle touch-based input, check out the Pressable API.

A wrapper for making views respond properly to touches. On press down, the opacity of the wrapped view is decreased, dimming it.

Opacity is controlled by wrapping the children in an `Animated.View`, which is added to the view hierarchy. Be aware that this can affect layout.

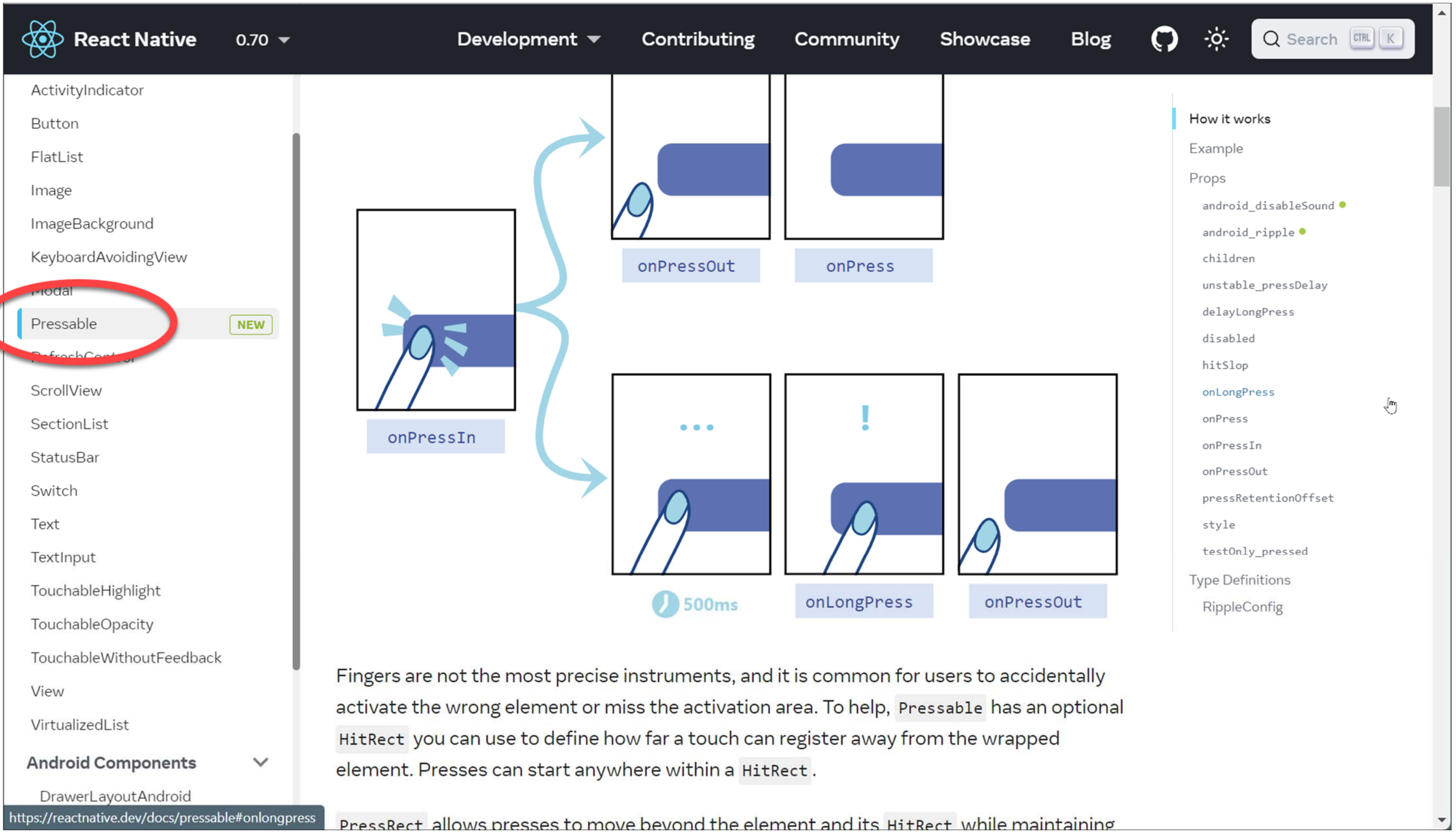
Example

Function Component | Class Component

TouchableOpacity Function Component Example — Expo

```
import React, { useState } from "react";
import { StyleSheet, Text, TouchableOpacity, View } from
"react-native";
```

