THEMING REACT NATIVE COMPONENTS

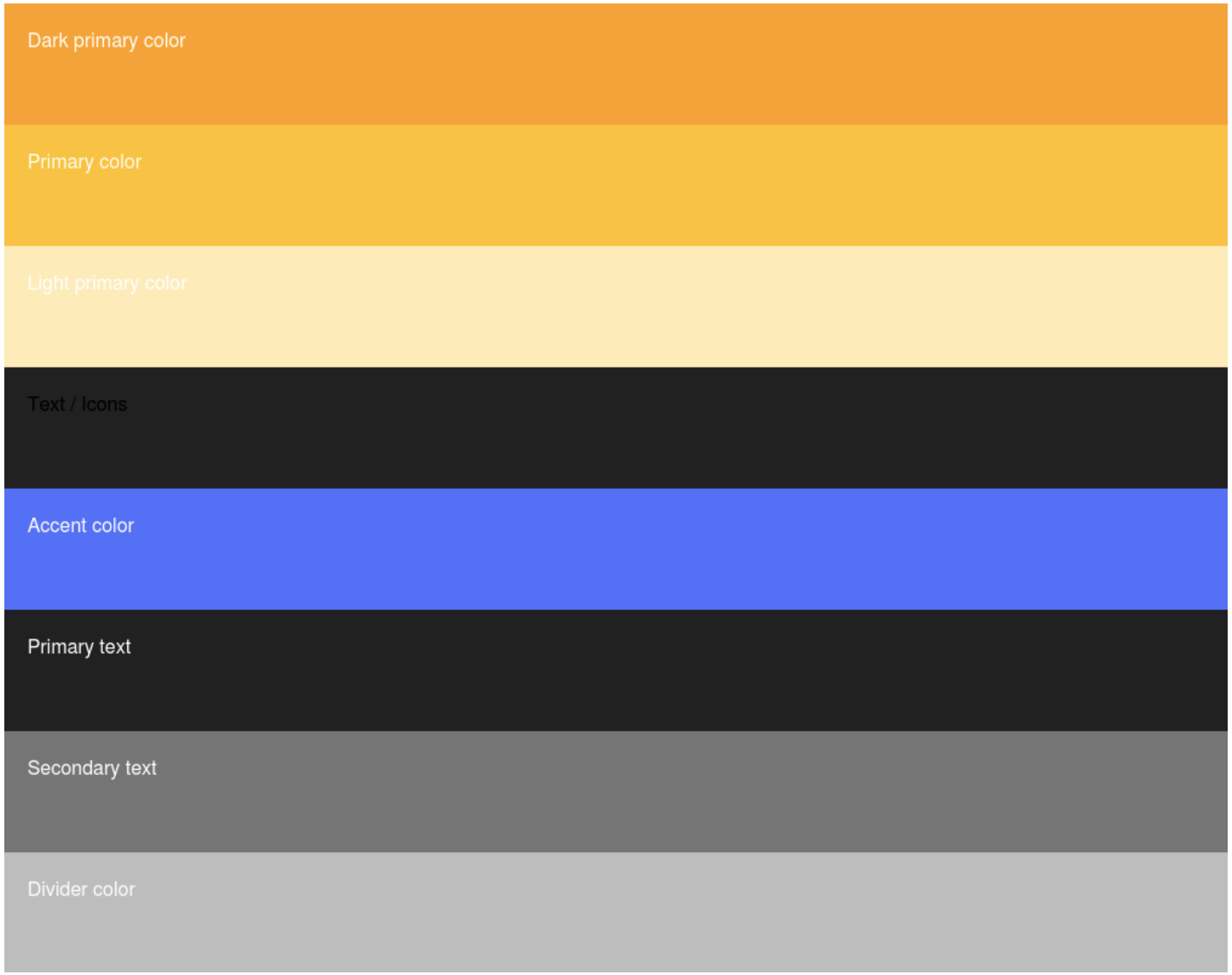
WHO AM I?

