Video 3.3

React Events

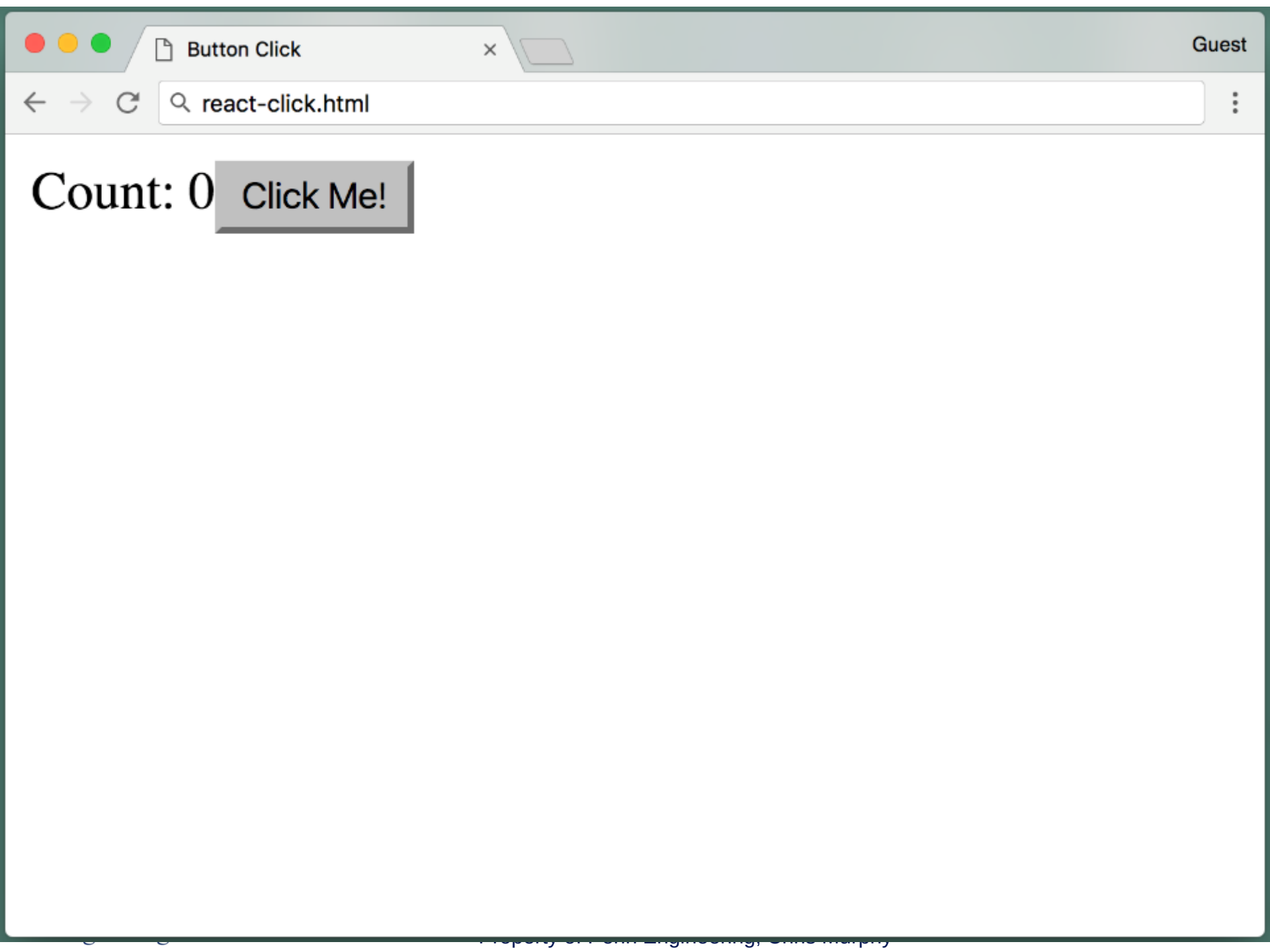
Chris Murphy

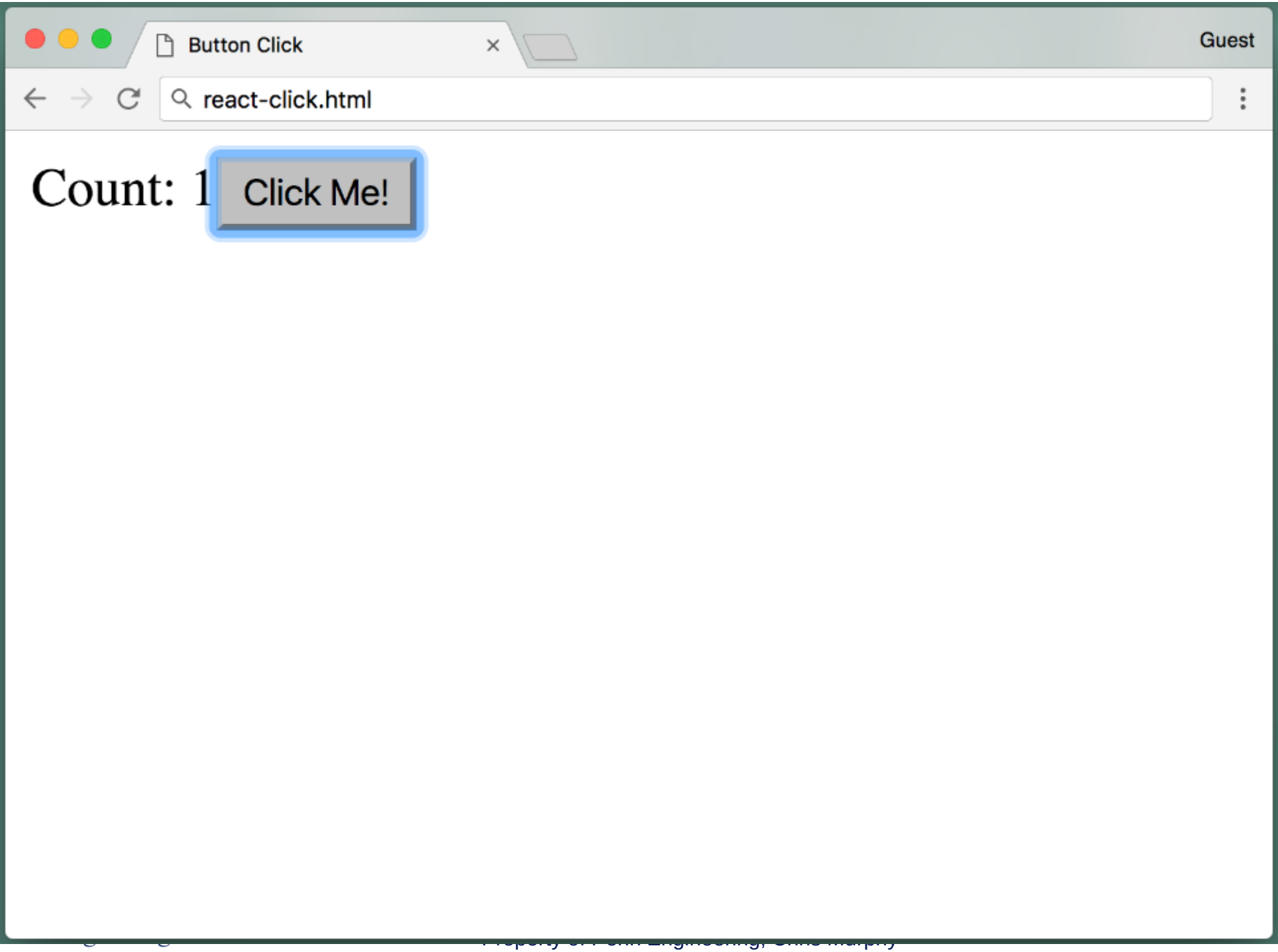
Review

- React allows us to insert JavaScript elements/components into VirtualDOM
- We can create additional components using the `React.Component` class as a base
- Components have two types of attributes
  - **Properties:** set at initialization and immutable thereafter
  - **State:** change in response to user events
- Component callback functions can be bound to HTML events

