React Components

Agenda

- What are React components?
- Types
- Getting Started

Components

In React, Everything is component.

A **Component** returns exactly **one** DOM element.

Types of components

- Stateful

It means that it stores information about the app/component's state. It also has the ability to change it.

- Stateless

These components never store any information, they just display their props and do not have ability to mutates them.This allows for complete transparency meaning that given the same inputs, it will always produce the same output.

Creating a component

```
class Button extends React.Component {
    render() {
        return (
            <div>
                Component
            </div>
        )
    }
}
```

```
class Button extends React.Component {
    render() {
        return (
            <div>
                React JS
            </div>
            <div>
                Components
            </div>
        )
    }
}
```

Nested Elements

```
class Button extends React.Component {
    render() {
        return (
            <div>
                <button onClick={this.props.functionRef}>
                    {this.props.btnText}
                </button>
            </div>
        )
    }
}
```

Styling

```
class Button extends React.Component {
    render() {
        return (
            <div style={{background: ‘#fff’}}>
                <button onClick={this.props.functionRef}>
                    {this.props.btnText}
                </button>
            </div>
        )
    }
}
```

Expressions

```
class Button extends React.Component {
    const a = 1;
    const b = 2;
    render() {
        return (
            <div>
                {a + b}
            </div>
        )
    }
}

//We can also do conditional rendering
```

Display a List

```
class Button extends React.Component {
    Const a = [1, 2, 3, 4];
    render() {
        return (
            a.map(item => (
                return(<div>{item}</div>)
            ))
        )
    }
}
```

Events

Events in React is very similar to events on DOM elements.

There are some syntactic differences:

- React events are named using camelCase, rather than lowercase.
- With JSX you pass a function as the event handler, rather than a string.

Refs

The **ref** is used to return a reference to your element.

It can be defined as

- String
- Function

<input ref="myInput" /> As string

<input ref={ref => (this._container = ref)} /> As function

Stateless components

```
const DisplayName = ({ name }) => (
 <div>
   {name}
 </div>
);
```

Exercise

- Create a UserList component that displays a table of users.

```
    Sample user list = [
    {name: 'John', age: 25, avatar:
'https://randomuser.me/api/portraits/men/15.jpg'},
    {name: 'Joe', age: 35, avatar:
'https://randomuser.me/api/portraits/men/13.jpg'},
    {name: 'Andrei', age: 45, avatar:
'https://randomuser.me/api/portraits/men/10.jpg'},
    {name: 'Ted', age: 29, avatar:
'https://randomuser.me/api/portraits/men/1.jpg' },
    {name: 'Ben', age: 30,
avatar:'https://randomuser.me/api/portraits/men/2.jpg' }
      ]
```

Thank you