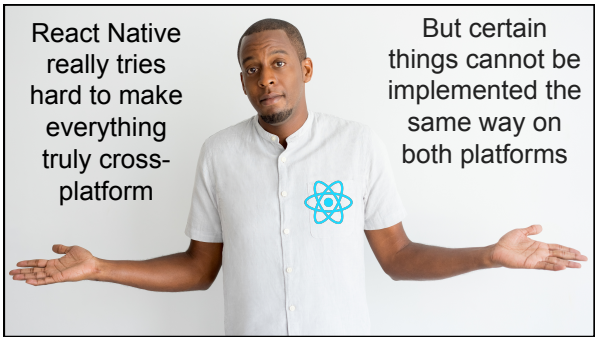
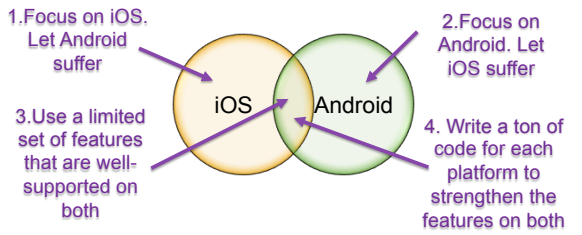
Platform-specific Development

tl;dr

- React Native tries to be 100% cross platform, but that is impossible in some situations (Like DatePicker, for example).
- Besides, we may want there to be differences
- When that happens, we can use
  1. Platform-specific extensions, serving a whole different file
  2. The Platform module which gives us
     - Platform.OS
     - Platform.select()

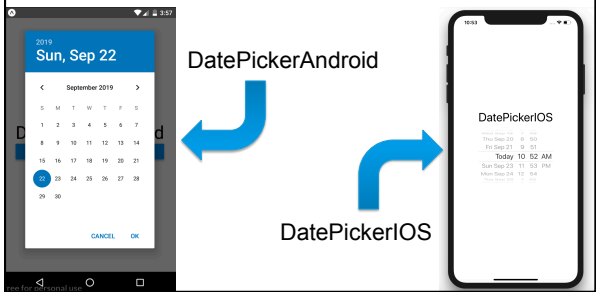


Truly cross-platform development gives us a few choices



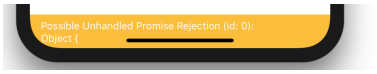
DatePicker*

There are two DatePickers



To use either on the wrong platform is an error

DatePickerAndroid on iOS



DatePickerIOS is not supported on this platform!

DatePickerIOS on Android

DatePickerIOS is a JSX component

```
<DatePickerIOS
 date* - The initial date
 onDateChange* - Event when they change a date.
      Returns the date chosen.
 maximumDate, minimumDate
 mode - 'date', 'time', or 'dateTime'
 timeZoneOffsetinMinutes - Force a timezone
     instead of looking at our location
/>
*Required
```

Simple DatePickerIOS example

Foo.js

```
function Foo() {
 return (
  <DatePickerIOS date={new Date()}
             onDateChange={setDate} />
 )
 function setDate(date) {
  console.log("The date: ",date);
 }
}
```

DatePickerAndroid is a JS Object

`open(options)` - Opens the standard Android date picker dialog and returns a Promise

```
options = {
  date - The initial date (defaults to today)
  minDate, maxDate
  mode - 'calendar', 'spinner'
}
```

The Promise callback receives an object

- `action` - dateSetAction or dismissedAction
- `year`, `month` (0-11), `day` (1-31)

Simple DatePickerAndroid example

Foo.js

```
function Foo() {
 return (
  <Button onPress={getDate}
            onDateChange={setDate} />
 )
 function getDate() {
  DatePickerAndroid.open({date:new Date()})
   .then( ({month,day,year}) =>
         setDate(new Date(year,month,day)));
 }
 function setDate(date) {
  console.log("The date: ",date);
 }
}
```

Android-only

- DatePickerAndroid
- DrawerLayoutAndroid
- ProgressBarAndroid
- ToolbarAndroid
- ViewPagerAndroid

iOS-only

- DatePickerIOS
- MaskedViewIOS
- NavigatorIOS
- PickerIOS
- ProgressViewIOS
- SegmentedControlIOS
- SnapshotViewIOS
- TabBarIOS

How to handle Platform-specific code

Two main ways to implement Platform Specific code

1. Platform-specific file extensions
2. The Platform module

Platform Specific File Extensions

- If you ...

```
import MyButton from './MyButton';
```

- And there is no MyButton.js.
- But there are ...

```
MyButton.ios.js
MyButton.android.js
```

- Then the compiler will pick the proper one for each platform when compiling

Platform.OS is set to a string, 'ios' or 'android'

```
function CustomButton() {
 const MyButton = Platform.OS === 'ios' ?
  TouchableHightlight : TouchableWithoutFeedback;
 return (
  <MyButton onPress={console.log}>
   <Text>Press me</Text>
  </MyButton>
 );
}
```

Platform.select() returns a different object depending on the platform

```
function CustomButton() {
  const MyButton = Platform.select({
    ios: TouchableHighlight,
    android: TouchableWithoutFeedback,
  });
  return (
    <MyButton onPress={doIt}>
      <Text>Press me</Text>
    </MyButton>
  );
}
```

tl;dr

- React Native tries to be 100% cross platform, but that is impossible in some situations (Like DatePicker, for example).
- Besides, we may want there to be differences
- When that happens, we can use
  1. Platform-specific extensions, serving a whole different file
  2. The Platform module which gives us
     - Platform.OS
     - Platform.select()