Changing Component State

- A component's state typically changes in response to some user action or "event"
- We can **bind** an event to a callback function within a React component
- That component can then change state using its `setState` function
- This will automatically re-render the component and any other affected component


Button Click
Guest
react-click.html
Count: 0
Click Me!


Button Click
Guest
react-click.html
Count: 1
Click Me!

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    super(props);
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  }

  incrementCount() { // callback function
    this.setState( { count: this.state.count + 1; } );
  }

  render() { // invoked when setState is called
   return (
      <div> Count: { this.state.count }
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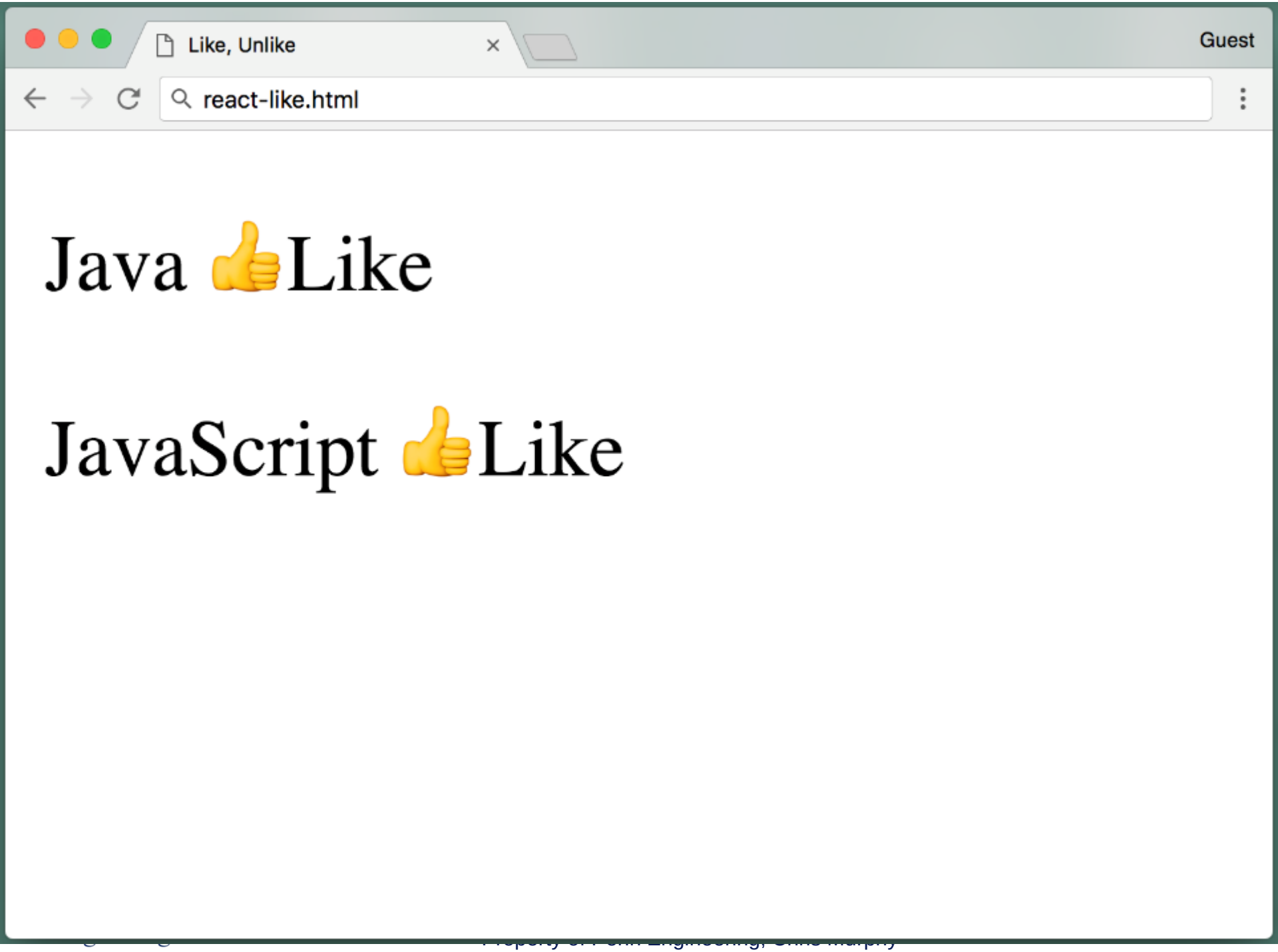
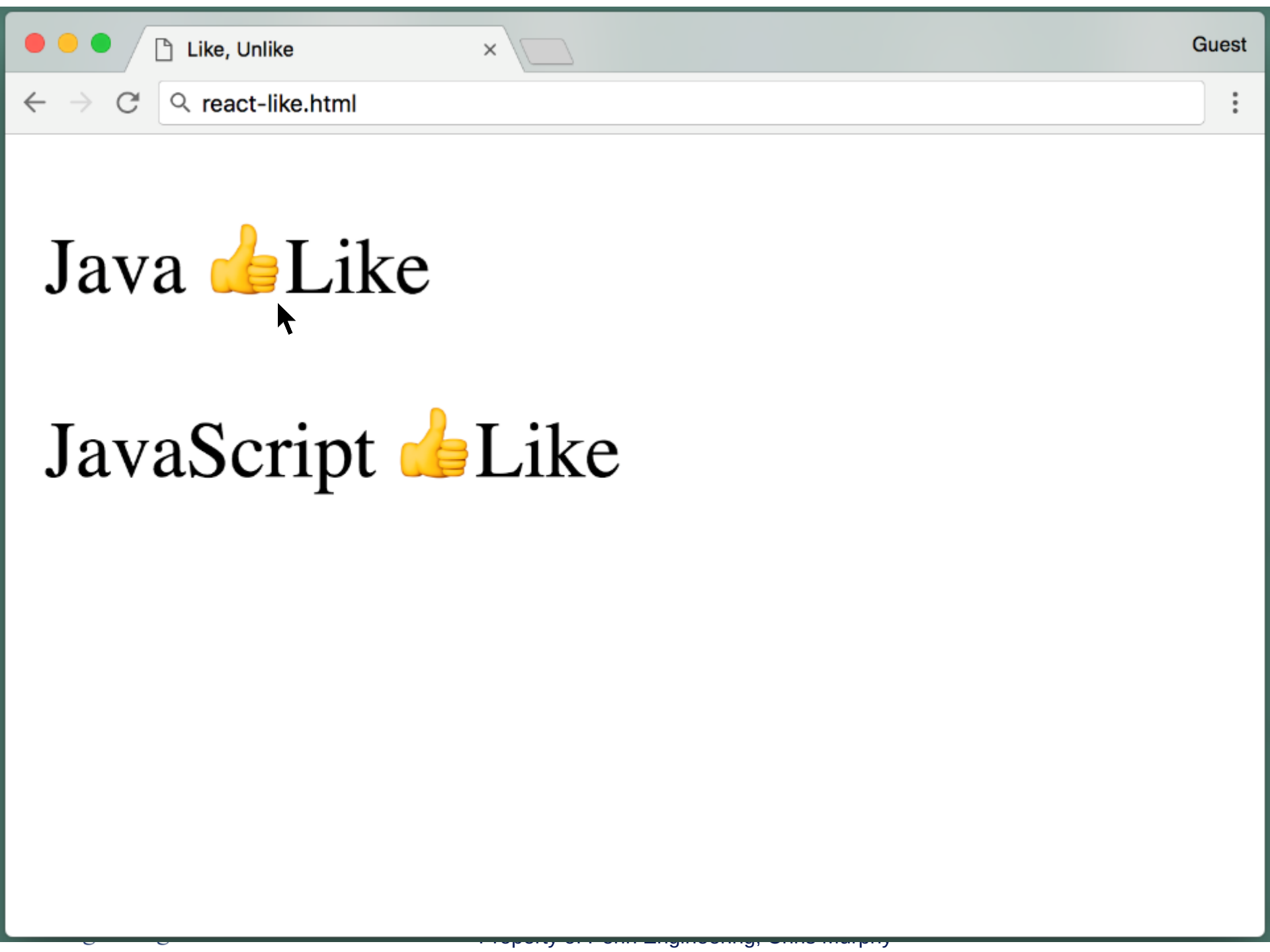

