

React Native

1.

React Native is a JavaScript based lib. Some people may think it's a Hybrid application using WebView(like Cordova)

2.

React Native is JavaScript code running on mobile devices for real. It uses the JavaScriptCore to run the code in a separated thread, in parallel with the Main Thread(Objective-C, Java, etc) and the Shadow Queue, the layout thread. It is not transpiled to Native code

3.

The component based structure in React Native is different from the web. Specially because mobile devices don't have DOM and don't share the same markup language of the web. So, we are not able to render web components in mobile devices, because we use React Native instead of ReactDOM.

4.

Due to the lack of DOM, React Native doesn't use tags like: div, section, span, input, etc. Almost every HTML tag has an equivalent React Native component, so we are able to use the same mindset of the web to develop with React Native components View, Text, TextInput, etc.

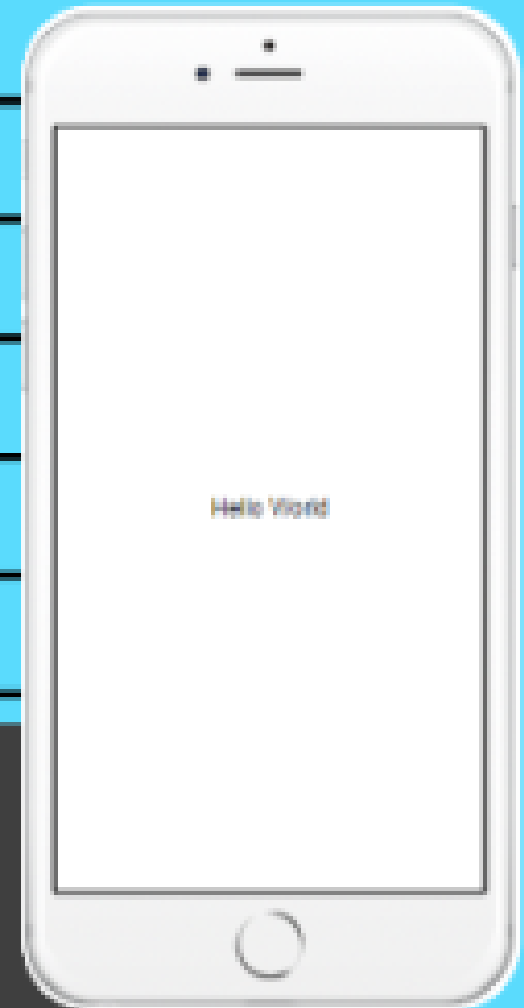
5.

there's no CSS in React Native. We can style our app using almost the same mindset of traditional CSS.
Eg. `marginBottom: 15`
Important: React Native enforce us to use Flexbox layouts by default. So we don't need to use float and display to build our layout structure.

COMPONENTS *'HTML'*

<code><div></code>	<code><View></code>
<code> / <p></code>	<code><Text></code>
<code><input type="text"></code>	<code><InputText></code>
<code><a> / <button></code>	<code><Button></code>
<code></code>	<code><Image></code>

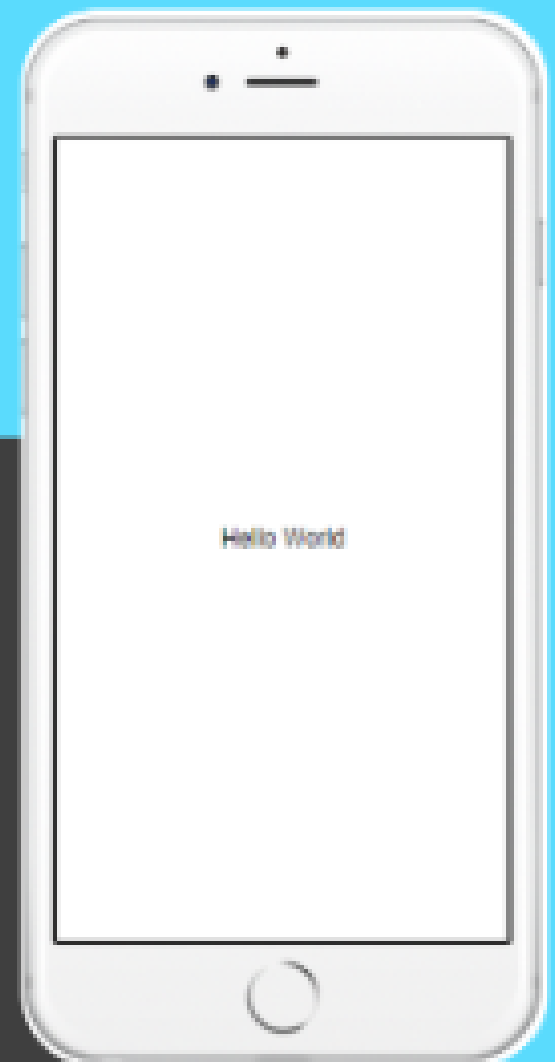
```
render() {  
  return (  
    <View>  
      <Text>Hello World</Text>  
    </View>  
  )  
}
```



