



# WEB TECHNOLOGIES

## React.JS – Complex Components

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# React.JS – Complex Components

## Advantages of using Component

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- Major advantage of using Components is Reusability
- Beyond that another major advantage is ***Composability***
- You can combine components to create more complex components.



# React.JS – Complex Components

## Composite Component

- Identify the visual elements
- Break them into individual components



tiger | Facts, Information, & Habitat ...  
britannica.com



tiger | Facts, Information, & Habitat ...  
britannica.com



# React.JS – Complex Components

## Composite Component...(cntd.)

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- Let us say the Complex Component is called SrchResult

```
ReactDOM.render(  
  <div>  
    <SrchResult/>  
  </div>,  
  document.querySelector("#container")  
);
```



# React.JS – Complex Components

## Composite Component...(cntd.)

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- SrchResult should be composed of a ResImage, ResCaption and ResLink components

```
class SrchResult extends React.Component {  
  render() {  
    return (  
      <div>  
        <ResImage/>  
        <ResCaption/>  
        <ResLink/>  
      </div>  
    );  
  }  
}
```



# React.JS – Complex Components

## Composite Component...(cntd.)

- Each of the individual components have their own class definition

```
class ResImage extends React.Component {  
  render() {  
    return (  
      <div>   
      </img> </div> );  
    }  
  }  
}
```

```
class ResLink extends React.Component {  
  render() {  
    return (  
      <div> <a  
        href="https://www.britannica.com/animal/tiger">  
        britannica.com </a> </div> );  
    }  
  }  
}
```

```
class ResCaption extends React.Component {  
  render() {  
    return (  
      <div> <p>tiger | Facts, Information and  
        Habitat...</p> </div> );  
    }  
  }  
}
```



# React.JS – Complex Components

## Composite Component...(cntd.)

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- To remove the hardcoding, the properties like src, href, caption text etc., the properties have to be passed on using this.props from the parent Components to it's sub components, as follows

```
<SrchResult      src="tiger.jpg"      href="https://www.britannica.com/animal/tiger"
  linktext="britannica.com" caption="tiger | Facts, Information and Habitat... " />
```



# React.JS – Complex Components

## Composite Component...(cntd.)

- Modify the components as follows

```
class ResImage extends React.Component {  
  render() {  
    return (  
      <div> <img src={this.props.src}>  
      </img> </div>  
    );  
  }  
}
```

```
class ResLink extends React.Component {  
  render() {  
    return (  
      <div> <a href={this.props.href}> {this.props.linktext}  
      </a> </div>  
    );  
  }  
}
```

```
class ResCaption extends React.Component {  
  render() {  
    return (  
      <div> <p>{this.props.caption}</p> </div>  
    );  
  }  
}
```





# React.JS – Complex Components

## Composite Component...(cntd.)

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- Styling can be added individually to the Composite Component and the individual components, as discussed earlier. For example,

```
<div style={srchResStyle}>
```

```
<div style={resLinkStyle}> <a href=... </a> </div>
```

```
<div style={resImageStyle}> <img src=...> </img> </div>
```

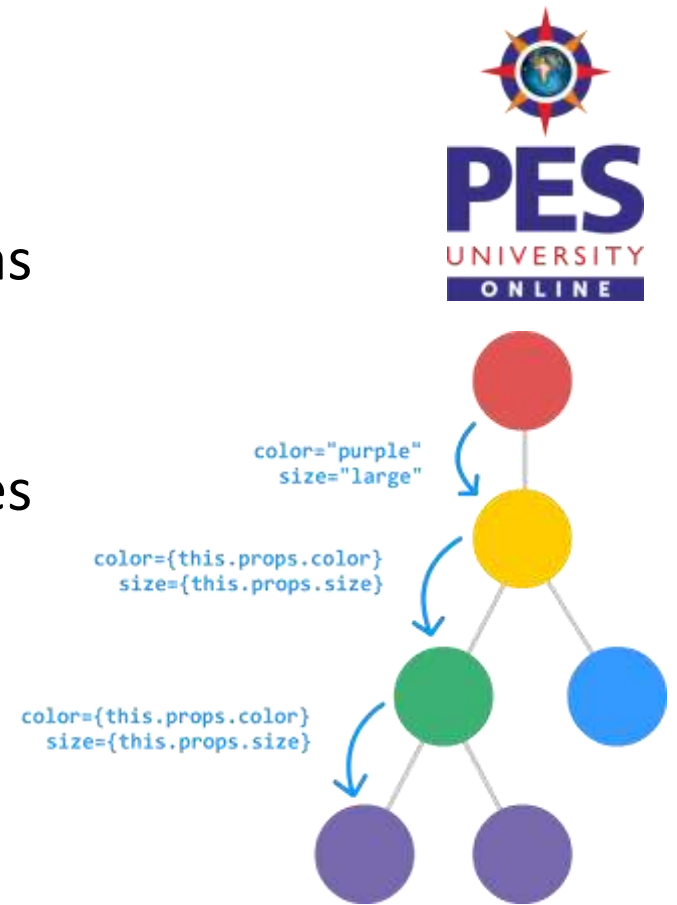
```
<div style={resCaptionStyle}> <p> ... </p> </div>
```



# React.JS – Complex Components

## Transferring Properties

- In the earlier example, transferring properties was not tedious as there was only one level of hierarchy
- If there are multiple levels of components, transferring properties will be very cumbersome
- To overcome that, we use the spread operator (...) as follows  
`<Display {...this.props}/>`





# THANK YOU

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