Like, Unlike
Guest
react-like.html
Java 👍Like
JavaScript 👍Like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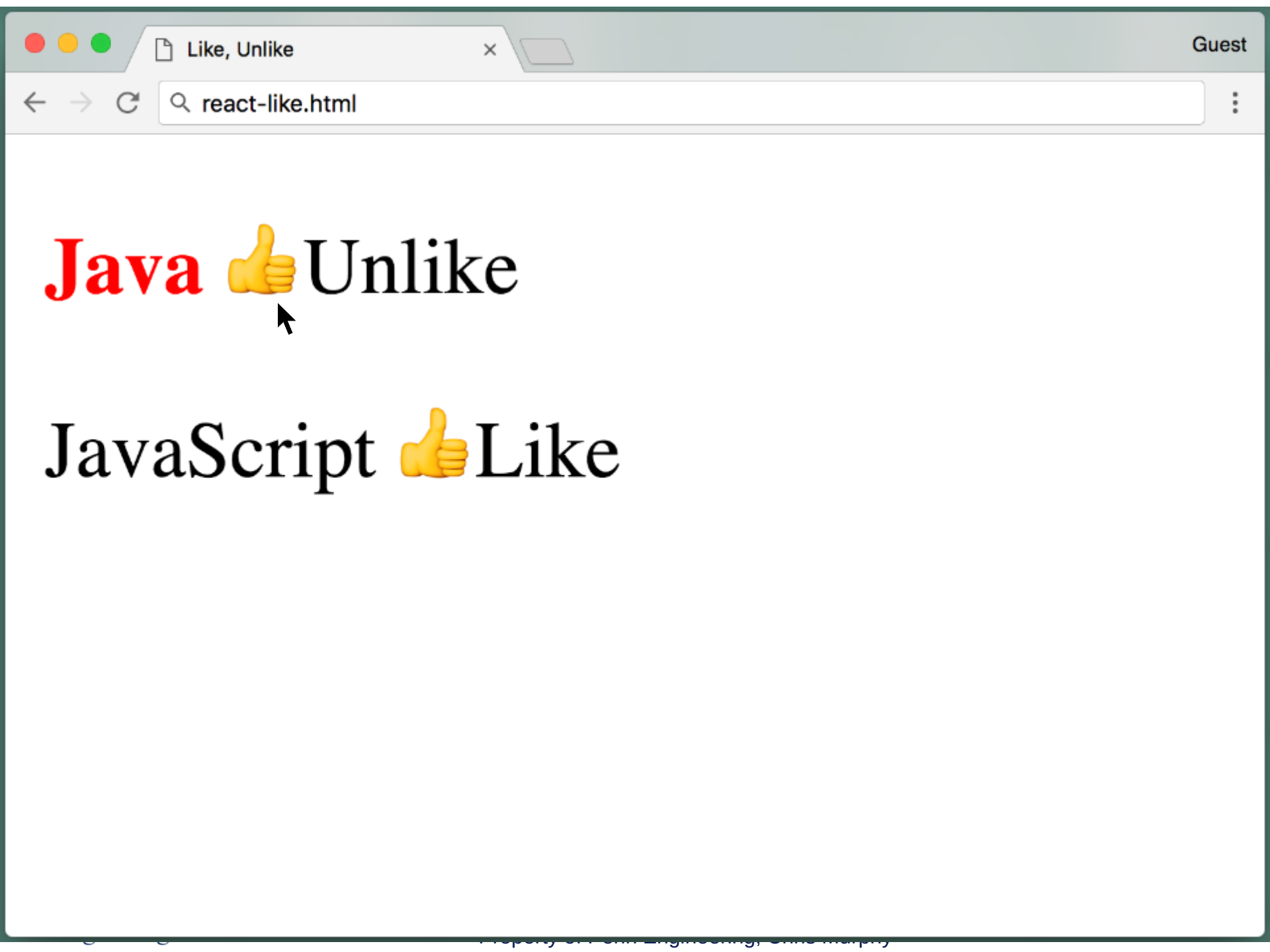
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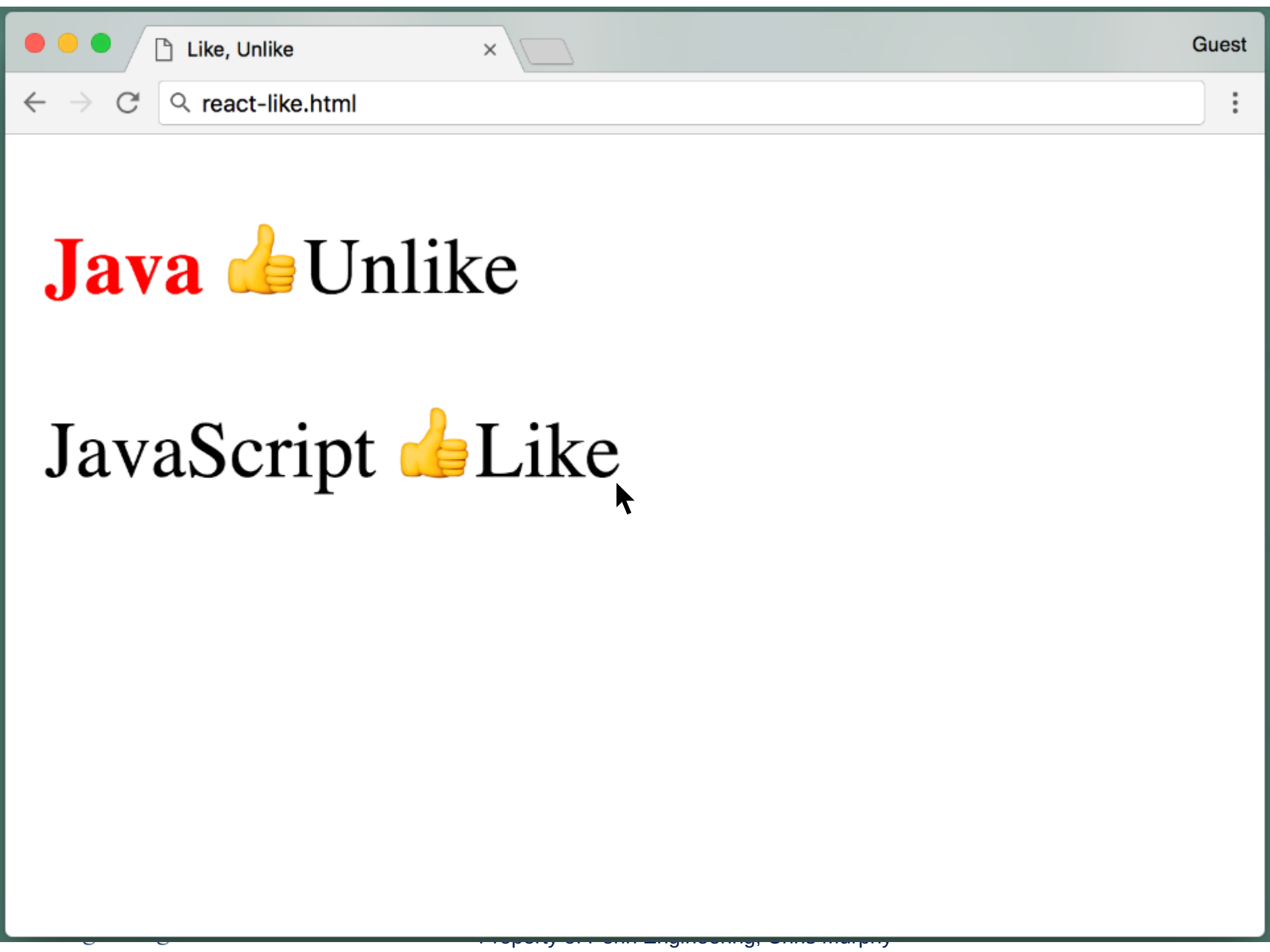