STYLING *'CSS'*

- * **STYLESHEET MODULE** *OR* **INLINE STYLES**
- * *'CSS LIKE'* **NAME/VALUE**
- * **LAYOUT FLEXBOX**

```
render() {  
  return (  
    <View style={styles.container}>  
      <Text style={{color: 'black'}}>Hello World</Text>  
    </View>  
  )  
}  
  
const styles = StyleSheet.create({  
  container: {  
    flex: 1,  
    justifyContent: 'center',  
    alignItems: 'center',  
  },  
})
```



1 . npm install -g expo-cli



2. expo init <nama_project>



4. cd <nama_project>



**5.
npm install --save react-navigation
react-native-gesture-handler
react-navigation-stack
react-native-reanimated
native-base**



6. react-native link



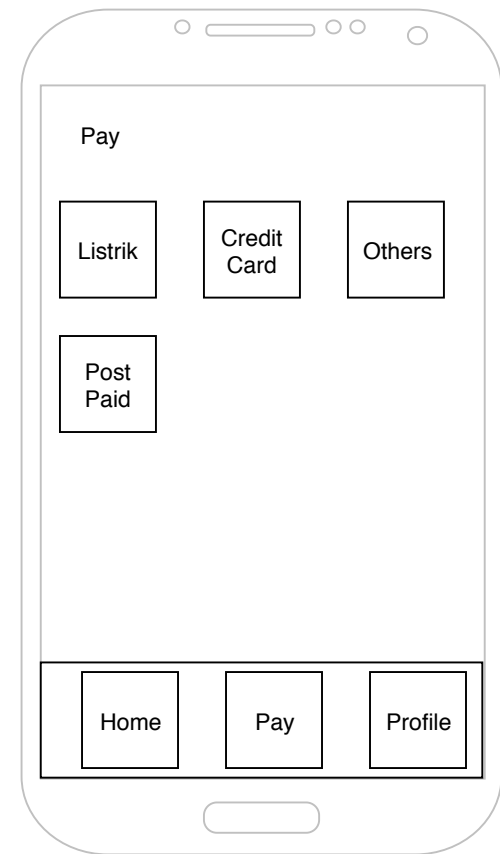
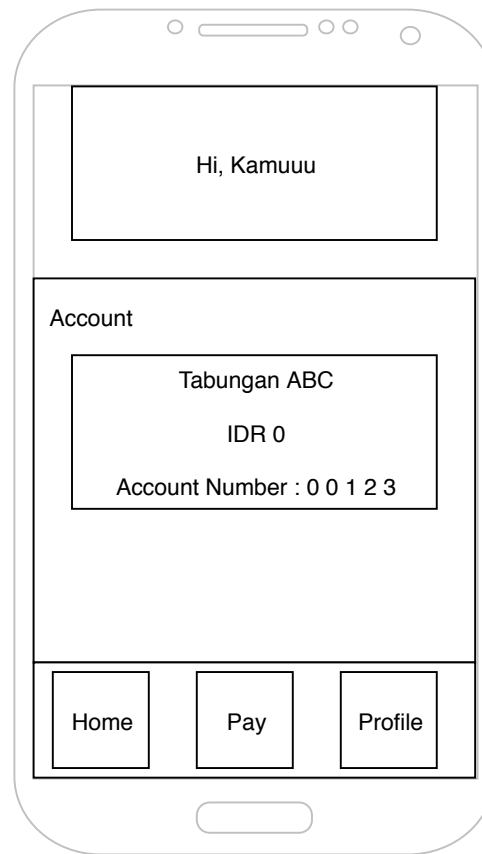
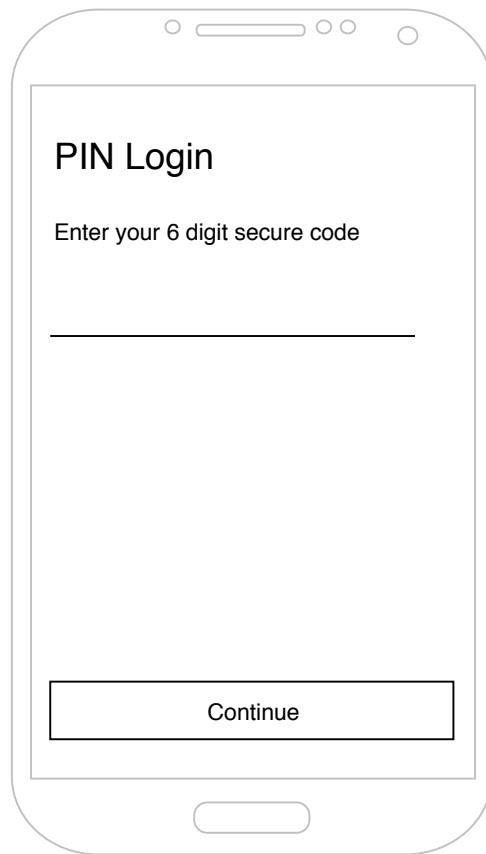
7. expo install expo-font

