

# Function and Component

Use React to create a webpage that displays  
"Welcome {Name}!"

# Hello Mike!

```
class Welcome extends React.Component {
  constructor(props) {
    super(props);
  }
  render() {
    return (<h1>Hello {this.props.name}!</h1>);
  };
}
ReactDOM.createRoot(document.getElementById("root")).render(<Welcome name="Mike" />);
```

**A sample solution using React class**

can we use function!

isn't function an object!

```
function Welcome(props) {  
  return <h1>Hello {props.name}!</h1>;  
}
```

```
ReactDOM.createRoot(document.getElementById("root")).render(<Welcome name="Robert" />);
```

**A sample solution using React class**

Comment component

Consider this **Comment** component:



```
function Comment(props) {
  return (
    <div className="Comment">
      <div className="UserInfo">
        <img className="Avatar"
          src={props.author.avatarUrl}
          alt={props.author.name}
        />
        <div className="UserInfo-name">
          {props.author.name}
        </div>
      </div>
      <div className="Comment-text">
        {props.text}
      </div>
      <div className="Comment-date">
        {props.date.toLocaleDateString()}
      </div>
    </div>
  );
}
```

```
const comment = {
  date: new Date(),
  text: 'I hope you enjoy learning React!',
  author: {
    name: 'Hello Kitty',
    avatarUrl: 'http://placekitten.com/g/64/64'
  }
};
```

```
ReactDOM.createRoot(document.getElementById("root")).render(
  <Comment date={comment.date}
    text={comment.text}
    author={comment.author} />
);
```

```
function formatDate(date) {  
    return date.toLocaleDateString();  
}
```

This component can be tricky to change  
because of all the nesting, and  
it is also hard to reuse individual parts of it.

Don't be afraid to split components into smaller components.

extract **Avatar** from the component

```
function Avatar(props) {  
  return (  
    ... // fill here  
  );  
}
```

```
function Avatar(props) {  
  return (  
    <img className="Avatar"  
      src={props.user.avatarUrl}  
      alt={props.user.name}  
    />  
  );  
}
```

We can now simplify **Comment** a tiny bit



```
function Comment(props) {
  return (
    <div className="Comment">
      <div className="UserInfo">
        <Avatar user={props.author} />
        <div className="UserInfo-name">
          {props.author.name}
        </div>
      </div>
      <div className="Comment-text">
        {props.text}
      </div>
      <div className="Comment-date">
        {formatDate(props.date)}
      </div>
    </div>
  );
}
```

```
function Comment(props) {
  return (
    <div className="Comment">
      <div className="UserInfo">
        <img className="Avatar"
          src={props.author.avatarUrl}
          alt={props.author.name}
        />
        <div className="UserInfo-name">
          {props.author.name}
        </div>
      </div>
      <div className="Comment-text">
        {props.text}
      </div>
      <div className="Comment-date">
        {props.date.toLocaleDateString()}
      </div>
    </div>
  );
}
```

extract a **UserInfo** component that  
renders an **Avatar** next to the user's name

```
function UserInfo(props) {  
  return (  
    <div className="UserInfo">  
      // Complete Here  
    </div>  
  );  
}
```

```
function UserInfo(props) {  
  return (  
    <div className="UserInfo">  
      <Avatar user={props.user} />  
      <div className="UserInfo-name">  
        {props.user.name}  
      </div>  
    </div>  
  );  
}
```

This lets us simplify **Comment** even further

```
function Comment(props) {
  return (
    <div className="Comment">
      <UserInfo user={props.author} />
      <div className="Comment-text">
        {props.text}
      </div>
      <div className="Comment-date">
        {formatDate(props.date)}
      </div>
    </div>
  );
}
```

```
function Comment(props) {
  return (
    <div className="Comment">
      <div className="UserInfo">
        <img className="Avatar"
          src={props.author.avatarUrl}
          alt={props.author.name}
        />
        <div className="UserInfo-name">
          {props.author.name}
        </div>
      </div>
      <div className="Comment-text">
        {props.text}
      </div>
      <div className="Comment-date">
        {props.date.toLocaleDateString()}
      </div>
    </div>
  );
}
```



Hello Kitty

I hope you enjoy learning React!

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