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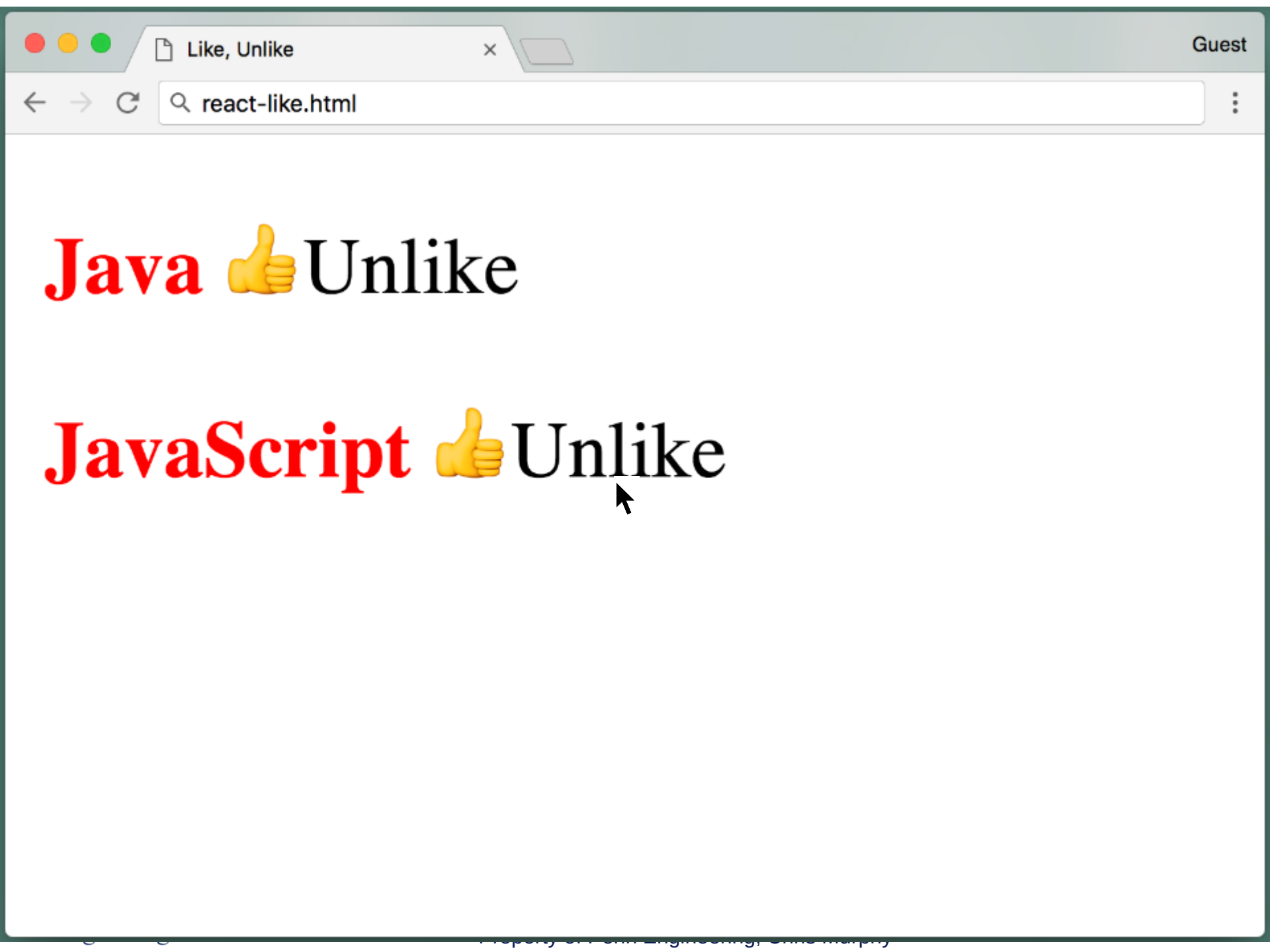
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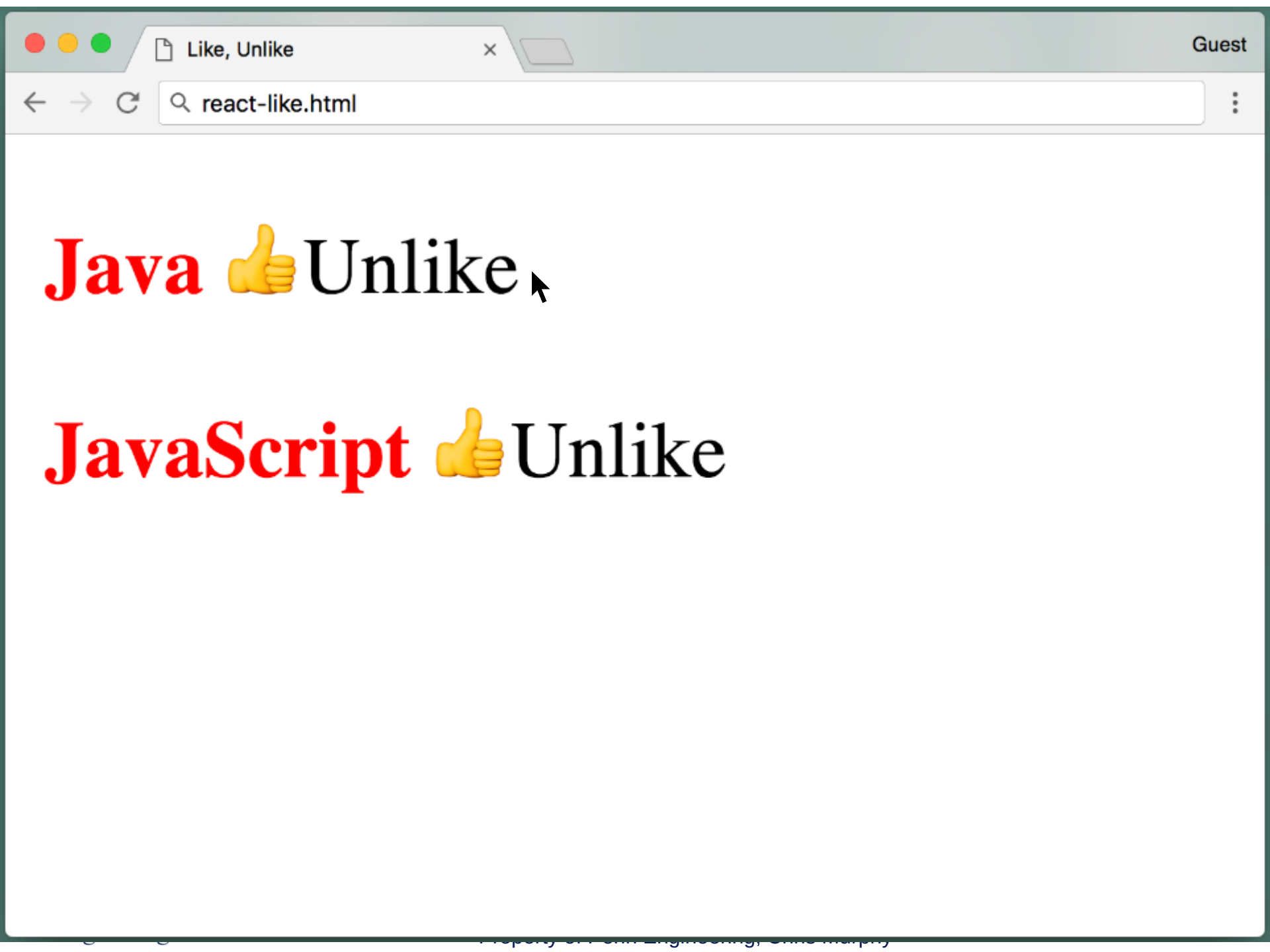
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