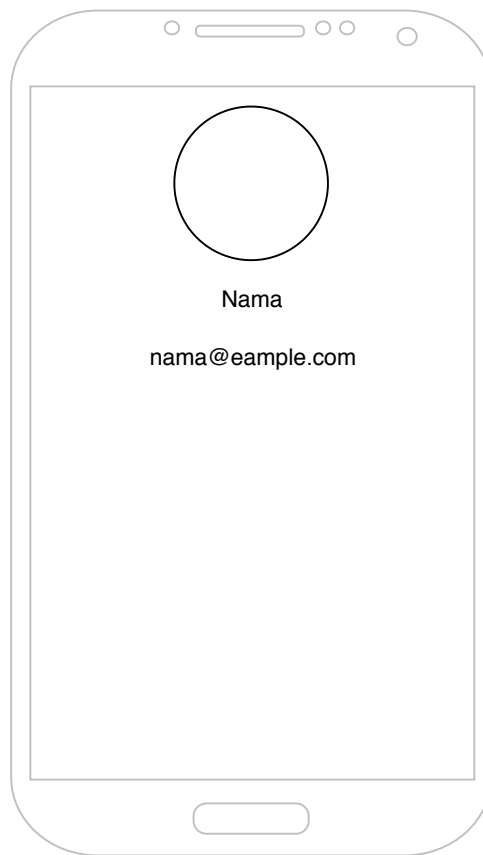
```
import React from 'react';
import {StyleSheet, Text, View} from 'react-native';
import {Icon} from "native-base";

export default class App extends React.Component {
  render() {
    return (
      <View style={styles.container}>
        <Text>Open up App.js to start working on your app!</Text>
        <Icon name="information-circle-outline"/>
      </View>
    );
  }
}

const styles = StyleSheet.create({
  container: {
    flex: 1,
    backgroundColor: 'white',
    alignItems: 'center',
    justifyContent: 'center',
  },
});
```

npm start





buat file src > components > Splash.js

```
import React from 'react';
import {BackHandler, Image, StyleSheet} from "react-native";
import {View} from "native-base";
import * as Font from "expo-font/build/Font";

class SplashScreen extends React.Component {
  async componentWillMount() {
    this.backHandler = BackHandler.addEventListener('hardwareBackPress', () => {
      return true;
    });
    await Font.loadAsync({
      Roboto: require('..../node_modules/native-base/Fonts/Roboto.ttf'),
      Roboto_medium: require('..../node_modules/native-base/Fonts/Roboto_medium.ttf')
    });

    doRedirect = () => {
      setTimeout(() => {
        this.props.navigation.navigate('Main')
      }, 2500)
    };

    render() {
      return (
        <View style={styles.container}>
          <Image source={require('..../assets/Celengan.png')} alt="Celengan logo" style={styles.image} />
          {this.doRedirect()}
        </View>
      )
    }
  }
}
```

```
const styles = StyleSheet.create({
  container: {
    flex: 1,
    justifyContent: 'center',
    alignItems: 'center',
    backgroundColor: '#4F6D7A',
  }
});

export default SplashScreen;
```


buat folder src > components

buat Login.js & Home.js

deklarasikan class component di Login.js & Home.js, di method render, return sebuah <View/> dari package Native-Base

