

Windows Security

Enter network credentials

Enter your credentials to connect to: 172.16.16.220

04itts00

Password

☐ Remember my credentials

The user name or password is incorrect.

OK

Cancel

[Connect to a Web site that you can use to store your documents and pictures.](#)



Screen Capture



Impartus Screen Capture
Screen Recording Started

11 items



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ENG

11:56

23-03-2023



19AD602

FileHomeShareView

« Jenefa » Subjects » 19AD602

Search 19AD602

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19AD602

Deep Learning

unit 2

unit 4

OneDrive - Person

This PC

3D Objects

Desktop

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Videos

Local Disk (C:)

aid-commonare

Name	Date modified	Type	Size
JS fun	08-02-2023 11:11	File folder	
19AD502 - ISD 2022 v1	25-08-2022 16:17	Microsoft Word D...	1,567 KB
19AD602 - FULL STACK DEVELOPMENT	15-03-2023 11:10	Microsoft Word D...	23 KB
19AD602 - ISD 2023	16-03-2023 17:05	Microsoft Word D...	2,258 KB
19AD652 - FULL STACK DEVELOPMENT L...	02-01-2023 14:32	Microsoft Word D...	21 KB
AID-UG-5-S1-CAT1-19AD502-Set1	25-08-2022 11:03	Microsoft Word 97...	217 KB
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AID-UG-6-S1-CAT2-19AD602-Set1	08-03-2023 18:29	Microsoft Word 97...	91 KB
client side programming	27-01-2023 17:57	Microsoft PowerPo...	1,621 KB
Frank Zammetti - Modern Full-Stack Dev...	09-12-2021 11:36	Adobe Acrobat D...	5,778 KB
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JavaScriptObjects	28-12-2009 17:08	Microsoft PowerPo...	605 KB
Learning JavaScript	01-02-2023 18:07	Microsoft PowerPo...	1,803 KB
NodeJS	28-02-2023 17:52	Microsoft Word D...	25 KB
nodejs_at_a_glance v1	09-03-2023 14:55	Microsoft PowerPo...	1,270 KB
nodejs_at_a_glance	09-03-2023 11:59	Microsoft PowerPo...	1,270 KB
React JS	23-03-2023 11:51	Microsoft PowerPo...	985 KB

30 items

11:56

23-03-2023

ENG

4

19AD602

FileHomeShareView

« Jenefa » Subjects » 19AD602 »

Search 19AD602

Desktop

Downloads

Documents

Pictures

19AD602

Deep Learning

unit 2

unit 4

OneDrive - Person

This PC

3D Objects

Desktop

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Local Disk (C:)