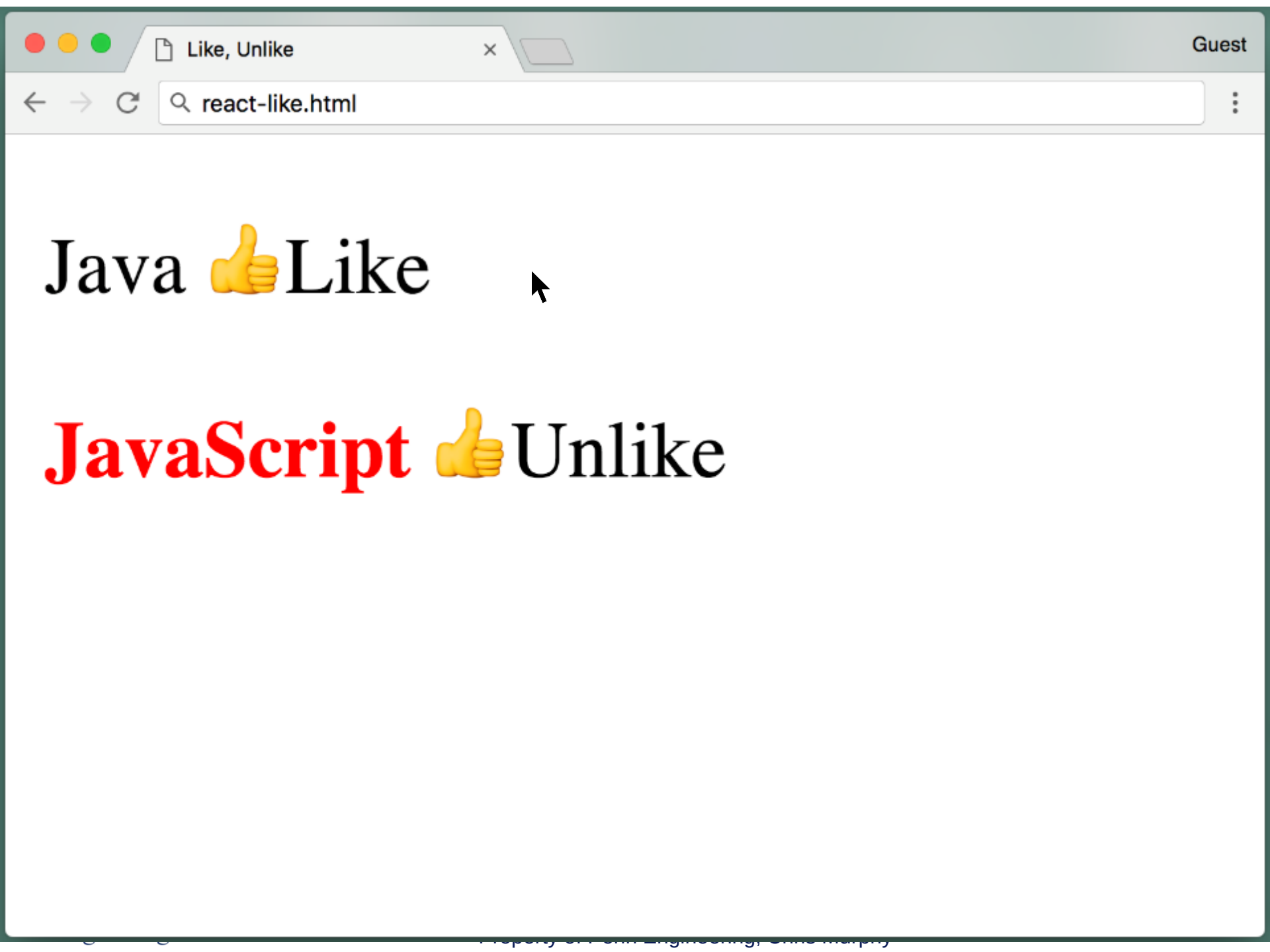
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     this.state = { liked : false };
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  toggle() {
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  render() {
