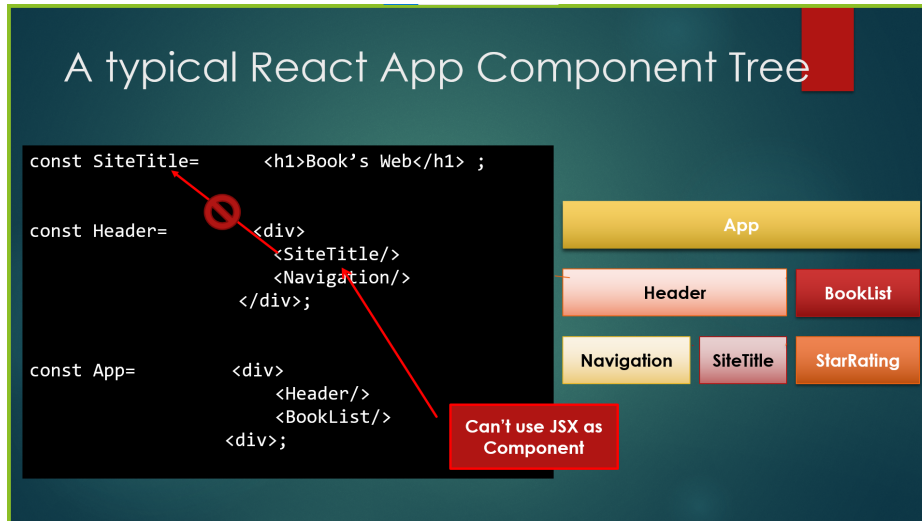# A React Component

Monday, March 21, 2022   5:11 PM
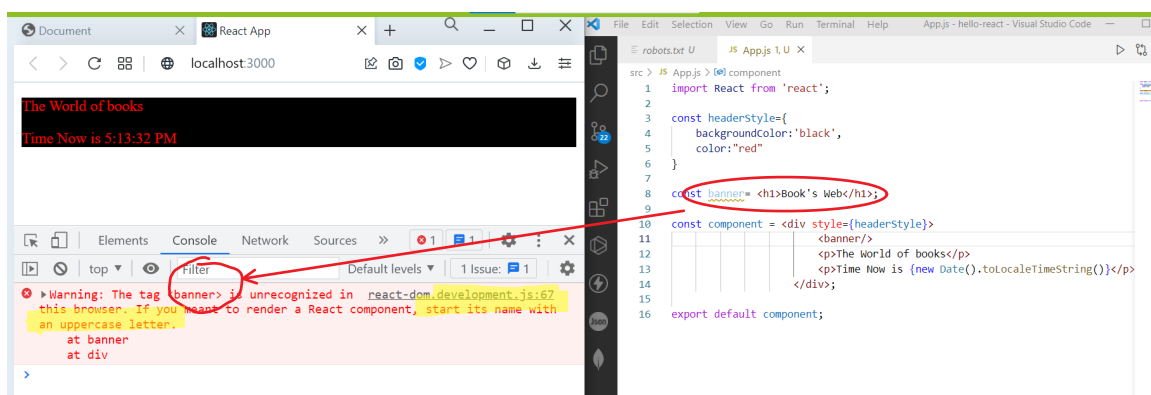
A JSX in itself is NOT a component

- A Bunch of JSX in itself is not a component
- It can be a part of component.

Naming Convention
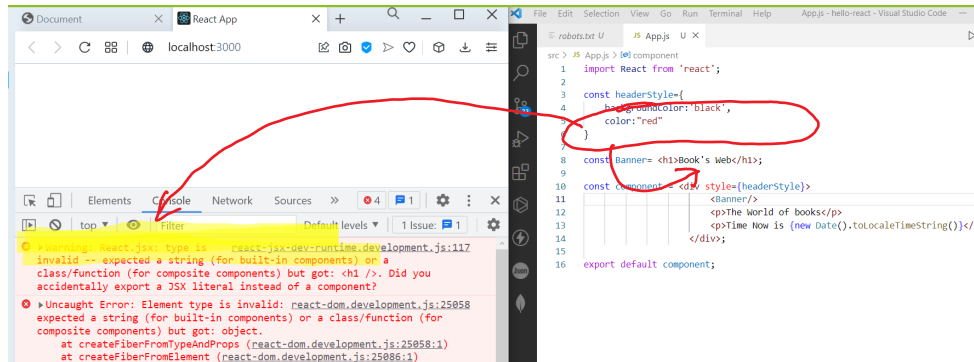
- The built-in HTML elements like h1, p, a should always be written in lower case letters in JSX
    - In html
        - we can write
            - <h1>Hello</h1> or
            - <H1>Hello</H1>
        - Both are correct
    - In JSX
        - We must write
            - <h1>Hello</h1> and not
            - <H1>Hello</H1>

- User Defined components should always begin with Upper case letter.

IMPORTANT!

- At this stage it is a warning an NOT an error.
- JSX ignores "banner"
- Browser ignores "banner"

JSX by itself is NOT a component

- A bunch of JSX is NOT a component even if written in upper case.

What is a React Component?

- A react component is a set of
  - Visibile UI (JSX)
  - Functionality (JS logic)

- A react component should be smart not dumb
  - It should know how to do some task lie
    - React to a button click
    - React to changes in style/color/value

- Is represented using either a class or a function
- A component is some that renders an JSX

A React Function Component

```
function  MyComponent(){

    //do whatever you want to do

    return <h1>Some JSX</h1>;
}
```

- Can also be simplified using Lambda Expression

```
const MyComponent = () => <h1>Some JSX</h1>
```

A React Class Component

```
class  MyComponent2 extends React.Component{

    render(){
        //do whatever you want to do

        return <h1>Some JSX</h1>

    }
}
```

Different Approach Creating a Component

```
 8   function SiteTitle() {
 9
10       return <h1>Book's Web</h1>;
11
12   }
13
14   class Header extends React.Component {
15       render() {
16           return <div style={headerStyle}>
17               <SiteTitle />
18               <p>World of books...</p>
19           </div>
20       }
21   }
22
23
24   const HomePage = ()=> <div>
25       <h2>Home Page</h2>
26       <p>You are on the Home Page</p>
27   </div>
28
29
30   const App = ()=>{
```

- Any function that returns a bunch of JSX can be considered as a React Component

- A class comonent
  1. Extend React.Component base class
  2. Define a render() function to return JSX

- A component can also be a lambda expression.
  - Here the lambda contains a single statement <div>...</div>
  - return becomes implied

```
30    const App = ()=>{
31
32        return <div >
33            <Header />
34            <HomePage/>
35        </div>;
36    }
37    export default App;
```

- If lambda has body marked by **{},** we must explicitly use 'return' statement

Rendering the component using ReactDOM

```
1    import ReactDOM from 'react-dom';
2
3    import App from './App';
4
5    ReactDOM.render( <App/>,
6        document.getElementById("root")
7        );
```

- When we use a component as JSX
  - The function component is automatically called
  - Class component
    - Gets created
    - render method is called.

Important!

- Method name and class name are not components
- They must begin with upper case letter
- This can differentiate
  - header <—— standard html tag
  - Header <———-- User defined React Component
  - h1 <—- standard html tag
  - H1 <—— custom React Component