

# Extracting Component

1. In the beginning, there is a Comment component which accepts author (an object), text (a string), and date (a date) as props, and describes a comment on a social media website.

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

//declare Comment component by function

```
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">  
        {formatDate(props.date)}  
      </div>  
    </div>  
  );  
}
```

//Declare and initialize comment object

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

//Comment component calls ReactDOM.render function

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

What happens?

Step 1: Comment component calls ReactDOM.render;

Step2: Set Comment's props equal to Object comment's properties value (not sure this is the right way to say)

Step3: Pass Comment's props into Comment component

Step4: ReactDOM re-renderDOM

## 2. Start to extract component with Avatar

//declare Avatar component

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

//change Comment component, Comment refer to new Avatar component

```
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>  
  );  
}
```

1.React calls the Avatar component with user={props.author} as the props.

2. Avatar component returns

```
<img className="Avatar"  
  src={author.avatarUrl}  
  alt={author.name}  
/>
```

as result

### 3. Further extract component with UserInfo

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

```
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>  
  );  
}
```