# WHAT AND WHY REACT

#### WHAT!!!!

React is an open source front-end Javascript library used to build user interface and UI components.

Why Library!!!! And not Framework.

#### WHY??

Among other things React gives you the power to break down complex web applications to small components that could be loaded designed and rendered independently.

Take a look at AirBnB

## JSX

This is a syntax extension to Javascript that allow you to write both JS and markup together. (Not required but recommended)

const name = "Linus"

const Element = <h1>Hello world {name}<h1>

### DOM VS REACT VIRTUAL DOM

```
<!doctype html>
<html>
<head> <title>Example</title>
</head>
<body>
<div id="root">
</div>
</body>
</html>
```

How do we modify that to say Hello world Linus

Create and link a file index.js

var name = document.createElement("p")

name.innerText = "Hello world Linus"

document.getElementById("root").append(name)

```
Open a new file: index.js
Import React from "react"
import ReactDOM from "react-dom"
ReactDOM.render(
   Hello world Linus,
   document.getElementById("root")
```

# SANDBOX INTRO TO REACT