React JS Tutorial

Martin Chu

Objective

- What is JS?

- What is ReactJS?

- How to code without concrete instructions/guidance?

- How to solve problems in a brand new language?

- How to make a simple but presentable website?

- How to work with team members?

Overview of ReactJS/JS

JavaScript

- Dynamically typed
- Works with HTML/CSS

ReactJS

- Front End Library developed by Facebook
- State, Component

Sample Code

```jsx
class Board extends React.Component {
  constructor(props) {
    super(props);
    this.state = {
      squares: Array(9).fill(null),
      xIsNext: true,
    };
  }

  handleClick(i) {
    …
  }
  renderSquare(i) {
    …
  }
  render() {
    const winner = calculateWinner(this.state.squares);
    let status;
    if (winner) {
      status = 'Winner: ' + winner;
    } else {
      status = 'Next player: ' + (this.state.xIsNext ? 'X' : 'O');
    }
    return (
      <div>
          <div className="status">{status}</div>
          <div className="board-row">
            {this.renderSquare(0)}
            {this.renderSquare(1)}
            {this.renderSquare(2)}
          </div>
          <div className="board-row">
            {this.renderSquare(3)}
            {this.renderSquare(4)}
            {this.renderSquare(5)}
          </div>
          <div className="board-row">
            {this.renderSquare(6)}
            {this.renderSquare(7)}
            {this.renderSquare(8)}
          </div>
        </div>
    );
  }
}
```

Project Structure/Entry Point

```
package.json
public/
     ...
     (where you store your static assets)
src/
     Page/
          Submission/
               YOUR_TEAM_NAME/
                    YOUR_TEAM_NAME.js
          Example.js
     Components/
     Data/
     index.js
     App.js
...
```

Instructions

Boot up your website:

```
$ npm install
$ yarn start
```

REMEMBER: change your file name to your team name

Tips

- Check out the example page
- Walk through the official react js tutorial

References

- https://reactjs.org/tutorial/tutorial.html
- https://canvasjs.com/

- Google