

## Chapter 03 - Laying the Foundation

### Topics

- JSX
- React.createElement vs JSX
- Benefits of JSX
- Behind the Scenes of JSX
- Babel & parcel role in JSX
- Components
- Functional Components
  - Composing Components

### Assignment

- What is JSX?  
JSX is a html like syntax
- Superpowers of JSX  
The superpowers of JSX are
  1. JS integration
  2. Conditional Rendering
  3. looping
  4. Dynamic Attributes
- Role of `type` attribute in script tag? What options can I use there?  
This attribute indicates the type of script represented.  
its options are

1. [importmap](#)
2. [module](#)
3. [speculationrules](#)

- `{TitleComponent}` VS `<TitleComponent/>`  
VS  
`<TitleComponent></TitleComponent>` in JSX

the `{TitleComponent}` this syntax is used when we need to pass the component as a prop

`<TitleComponent/>` It is normal function component called and rendered

`<TitleComponent></TitleComponent>` This is also an normal component called and rendered , its main purpose is to render group of children between those tags

### Coding Assignment:

- Create a Nested header Element using `React.createElement(h1,h2,h3)` inside a div with class "title"
  - Create the same element using JSX
  - Create a functional component of the same with JSX
  - Pass attributes into the tag in JSX
  - Composition of Component(Add a component inside another)
- `{TitleComponent}` vs `{<TitleComponent/>}`  
vs  
`{<TitleComponent></TitleComponent>}` in JSX
- Create a Header Component from scratch using Functional Components with JSX
  - Add a Logo on left
  - Add a search bar in middle
  - Add User icon on right
  - Add CSS to make it look nice

### References

- Babel: <https://babeljs.io/>
- Attribute Type: <https://developer.mozilla.org/en-US/docs/Web/HTML/Element/script#attr-type>

- JS Modules: <https://developer.mozilla.org/en-US/docs/Web/JavaScript/Guide/Modules>
- Babel Playground: <https://babeljs.io/repl#>
- React without JSX: <https://reactjs.org/docs/react-without-jsx.html>