Ubah App.js

```
import React from 'react';
import {createAppContainer} from "react-navigation";
import {createStackNavigator} from "react-navigation-stack";
import Login from "../src/components/Login";
import HomeScreen from "../src/components/Home";
import {Root} from "native-base";
import Splash from "../src/components/Splash";

const MainNavigator = createStackNavigator({
  Splash: {
    screen: SplashScreen,
    navigationOptions: {
      header: null,
    }
  },
  Login: {
    screen: Login,
    navigationOptions: {
      header: null,
    }
  },
  Main: {
    screen: HomeScreen,
    navigationOptions: {
      header: null
    }
  }
}, {
  initialRouteName: 'Splash',
});

const AppNavigator = createAppContainer(MainNavigator);
export default () => <Root><AppNavigator /></Root>;
```


npm install --save axios

buat src > api > api.js

```
import axios from 'axios';

export default axios.create({
  baseURL: `http://192.168.43.29:3006/`
});
```

buat src > api > user > index.js

```
import API from '../api';

export function doAuth(name, password) {
  return API.post('/auth',
    {userName: name, userPassword: password});
}
```

Login.js

```
class LoginScreen extends React.Component {
  state = {userPin: '', loading: false};

  onChangePin = (text) => {
    this.setState({userPin: text})
  };

  doLogin = () => {
    this.setState({loading: true});
    doAuth('edo', this.state.userPin).then((res) => {
      if (res.status === 200) {
        this.setState({loading: false});
        this.props.navigation.navigate('Main', {userFull});
      }
    }).catch(err => {
      this.setState({loading: false});
      alert('Some error occurred');
    })
  }
}
```

```
Name': 'Edward Suwiry'a'})
```

```

render() {
  const uri = "https://facebook.github.io/react-native/docs/assets/favicon.png";
  if (this.state.loading) {
    return (
      <View style={{flex: 1, justifyContent: 'center'}}>
        <Spinner/>
      </View>
    )
  } else {
    return (
      <View style={styles.background}>
        <Grid>
          <Row size={1}>
            </Row>
            <Row size={1} style={{
              flexDirection: 'column',
              padding: 30,
              width: '100%'
            }}>
              <Grid>
                <Col size={4}>
                  <Text style={styles.loginTextHeader}>PIN Login</Text>
                </Col>
                <Col size={1}>
                  <Thumbnail small source={{uri: uri}}/>
                </Col>
              </Grid>
              <Form>
                <Item stackedLabel>
                  <Label style={styles.loginText}>Enter Your 6 digit PIN</Label>
                  <Input secureTextEntry keyboardType="numeric" onChangeText={this
                    value={this.state.userPin}/>
                </Item>
              </Form>
            </Row>
          </Grid>
        </View>
      )
    }
  }
}

```

`.onChangePin}`

```

<Row size={2} style={{
    flexDirection: 'column', padding: 10
  }}>
  <Button style={styles.buttonLogin}
    onPress={this.doLogin}
    <Text style={styles.buttonLoginText}>
      Login
    </Text>
  </Button>
</Row>
</Grid>
</View>
);
}
}
}

```

```

const
  styles = StyleSheet.create({
    background: {
      flex: 1,
      backgroundColor: '#0cb9ff'
    },
    loginText: {
      color: '#F5F5F5'
    },
    loginTextHeader: {
      color: '#F5F5F5',
      fontSize: 24,
      fontWeight: 'bold'
    },
    buttonLoginText: {
      color: '#000000'
    },
    buttonLogin: {
      backgroundColor: '#F5F5F5'
    }
  });
export default LoginScreen;