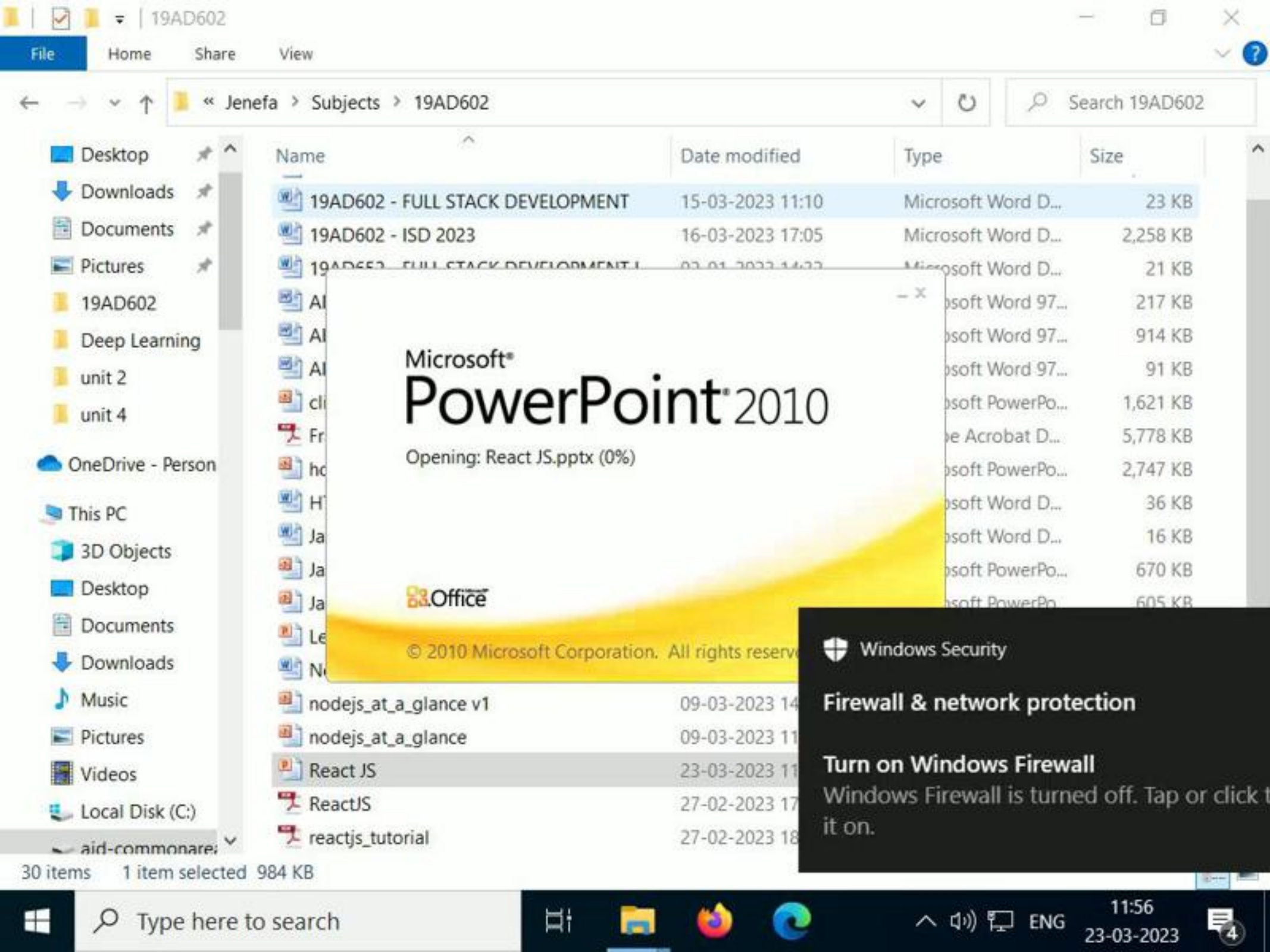
aid-commonare

Name	Date modified	Type	Size
19AD602 - FULL STACK DEVELOPMENT	15-03-2023 11:10	Microsoft Word D...	23 KB
19AD602 - ISD 2023	16-03-2023 17:05	Microsoft Word D...	2,258 KB
19AD652 - FULL STACK DEVELOPMENT L...	02-01-2023 14:32	Microsoft Word D...	21 KB
AID-UG-5-S1-CAT1-19AD502-Set1	25-08-2022 11:03	Microsoft Word 97...	217 KB
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Frank Zammetti - Modern Full-Stack Dev...	09-12-2021 11:36	Adobe Acrobat D...	5,778 KB
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nodejs_at_a_glance	09-03-2023 11:59	Microsoft PowerPo...	1,270 KB
React JS	23-03-2023 11:51	Microsoft PowerPo...	985 KB
ReactJS	27-02-2023 17:51	Adobe Acrobat D...	182 KB
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- Deep Learning
- unit 2
- unit 4

