What is React Native?

- React Native is a framework that allows you to build mobile applications using React (JavaScript/TypeScript).

- Cross-platform development means writing code once that can run on multiple platforms.

- React Native is a cross-platform framework because you can write one codebase in JavaScript and deploy it to both IOS and Android.

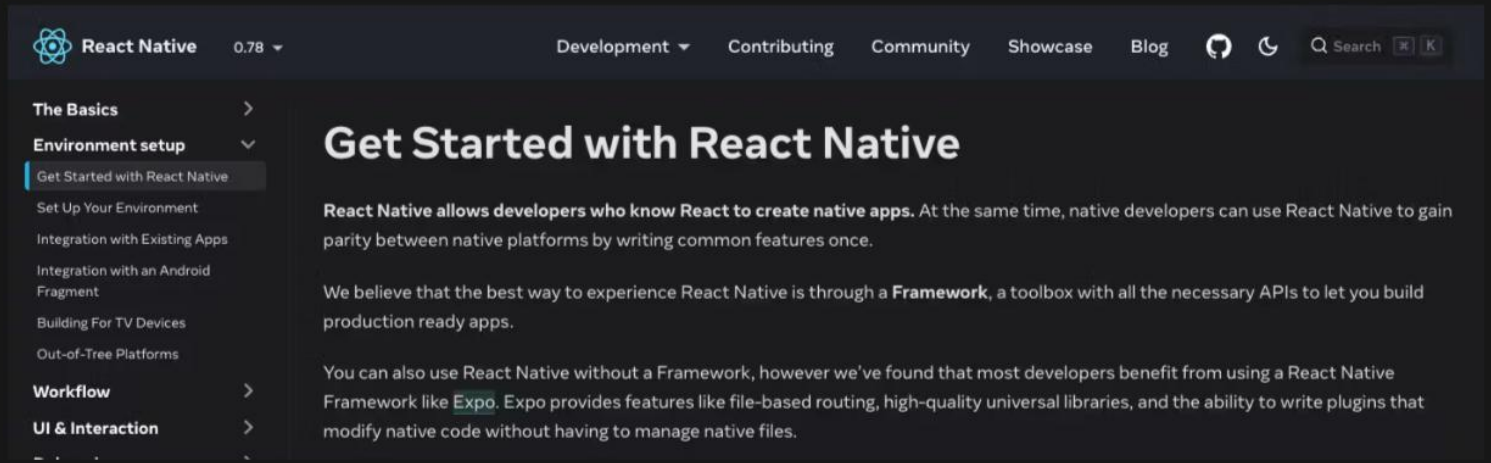
Back in the old days?

- Macbook required
- XCode as your IDE

- Had to learn Android SDK and its frameworks
- Android Studio/Eclipse as the IDE

React Native by itself is not enough!

(screenshot from docs) 👇



Go-to Framework for React Native?

Expo!

They're not the same thing!

VS

1- Component Structure

```jsx
import React from 'react';

const WebComponent = () => {
  return (
    <div className="container">
      <h1>Welcome</h1>
      <p>This is a web component</p>
    </div>
  );
};
```

```jsx
// React Native
import React from 'react';
import { View, Text } from 'react-native';

const NativeComponent = () => {
  return (
    <View style={styles.container}>
      <Text style={styles.title}>Welcome</Text>
      <Text>This is a native component</Text>
    </View>
  );
};
```

2- Styling

```jsx
// React Web - Using CSS
const WebStyledComponent = () => {
  return (
    <div className="card">
      <img src="/profile.jpg" className="profile-image" />
      <div className="content">
        <h2>John Doe</h2>
        <p>Web Developer</p>
      </div>
    </div>
  );
};
```

```jsx
// React Native - Using StyleSheet
import { StyleSheet } from 'react-native';

const NativeStyledComponent = () => {
  return (
    <View style={styles.card}>
      <Image
        source={require('./profile.jpg')}
        style={styles.profileImage}
      />
      <View style={styles.content}>
        <Text style={styles.name}>John Doe</Text>
        <Text style={styles.role}>Mobile Developer</Text>
      </View>
    </View>
  );
};
```

```css
/* CSS file */
.card {
  padding: 16px;
  border-radius: 8px;
  box-shadow: 0 2px 4px rgba(0,0,0,0.1);
}

.profile-image {
  width: 100px;
  height: 100px;
  border-radius: 50%;
}
```

```jsx
const styles = StyleSheet.create({
  card: {
    padding: 16,
    borderRadius: 8,
    shadowColor: '#000',
    shadowOffset: { width: 0, height: 2 },
    shadowOpacity: 0.1,
    shadowRadius: 4,
  },
  profileImage: {
    width: 100,
    height: 100,
    borderRadius: 50,
  },
});
```

3- Event handling

```jsx
// React Web
const WebButton = () => {
  const handleClick = (event) => {
    console.log('Button clicked:', event);
  };

  return (
    <button
      onClick={handleClick}
      onMouseOver={() => console.log('Mouse over')}
    >
      Click me
    </button>
  );
};
```

```jsx
// React Native
const NativeButton = () => {
  const handlePress = (event) => {
    console.log('Button pressed:', event);
  };

  return (
    <TouchableOpacity
      onPress={handlePress}
      onLongPress={() => console.log('Long press')}
    >
      <Text>Press me</Text>
    </TouchableOpacity>
  );
};
```

4- Lists

```jsx
// React Web
const WebList = ({ items }) => {
  return (
    <div className="list-container">
      {items.map((item) => (
        <div key={item.id} className="list-item">
          <h3>{item.title}</h3>
          <p>{item.description}</p>
        </div>
      ))}
    </div>
  );
};
```

```jsx
// React Native
const NativeList = ({ items }) => {
  const renderItem = ({ item }) => (
    <View style={styles.listItem}>
      <Text style={styles.itemTitle}>{item.title}</Text>
      <Text>{item.description}</Text>
    </View>
  );

  return (
    <FlatList
      data={items}
      renderItem={renderItem}
      keyExtractor={(item) => item.id}
      onEndReached={() => console.log("End reached")}
      onEndReachedThreshold={0.5}
    />
  );
};
```

5- Forms

```jsx
// React Web
const WebForm = () => {
  const [formData, setFormData] = useState({
    username: "",
    email: "",
  });

  return (
    <form onSubmit={(e) => e.preventDefault()}>
      <input
        type="text"
        value={formData.username}
        onChange={(e) =>
          setFormData({
            ...formData,
            username: e.target.value,
          })
        }
        placeholder="Username"
      />
      <button type="submit">Submit</button>
    </form>
  );
};
```

```jsx
// React Native
const NativeForm = () => {
  const [formData, setFormData] = useState({
    username: "",
    email: "",
  });

  return (
    <View style={styles.form}>
      <TextInput
        style={styles.input}
        value={formData.username}
        onChangeText={(text) =>
          setFormData({
            ...formData,
            username: text,
          })
        }
        placeholder="Username"
      />
      <TouchableOpacity onPress={() => console.log("Submit")}>
        <Text>Submit</Text>
      </TouchableOpacity>
    </View>
  );
};
```