https://reactnative.dev/docs/pressable



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ImageBackground
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Pressable NEW
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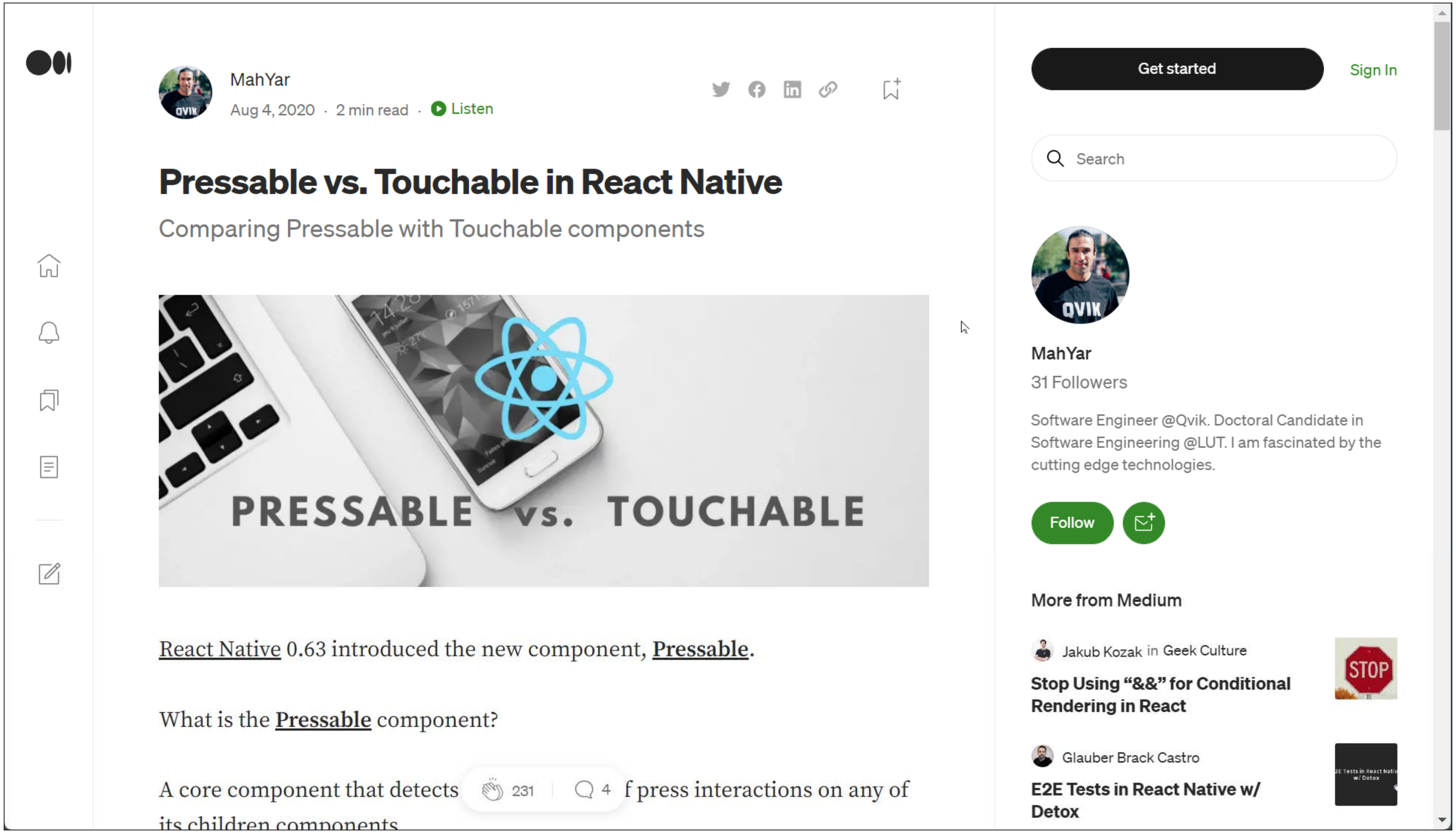
SectionList
StatusBar
Switch
Text
TextInput
TouchableHighlight
TouchableOpacity
TouchableWithoutFeedback
View
VirtualizedList
Android Components
DrawerLayoutAndroid

Fingers are not the most precise instruments, and it is common for users to accidentally activate the wrong element or miss the activation area. To help, `Pressable` has an optional `HitRect` you can use to define how far a touch can register away from the wrapped element. Presses can start anywhere within a `HitRect`.

`PressRect` allows presses to move beyond the element and its `HitRect` while maintaining

How it works
Example
Props
android_disableSound
android_ripple
children
unstable_pressDelay
delayLongPress
disabled
hitSlop
onLongPress
onPress
onPressIn
onPressOut
pressRetentionOffset
style
testOnly_pressed
Type Definitions
RippleConfig

https://reactnative.dev/docs/pressable#onlongpress https://mahyarmohammadi.medium.com/react-native-pressable-vs-touchable-5fec6b332f15



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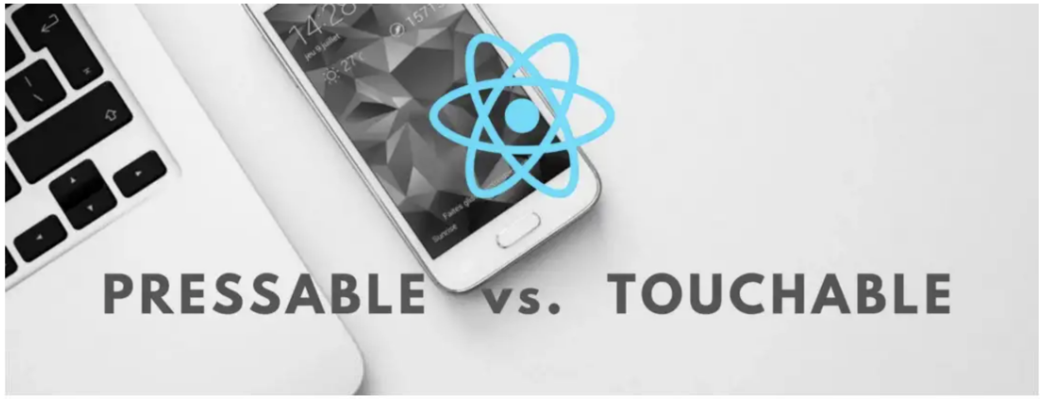
Pressable vs. Touchable in React Native

Comparing Pressable with Touchable components



React Native 0.63 introduced the new component, Pressable.

What is the Pressable component?

A core component that detects f press interactions on any of its children components

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