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React JS	23-03-2023 11		
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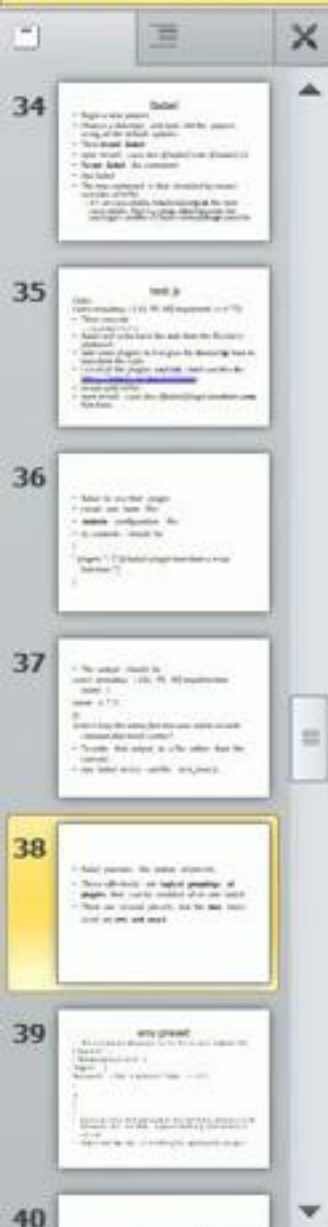
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Windows Security

Firewall & network protection

Turn on Windows Firewall

Windows Firewall is turned off. Tap or click to turn it on.



- Babel provides the notion of *presets*.
- *These effectively are logical groupings of plugins* that can be enabled all in one batch.
- There are several presets, but the **two** most used are env and **react**.





- in Node
- `{ "presets": [`
- `["@babel/preset-env", {`
- `"targets": { "node": "7.00" }`
- `}]`
- `]`
- `}`
- Babel to support Node back to version 7.
- To make use of this preset, you need to install a single plugin:
- `npm install --save-dev @babel/preset-env`



[illegible]

- ```
{ "presets" : [
 ["@babel/preset-react"]
]
}
```



# Compile JSX

- install the preset
- `npm install @babel/preset-react --save-dev`
- Then add a new preset in `.babelrc` to let Babel know how to deal with JSX:

```
{ "presets" : [
 ["@babel/preset-react"]
]
}
```



# index.html

```
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8" />
<title>Intro To React</title>
<script crossorigin src="https://unpkg.com/react@16/umd/react.
development.js"></script>
<script crossorigin src="https://unpkg.com/react-dom@16/umd/react-
dom.
development.js"></script>
<script src="main.js"></script>
</head>
<body onLoad="start();">
<div id="mainContainer"></div>
</body>
</html>
```

- Compile JSX:

```
npx babel main.jsx --out-file main.js
```

- An error message
- *“Support for the experimental syntax ‘classProperties’ isn’t currently enabled.”*

```
npm install --save-dev @babel/plugin-proposal-class-properties
```

- Add to .babelrc:

```
{
 "presets": ["@babel/preset-react"],
 "plugins": ["@babel/plugin-proposal-class-properties"]
}
```

# main.jsx

```
<button onClick={() => {
 this.title = this.title + "-CHANGED";
 this.setState({});
}}>
Click me
</button>

);
}
}
```



```
ReactDOM.render(React.createElement("div", null, React.
createElement("h1", null, "Bookmarks"),
 React.createElement("ul", null,
 React.createElement(Bookmark, {
 title: "Etherient",
 href: "https://www.etherient.com",
 description: "The home page of Etherient"
 }), React.createElement(Bookmark, {
 title: "Frank's Site",
 href: "https://www.zammetti.com",
 description: "The web home of Frank W. Zammetti"
 }))), document.getElementById("mainContainer"));
}
```

# Whither prop

- Example of passing a prop

```
const buttonColor = "red";
```

```
const button = <MaterialButton color={buttonColor}
onClick="alert('clicked');">
```