```

buat components > Footer.js

```
import React from 'react';
import {Button, Footer, FooterTab, Icon, Text} from "native-base";
import { withNavigation } from 'react-navigation';

class FooterSegment extends React.Component {
  render() {
    return (
      <Footer>
        <FooterTab>
          <Button onPress={() => {
            this.props.navigation.navigate('Main')
          }}>
            <Icon name="home" />
            <Text>Home</Text>
          </Button>
          <Button onPress={() => {
            this.props.navigation.navigate('Pay')
          }}>
            <Icon name="journal" />
            <Text>Pay</Text>
          </Button>
          <Button>
            <Icon name="person" />
            <Text>Profile</Text>
          </Button>
        </FooterTab>
      </Footer>
    )
  }
}

export default withNavigation(FooterSegment);
```



```
import React from 'react';
import {
  Button, Card, CardItem, Container, Content, Footer, FooterTab, Grid, Header, Icon, ListItem, Row, Text,
  View
} from "native-base";

class HomeScreen extends React.Component {
  state = {isShowDetail: false, iconName: 'arrow-dropdown'};

  doShowDetail = () => {
    if (this.state.isShowDetail) {
      return (
        <Row style={{height: 125}}>
          <View>
            <ListItem>
              <Text>Saldo : Rp 1.000.000 </Text>
            </ListItem>
          </View>
        </Row>
      )
    } else {
      return null;
    }
  };
}
```

xt,

```

render() {
  return (
    <Container>
      <Header />
      <Content paddner>
        <Card>
          <CardItem header>
            <Grid>
              <Row style={{height: 50}}>
                <View style={{flex: 1}}>
                  <Text
                    style={{textAlign: 'center'}}>Hi, .. {this.props.navigation.getParam
                  </View>
                </Row>
                {this.doShowDetail()}
              </Grid>
            </CardItem>
            <CardItem footer button onPress={() => {
              if (this.state.isShowDetail) {
                this.setState({isShowDetail: !this.state.isShowDetail, iconName: 'arrow-dropdo
              } else {
                this.setState({isShowDetail: !this.state.isShowDetail, iconName: 'arrow-dropup
              }
            }}>
              <View style={{flex: 1}}>
                <Text style={{textAlign: 'center'}}>
                  <Icon name={this.state.iconName}></Icon>
                </Text>
              </View>
            </CardItem>
          </Card>
        </Content>
      <FooterSegment />
    </Container>
  )
}

export default HomeScreen;

```

```
am('userFullName'))</Text>
```

```
own'}})
```

```
o'}})
```

Buat src > components > Pay.js

```
import React from 'react';
import {Button, Container, Content, Header, Icon, Text, View} from "native-base";
import {StyleSheet} from "react-native";
import FooterSegment from "../Footer";

class PayScreen extends React.Component {
  doParkingPay = () => {
    this.props.navigation.navigate('ParkingPayment')
  };

  render() {
    return (
      <Container>
        <Header>
        </Header>
        <Content>
          <Text style={styles.pageHeader}>Pay / Topup</Text>
          <View style={{flexDirection: 'row', flexWrap: 'wrap', flex: 1}>
            <Button transparent style={styles.buttonService}>
              <Icon name="battery-charging" />
              <Text>Listrik</Text>
            </Button>
            <Button transparent style={styles.buttonService}>
              <Icon name="card" />
              <Text>Topup</Text>
            </Button>
            <Button transparent style={styles.buttonService} onPress={
              this.doParkingPay
            }>
              <Icon name="subway" />
              <Text>Parkir</Text>
            </Button>
          </View>
        </Content>
        <FooterSegment />
      </Container>
    )
  }
}
```

```
}}>
```

```
{this.doParkingPay}>
```

```
const styles = StyleSheet.create({
  pageHeader: {
    color: '#0cb9ff',
    fontWeight: 'bold',
    margin: 15
  },
  buttonService: {
    flexDirection: 'column',
    margin: 10
  },
});
export default PayScreen;
```