     var name = this.props.name;
     var txt = this.state.liked ? 'Unlike' : 'Like';
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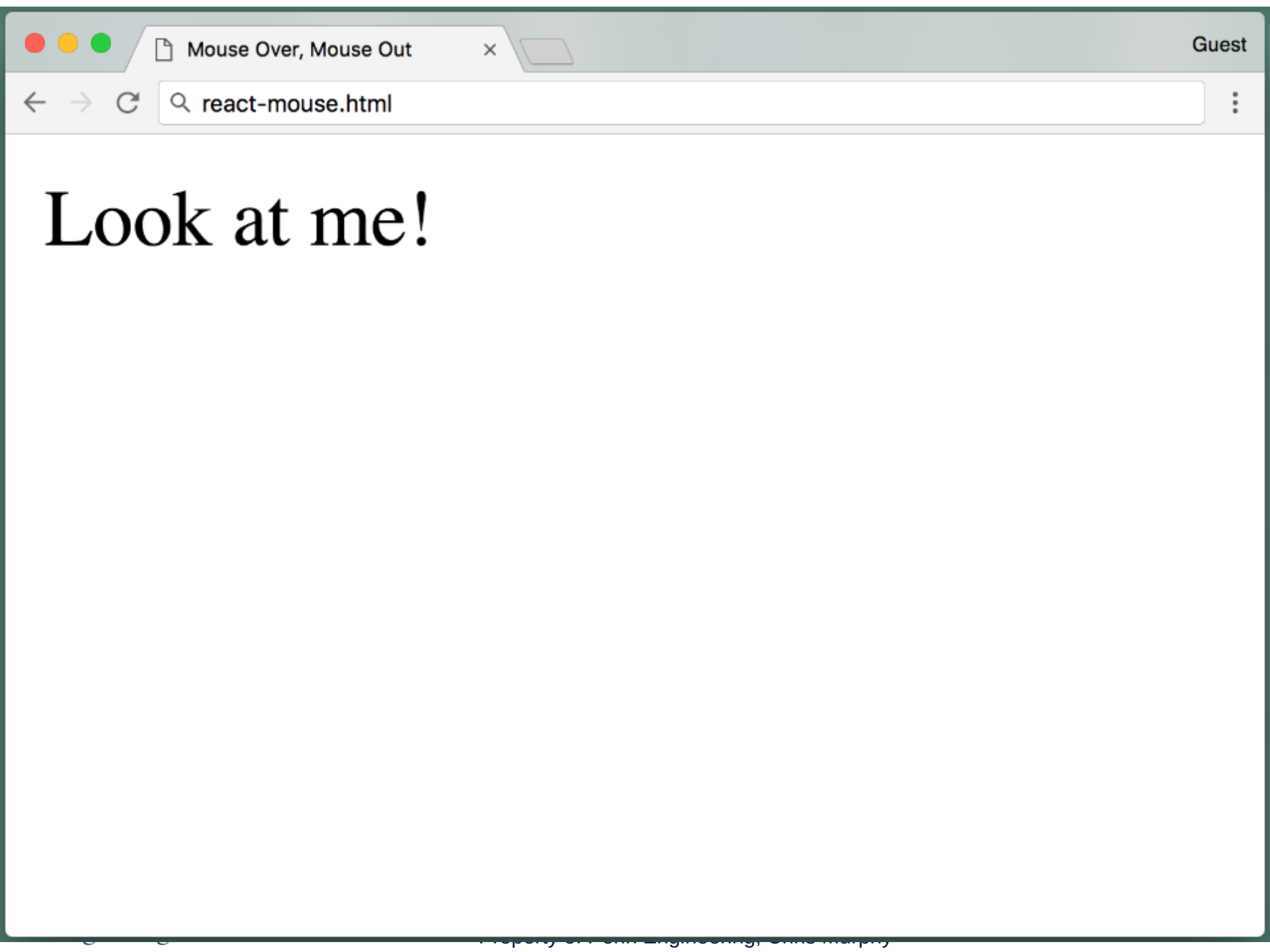
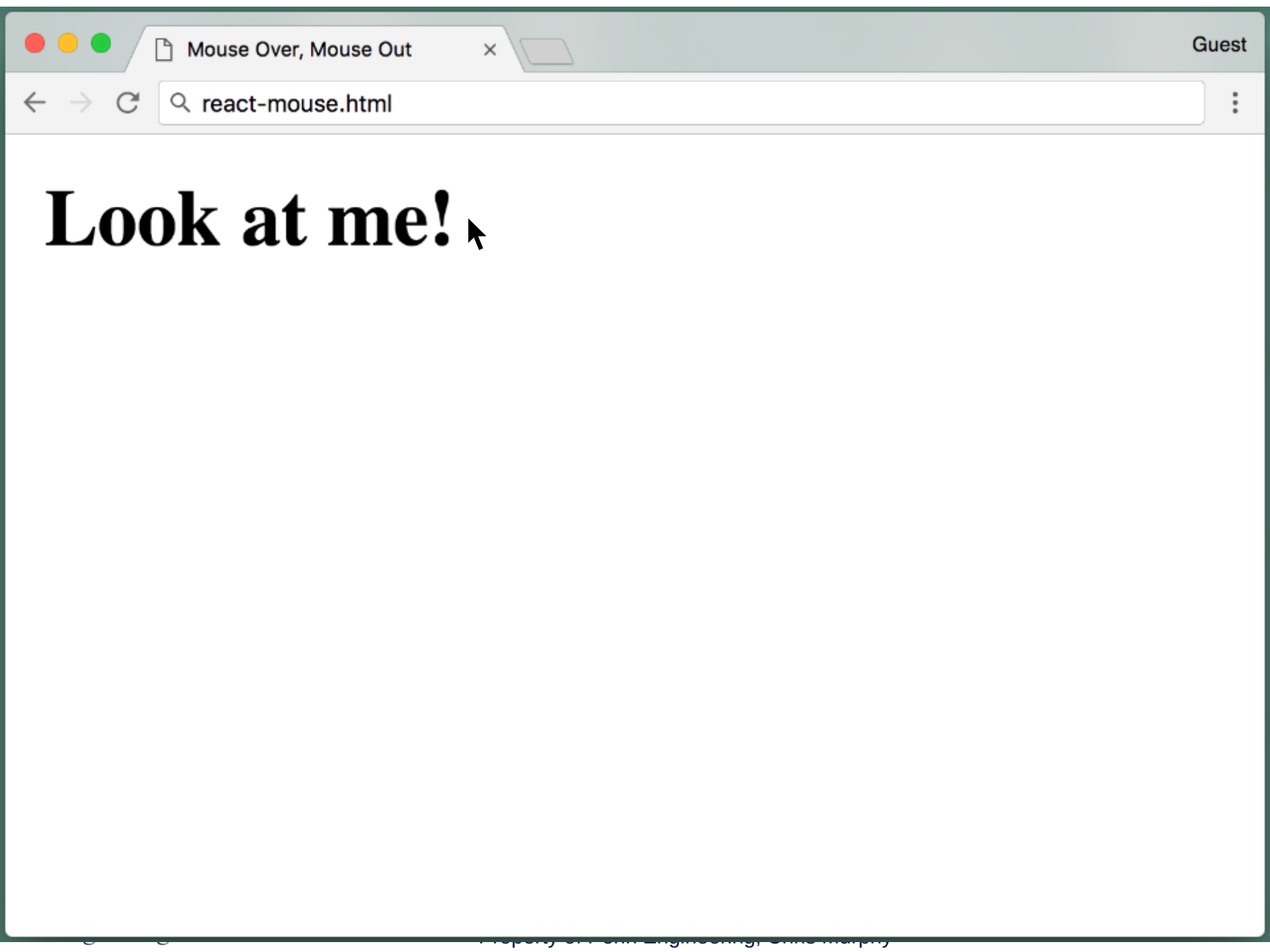