Click Me

```
</MaterialButton>;
```

- Any valid JavaScript expression can be contained within the braces, so we could do
- `color={buttonColor + "Alt"}`
- `color="red"` is equivalent to `color={"red"}`.

```
ReactDOM.render(React.createElement("div", null, React.
createElement("h1", null, "Bookmarks"),
 React.createElement("ul", null,
 React.createElement(Bookmark, {
 title: "Etherient",
 href: "https://www.etherient.com",
 description: "The home page of Etherient"
 }), React.createElement(Bookmark, {
 title: "Frank's Site",
 href: "https://www.zammetti.com",
 description: "The web home of Frank W. Zammetti"
 }))), document.getElementById("mainContainer"));
}
```



# Whither prop

- Example of passing a prop

```
const buttonColor = "red";
```

```
const button = <MaterialButton color={buttonColor}
onClick="alert('clicked');">
```

Click Me

```
</MaterialButton>;
```

- Any valid JavaScript expression can be contained within the braces, so we could do
- `color={buttonColor + "Alt"}`
- `color="red"` is equivalent to `color={"red"}`.

- props in JSX syntax, by default to true if you pass nothing for their value.

`<MaterialButton enabled />` is equivalent to  
`<MaterialButton enabled={true} />`

Use the spread operator

Eg: `<MaterialButton color={"red"} enabled={true} />`

- Could write this differently using the spread operator:

```
const props = { color : "red", enabled : true };
```

```
<MaterialButton {...props} />
```

- This can be handy if you have several prop values that need to be dynamic, and you need to “calculate”

# Default Props

- If a component doesn't pass a particular prop down to the child

```
class Bookmark extends React.Component {
 constructor(props) {
 super(props);
 console.log("Bookmark component created");
 }
}
```



# Define default values for props

```
class Bookmark extends React.Component {
 constructor(props) {
 super(props);
 console.log("Bookmark component created");
 }
 static defaultProps = { description : "Unknown"
 };
 title = this.props.title;
 titleStyle = { color : "red" }
 render() {
```

```
return (

 <h2 style={this.titleStyle}>{this.title}</h2>
 {this.props.description}
 <button onClick={() => {
 this.title = this.title + "-CHANGED";
 this.setState({});
 }}>
 Click me
 </button>

>); }
```

```
return (

 <h2 style={this.titleStyle}>{this.title}</h2>
 {this.props.description}
 <button onClick={() => {
 this.title = this.title + "-CHANGED";
 this.setState({});
 }}>
 Click me
 </button>

) ; }}
```