Binoy Patel

binoy.io

@binoyp14

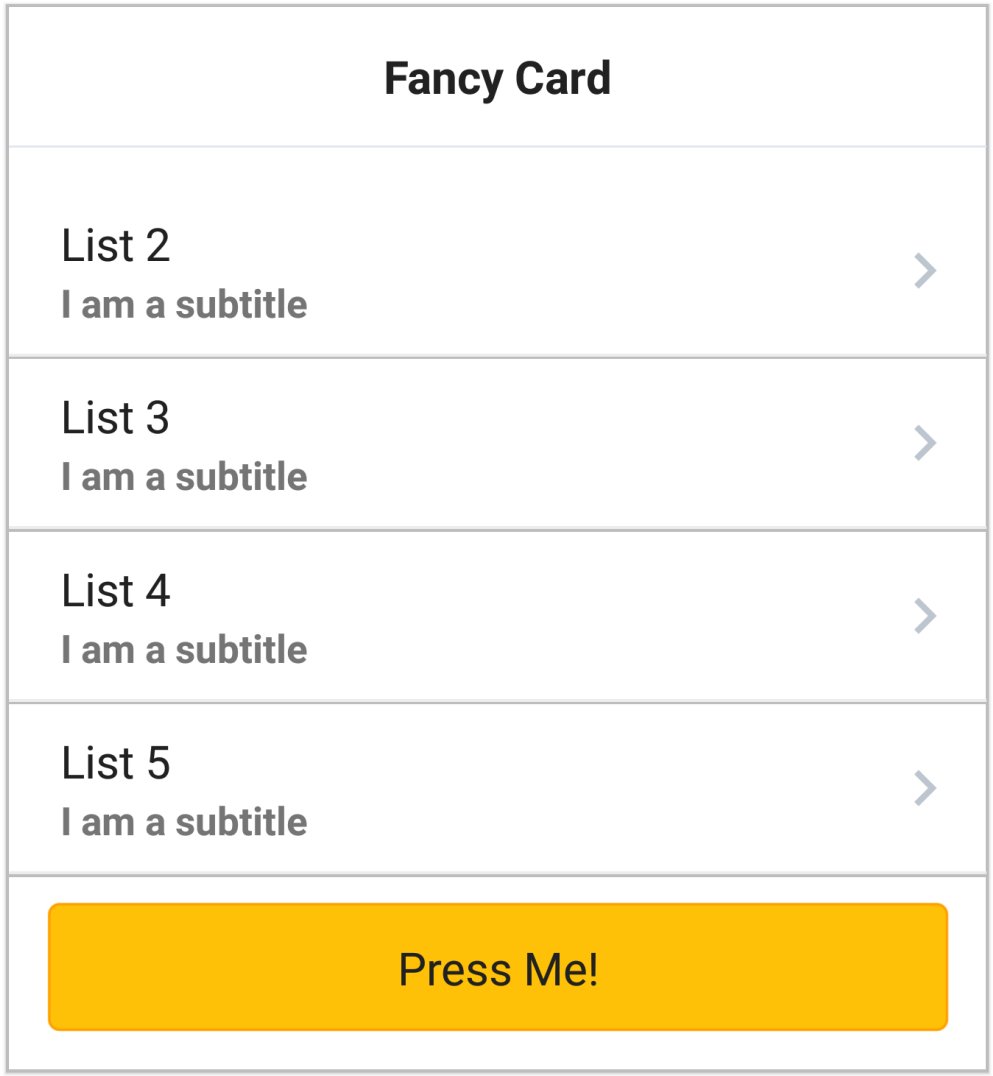
Color Palette



USING REACT NATIVE ELEMENTS

```
<Button
  color="#212121"
  backgroundColor="#FFC107"
  title="Press Me!"
  borderRadius={4}
  buttonStyle={{ borderColor: '#FFA000', borderWidth: 1}}
/>
```

Component Preview



IMPLEMENTATION

```
<Card
  title="Fancy Card"
  containerStyle={{ paddingHorizontal: 0, borderColor: "#BdBDBD" }}
  dividerStyle={{ borderColor: "#BDBDBD" }}
  titleStyle={{ color: "#212121" }}
>
  <ListItem
    title="List 2"
    subtitle="I am a subtitle"
    titleStyle={{ color: '#212121'}}
    subtitleStyle={{color: '#757575'}}
  />
  <Divider style={{ backgroundColor: '#BdBDBD'}}/>
  <ListItem
    title="List 3"
    subtitle="I am a subtitle"
    titleStyle={{ color: '#212121'}}
    subtitleStyle={{color: '#757575'}}
  />
  <Divider style={{ backgroundColor: '#BdBDBD'}}/>
  <Button
    color="#212121"
    backgroundColor="#FFC107"
    title="Press Me!"
    borderRadius={4}
    buttonStyle={{ borderWidth: 1, marginTop: 10}}
  />
</Card>
```


SUCH CODE REUSE
MUCH DRY. WOW.
memegenerator.net

With Theming Support

```
const theme = {
  dividerColor: '#BDBDBD',
  primaryTextColor: '#212121',
  secondaryTextColor: '#757575',
  primaryColor: '#FFC107',
};

<ThemeProvider theme={theme}>
  <Card
    title="Fancy Card"
    containerStyle={{ paddingHorizontal: 0 }}
  >
    <ListItem
      title="List 2"
      subtitle="I am a subtitle"
    />
    <Divider />
    <ListItem
      title="List 3"
      subtitle="I am a subtitle"
    />
    <Divider />
    <Button
      title="Press Me!"
      borderRadius={4}
      buttonStyle={{ borderWidth: 1, marginTop: 10}}
    />
  </Card>
</ThemeProvider>
```

How does it work?

