

Code Test: React Component Builder

Description

Conversional wants to make its widget more customisable. Different partners should be able to change the content of the app based on configuration only. For this you are tasked with creating a prototype that is able to render a JSON data structure into a functioning React App.

You receive two sample files `data.json`, `data2.json` and a list of React components that can appear in the data structures to be rendered.

Additional Requirements

One of our partners proposed a new feature. He wants to be able to add more dynamic behaviour. He said that he wants to trigger the opening of the `ModalComponent` by clicking on several specific `LinkComponent` and `ButtonComponent` that he uses in his `data.json`. For him it is very important to decide which links and buttons are triggering the modal, independent from their location in the JSON file.

Your additional task is to evaluate this requirement and propose a solution together alongside a documentation how the JSON structure needs to be changed.

Data Structure

The data files contain a set of nested components, that need to be rendered. in the following example a `ModalComponent` should be rendered, that contains 2 children: a headline order 1 and a text paragraph that should be within the modal.

```
{
  Content: {
    type: "ModalComponent",
    props: {
      isOpen: false,
      width: 500
      height: 600
    }
  },
  Children: {
    child1: {
      Content: {
        type: "H1Component",
        props: {
          text: "Tool tips for use"
        }
      }
    },
    child2: {
      Content: {
        type: "ParagraphComponent",
```

```

    props: {
      text: "When using our widget, the following
aspects are important"
    }
  }
}
}
}
}

```

Components

Your app should be able to render the following components. You will find there purpose in a short description next to the component name. There is no visual specification or detailed feature list. Don't worry about that, it is sufficient to represent a basic sample of the component. It is up to you if a component is able to render children and where those children are placed.

Hint: You don't need to implement all components from scratch. Feel free to use node modules as you like.

- **ModalComponent:** If opened shows a backdrop and a modal layer, can be closed again and have children.
- **H1Component:** Headline of type H1
- **H2Component:** Headline of type H2
- **ParagraphComponent:** Text paragraph
- **ListComponent:** A list with optional bullets
- **ButtonComponent:** A clickable button (for demonstration you can `console.log` on button click)
- **LinkComponent:** A clickable link with a URL that opens in a new tab
- **BoxComponent:** A container with a visible border line that can have multiple children.

What we are looking for

- Use Javascript and React to build the app
- The given data structures are only samples, the app should also work with different data sets within the given limitations
- You don't need to invest in pretty layout/CSS. Focus on good architecture that is maintainable, flexible and extendable

Hand In

Hand in your assignment to tl@conversional.de with any notes, comments and assumptions you have made via e-mail. Attach the project as archive (zip, tar etc.) or GitHub link.