Mouse Over, Mouse Out
Guest
react-mouse.html
Look at me!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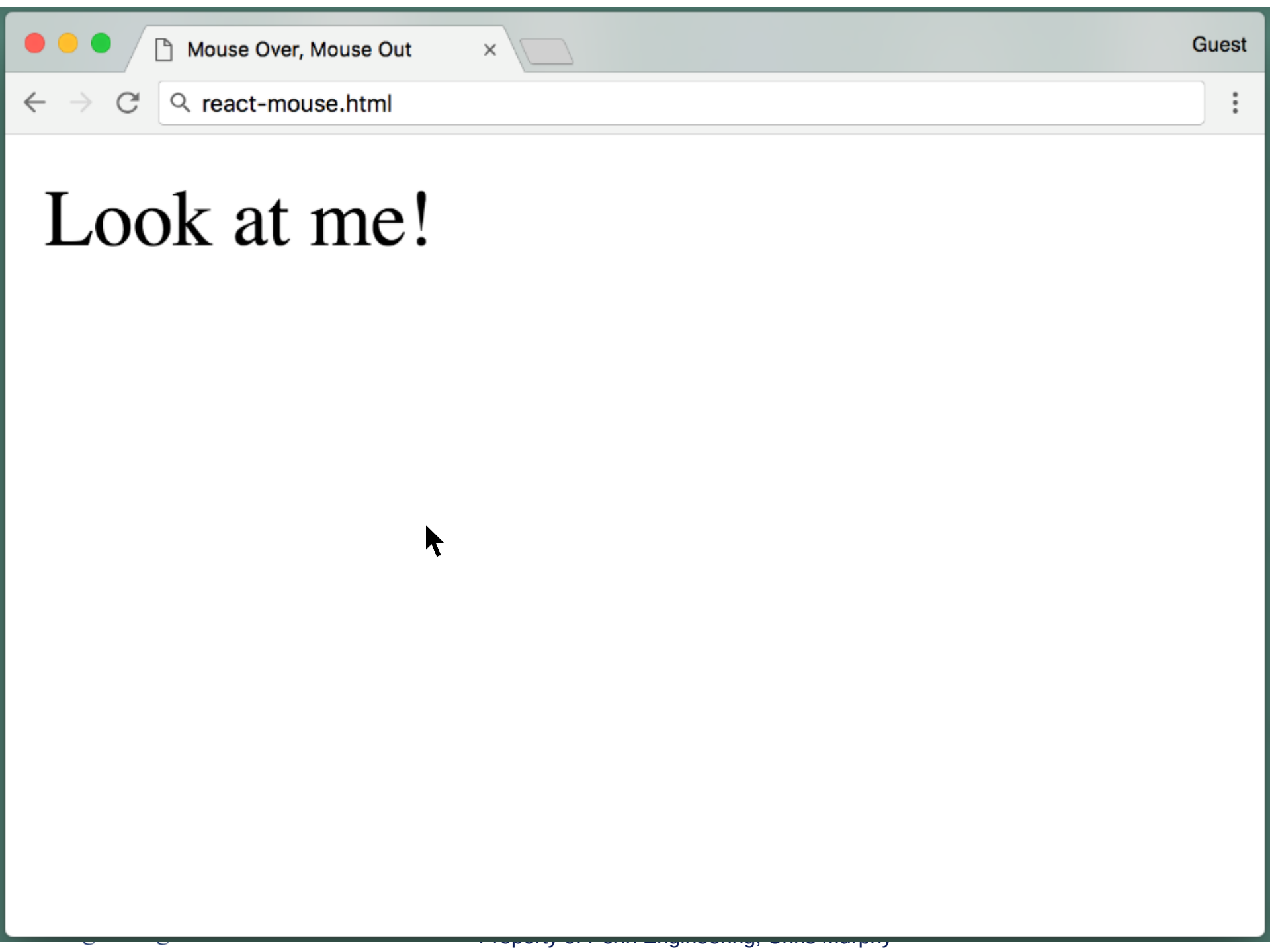
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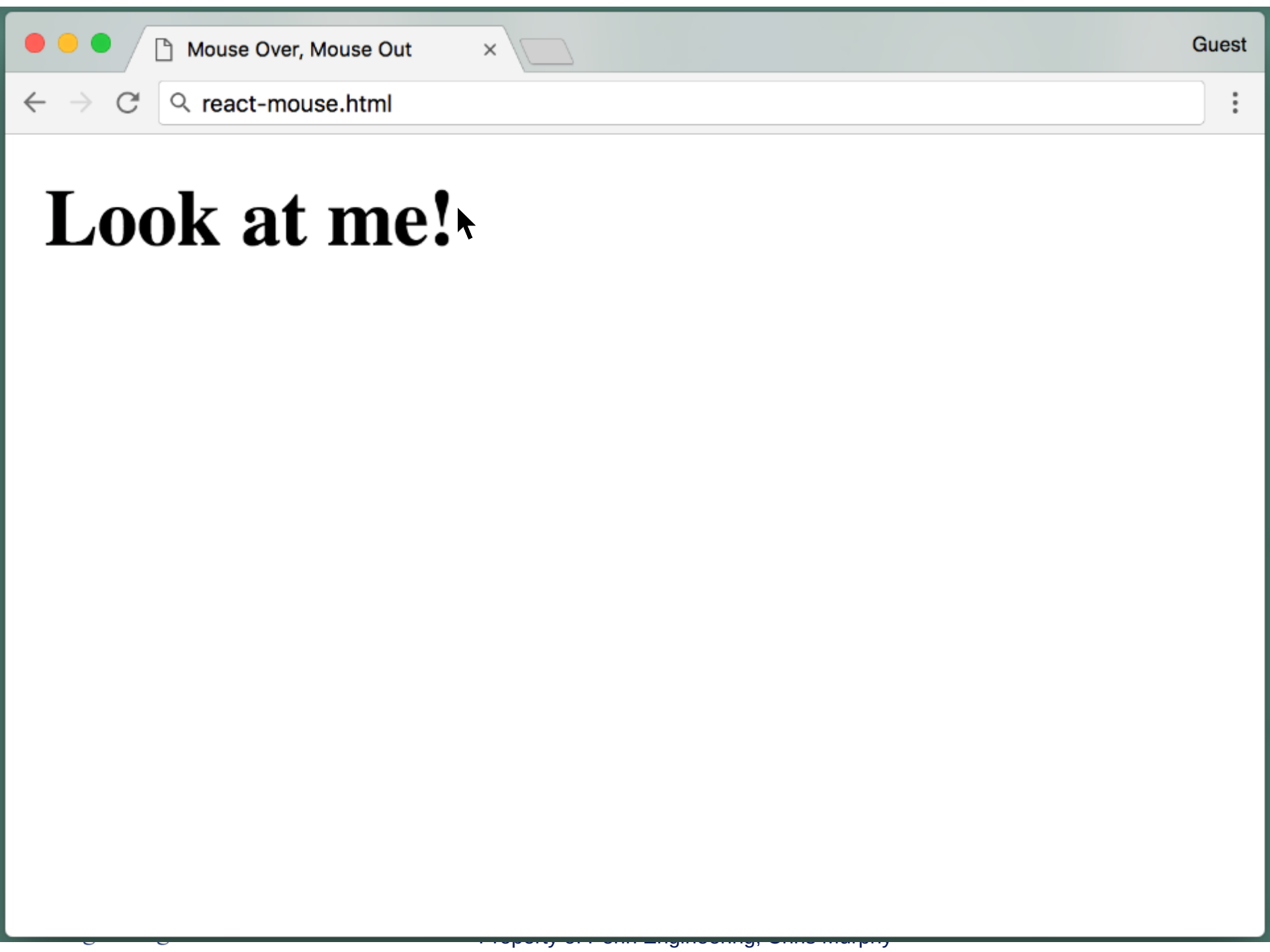
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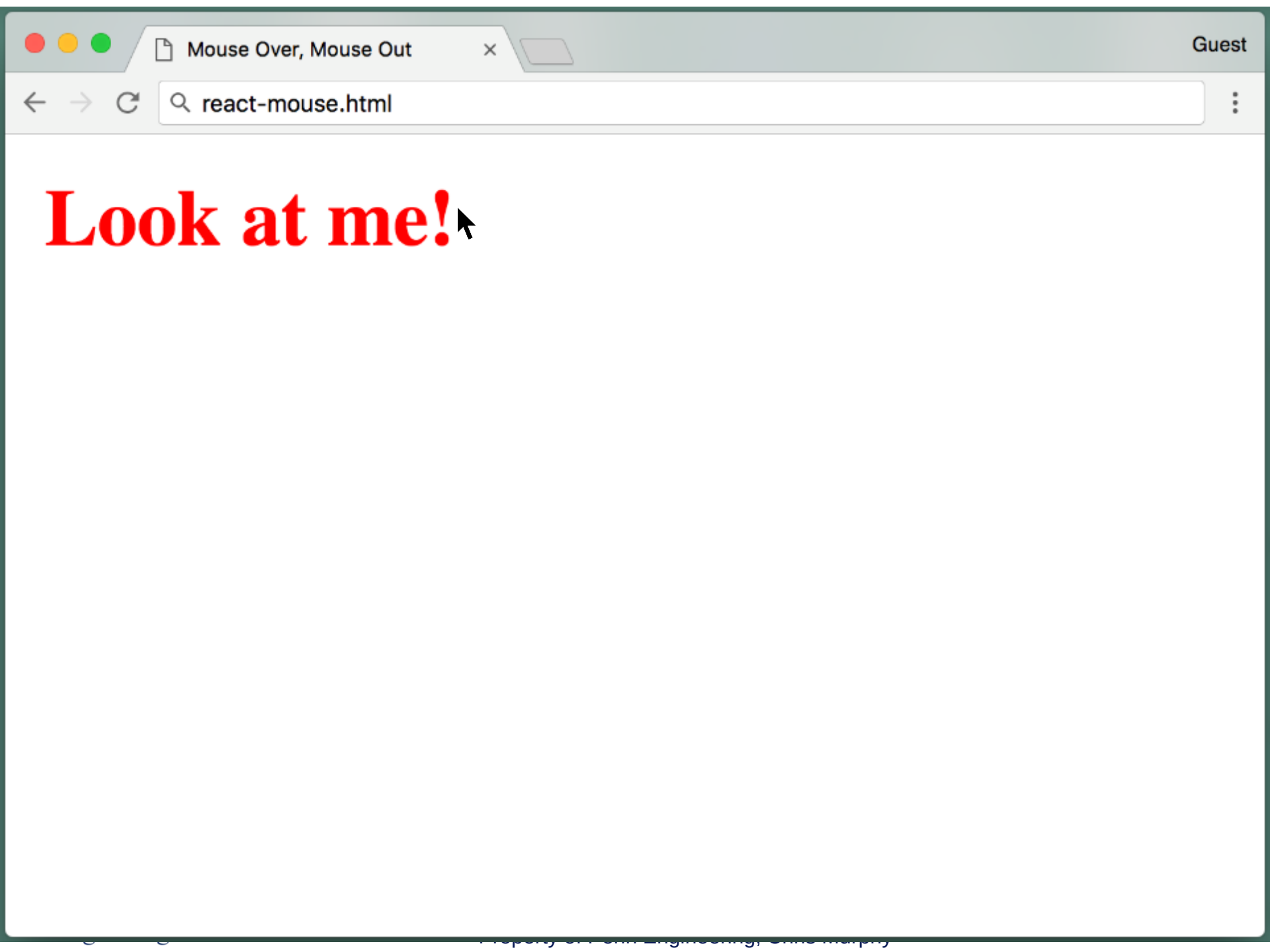
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  constructor(props) {
      super(props);
      this.state = { bold : false, color : 'black' };
  }

  handleMouseOver() {
      this.setState( { bold : true } );
  }

  handleMouseOut() {
      this.setState( { bold: false } );
  }

  handleClick() {
     if (this.state.color == 'red' )
         this.setState( { color: 'black' } );
     else
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  render () {
     var myColor = this.state.color;
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     return (
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       onClick={this.handleClick.bind(this)}
           onMouseOver={this.handleMouseOver.bind(this)}
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       {this.props.text}
       </span>
      );
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ReactDOM.render(
    <div><MyText text="Look at me!" /></div>,
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ReactDOM.render(
    <div><MyText text="Look at me!" /></div>,
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Summary

- We can bind user events in HTML elements to callback functions in React components

- When we invoke a component's `setState` function, the `render` function will automatically be called and the component's appearance can change accordingly