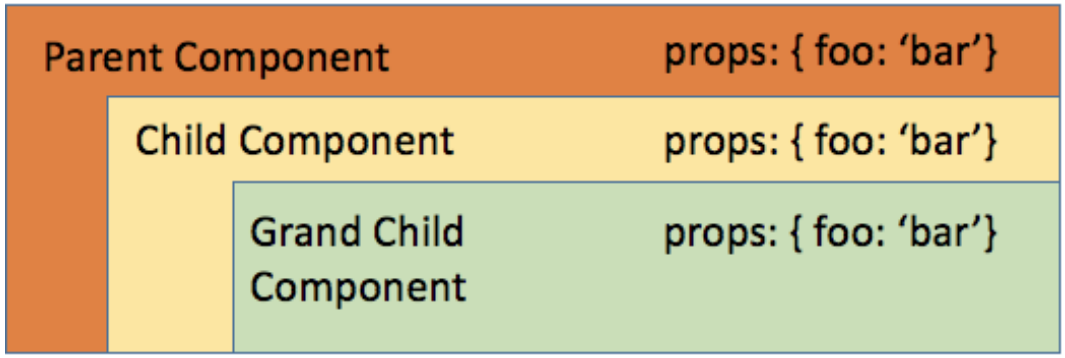
- High Order Components
- Context

RENDERING THE CHILDREN

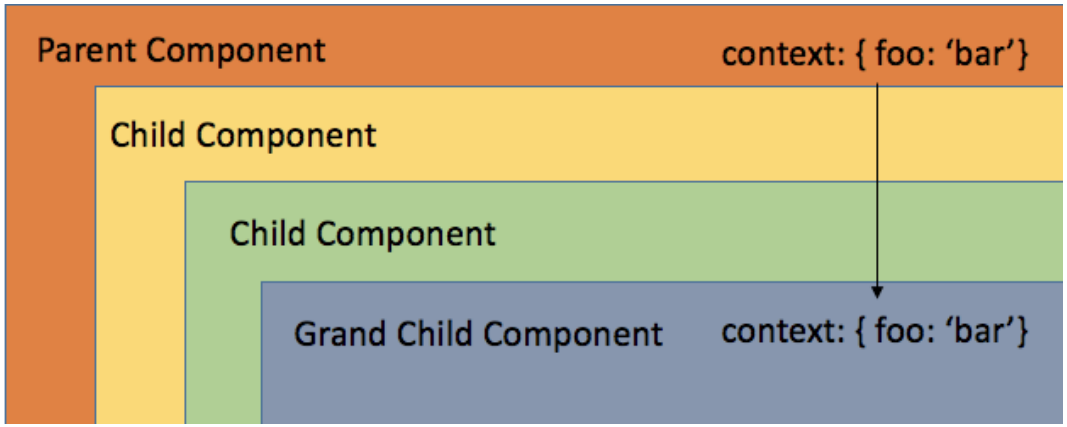
```
export default class ThemeProvider extends Component {
  render() {
    const { children } = this.props;
    const count = React.Children.count(children);
    if (count === 1) {
      return React.Children.only(children);
    } else {
      return (
        <View>
          {children}
        </View>
      );
    }

    return null;
  }
}
```

What is Context

To understand context, first lets take a look at how props are passed to children



Unlike props which need to be passed down by each child. Child components can actually require the context as they need



Using Context

```
class ParentComponent extends Component {
  getChildContext() {
    return {
      theme: { color: 'blue' }
    }
  }

  static childContextTypes = {
    theme: PropTypes.object
  }
}

export default class GrandChildComponent extends Component {
  static contextTypes = {
    theme: PropTypes.object
  }

  // this.context.theme
  ...
}
```

Context inside the ThemeProvider

```
export default class ThemeProvider extends Component {
  getChildContext() {
    if (this.props.hasOwnProperty('theme')) {
      const newTheme = {...defaultTheme, ...this.props.theme};
      return {
        theme: newTheme,
      };
    } else {
      return {
        theme: defaultTheme,
      };
    }
  }

  static childContextTypes = {
    theme: React.PropTypes.object
  }

  render() {
    ...
  }
}
```

Comparing different paradigms

CSS Way in React Native

```
const theme = {
  'library.ui.View': {
    '.h-center': {
      alignItems: 'center',
    },
    '.v-center': {
      justifyContent: 'center',
    },
    '.flexible': {
      flex: 1,
    },
    flexDirection: 'column',
  },
};

class HelloWorld extends Component {
  render() {
    return (
      <StyleProvider style={theme}>
        <View styleName="flexible vertical v-center h-center">
        </View>
      </StyleProvider>
    );
  }
}
```

Theming Each component

```
const buttonTheme = themeManager.getStyle('Button')

const newButtonTheme = {
  ...buttonTheme,
  BUTTON_FONT_COLOR: '#fff',
  BUTTON_PRIMARY_COLOR: '#2f8cff',
}

themeManager.setSource('Button', () => (newButtonTheme))
```

React Native Elements Way

```
// Theming whole application

<ThemeProvider theme={theme}>
  <App />
</ThemeProvider>

// Theming one component

<ThemeProvider theme={theme}>
  <Button />
</ThemeProvider>

// Theming multiple components separately

<ThemeProvider theme={lightTheme}>
  <Button />
  <Tile />
</ThemeProvider>
<ThemeProvider theme={darkTheme}>
  <Card />
  <SocialButton />
</ThemeProvider>
```

Resources

- github.com/binoy14/react-native-theming
- github.com/react-native-training/react-native-elements