npm install --save
expo-permissions
expo-barcode-scanner

Buat src > components > pay > ParkingPayment.js

Daftarkan komponen ParkingPayment di stack
navigation yang ada di App.js

```
import React from 'react';
import * as Permissions from 'expo-permissions';
import {Button, Container, Content, Header, Text, View} from 'react-native';
import {BarCodeScanner} from 'expo-barcode-scanner';
import {StyleSheet, Vibration} from 'react-native';
import FooterSegment from '../Footer';

class ParkingPayment extends React.Component {
  state = {
    hasCameraPermission: null,
    scanned: false
  };

  async componentDidMount() {
    this.getPermission();
  }

  getPermission = async () => {
    const {status} = await Permissions.askAsync(Permissions.CAMERA);
    this.setState({hasCameraPermission: status === 'granted'});
  };

  handleBarCodeScanned = ({type, data}) => {
    Vibration.vibrate();
    this.setState({scanned: true});
    alert(`Bar code with type ${type} and data ${data} has been scanned`);
  };

  resetScanner() {
    this.setState({
      scanned: false
    });
  }
}
```



```
"native-base";
```

```
ons.CAMERA);  
ted'}}
```

```
as been scanned!`);
```

```

render() {
  return (
    <Container>
      <Header>
      </Header>
      <Content>
        <BarcodeScanner
          onBarcodeScanned={this.state.scanned ? undefined
          style={styles.cameraView}
        />
        <View
          style={{
            marginTop: 10,
          }}>
          <Button style={styles.buttonScan} full rounded
            onPress={() => this.setState({scanned: fa
              <Text>Scan Again</Text>
            </Button>
          </View>
        </Content>
        <FooterSegment />
      </Container>
    )
  }
}

```

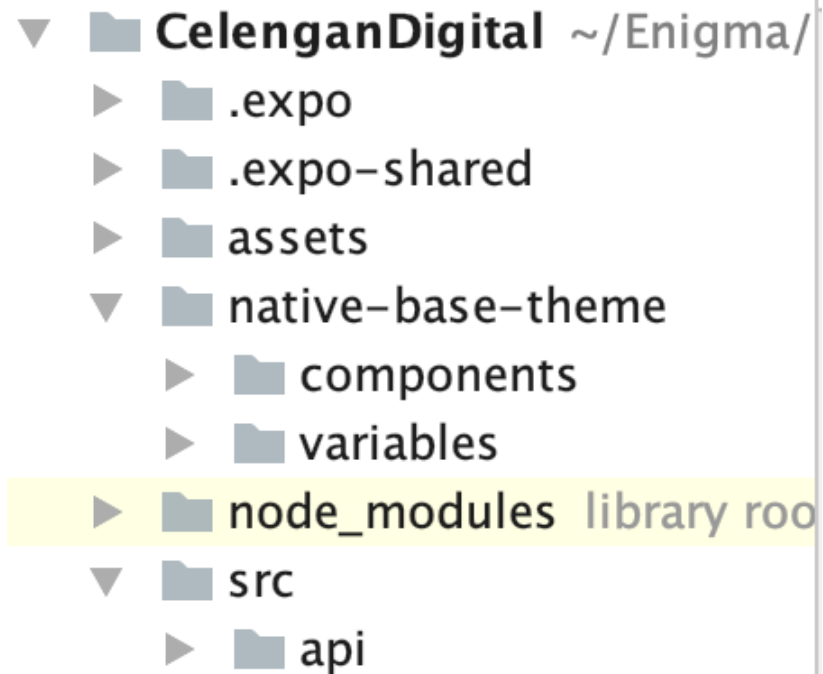
```

const
  styles = StyleSheet.create({
    buttonScan: {
      width: 200,
      marginLeft: 'auto',
      marginRight: 'auto'
    },
    cameraView: {
      height: 600,
      width: '100%'
    }
  });
export default ParkingPayment;

```

{

jalankan pada terminal
node node_modules/native_base/ejectTheme.js



Ubah native-base-theme > variables > platform.js

ndPrimary: platform \equiv PLATFORM.IOS ? '#007aff' : '#0cb9ff',

Ubah semua hex color yang berkaitan (bisa menggunakan find-replace all)

Pada src > components > Home.js, bungkus dengan StyleProvider component

```
Home.js x
1 import React from 'react';
2 import {
3   Card, CardItem, Container, Content, Grid, Header, Icon, ListItem, Row, StyleProvider, Text,
4   View
5 } from "native-base";
6 import FooterSegment from "../Footer";
7 import getTheme from '../../native-base-theme/components';
8 import platform from '../../native-base-theme/variables/platform';
9
10 class HomeScreen extends React.Component {
11   state = {isShowDetail: false, iconName: 'arrow-dropdown'};
12
13   doShowDetail = () => {...};
14
15   render() {
16     return (
17       <StyleProvider style={getTheme(platform)}>
18         <Container>
19           <Header/>
20           <Content padder>
```