Babel

Monday, March 21, 2022   2:43 PM

- React Javascript files may contains a combination of
  - Javascript code
    - Functions
    - Classes
  - JSX Code

- These files may get an extension
  - .jsx <——–-- JavaScript with xml
    - In earlier versions it was a compulsory requirement
  - .js
    - Now .js file may also contain JSX
    - **We will use this apporach**
  - .tsx
    - Used when we write our React Application in TypeScript

- No browser understands JSX.
  - It is not HTML
  - It is not String

- We need tools to convert JSX logic in to pure JavaScript logic

A Typical jsx file

```
const myStyle={
    backgroundColor: "blue",
};
const handleClick=()=>alert("hello");

const submit=<button
             style={myStyle}
             onClick={handleClick}
             >Submit</button> ;
```
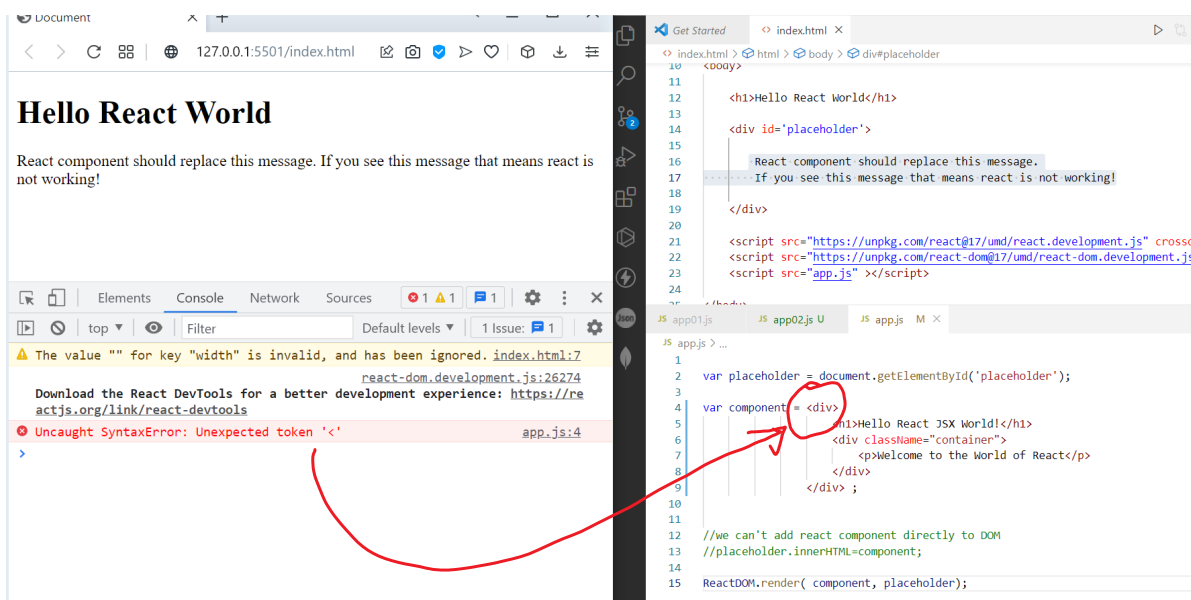
Babel/Typescript →

```
const myStyle={
    backgroundColor: "blue",
};
const handleClick=()=>alert("hello");

const submit = React.createElement(
        "button",
        {
            style: myStyle,
            onClick: handleClick
        },
        "Submit"
) ;
```

- JSX is written without quotes of any kind. It is not a String
- Browsers don't understand JSX. They never will.
- We need to convert JSX to React.createElement before my code can run.

Default Browser Reaction on seeing JSX

What is Babel?

- Babel is a utility (available via NPM)
- It can translate
  - JSX —> React.createElmement
  - ES2015+ syntax —> ES5 Syntax
    - Makes your code work on even older browsers

Babel and Webpack can work together

- Webpack can
  - Resolve modules by merging all .js files together
  - Compress the created html and JavaScript
  - Can run plugins before or after merging .js files together

- Webpack plugin
  - Can extend the functionality of webpack.
  - They may help us
    - Move html file
    - Compress html file
    - Inject js file in html file

Babel webapack plugin

- This plugin translates our source code using babel to pure JavaScript code before it is put together by webpack.