# Typing Props

- First, add propTypes to the component class 'propTypes'

```
function start() {
 class Bookmark extends React.Component {
 constructor(props) {
 super(props);
 console.log("Bookmark component created");
 }
 static propTypes = { description : PropTypes.number };
 title = this.props.title;
 titleStyle = { color : "red" }
 render() {
 return (

 <h2 style={this.titleStyle}>{this.title}</h2>

 {this.props.description}

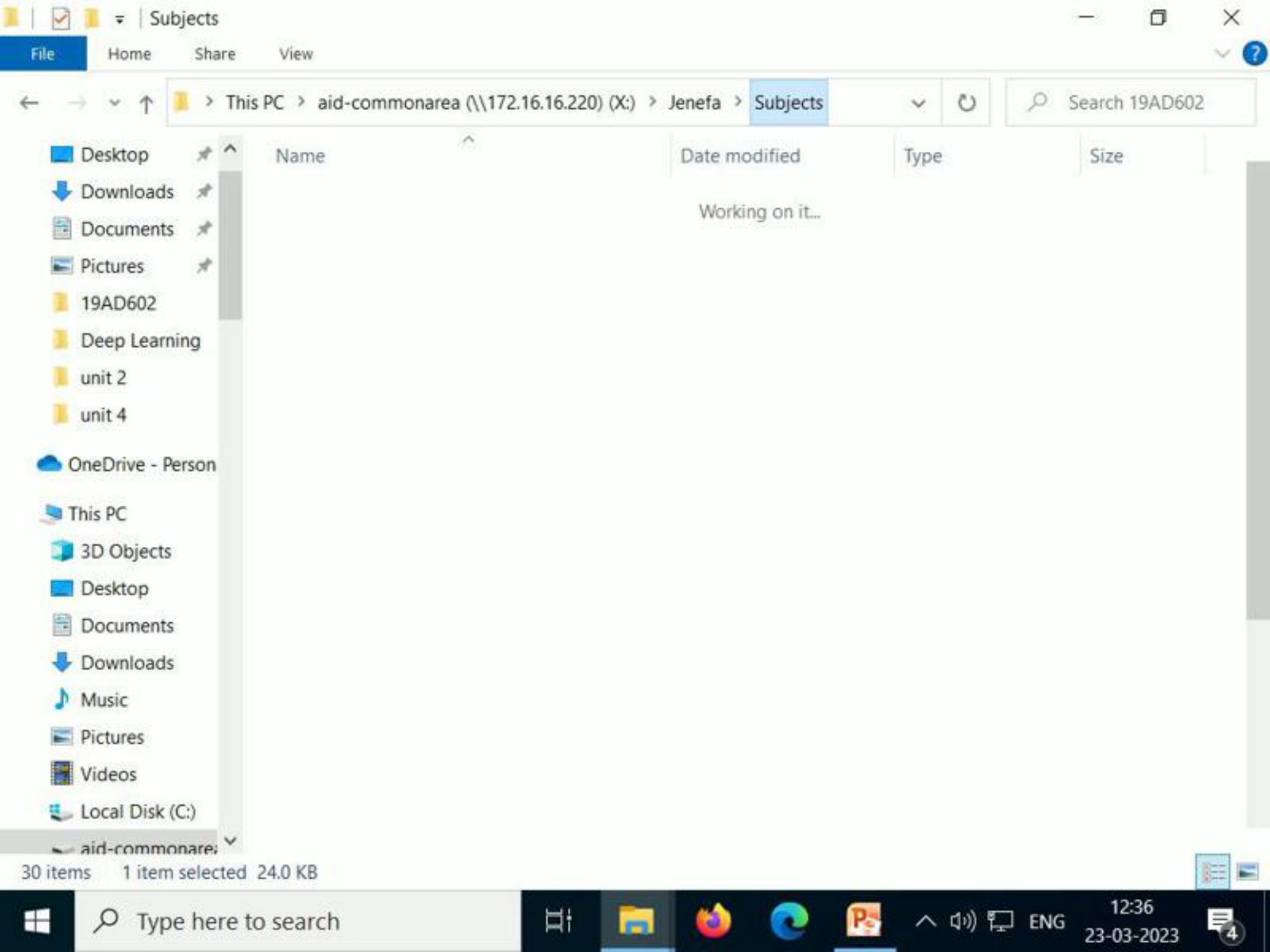
);
 }
 }
}
```

- see the following error in the dev tools console:
- `react.development.js:1818` Warning: Failed prop type: Invalid prop `description` of type `string` supplied to `Bookmark`, expected `number`. in Bookmark

```
static propTypes = { description :
 descriptionValidator };
```

- The `descriptionValidator()` function will be passed the collection of props, the name of the prop being validated, and the name of the component.
- If it then returns null, then React assumes everything is okay;
- otherwise, the function would return an Error object





19AD602

FileHomeShareView

←→↕↑

« Jenefa » Subjects » 19AD602 »

Search 19AD602

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Deep Learning

unit 2

unit 4

OneDrive - Person

This PC

3D Objects

Desktop

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Local Disk (C:)

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React JS	23-03-2023 11:51	Microsoft PowerPo...	985 KB

30 items1 item selected2.20 MB

Windows Search

Taskbar

System Tray

# Compile JSX

- install the preset
- `npm install @babel/preset-react --save-dev`
- Then add a new preset in `.babelrc` to let Babel know how to deal with JSX:

```
{ "presets" : [
 ["@babel/preset-react"]
]
}
```

- ```
{ "presets" : [
  [ "@babel/preset-react" ]
]
}
```


57

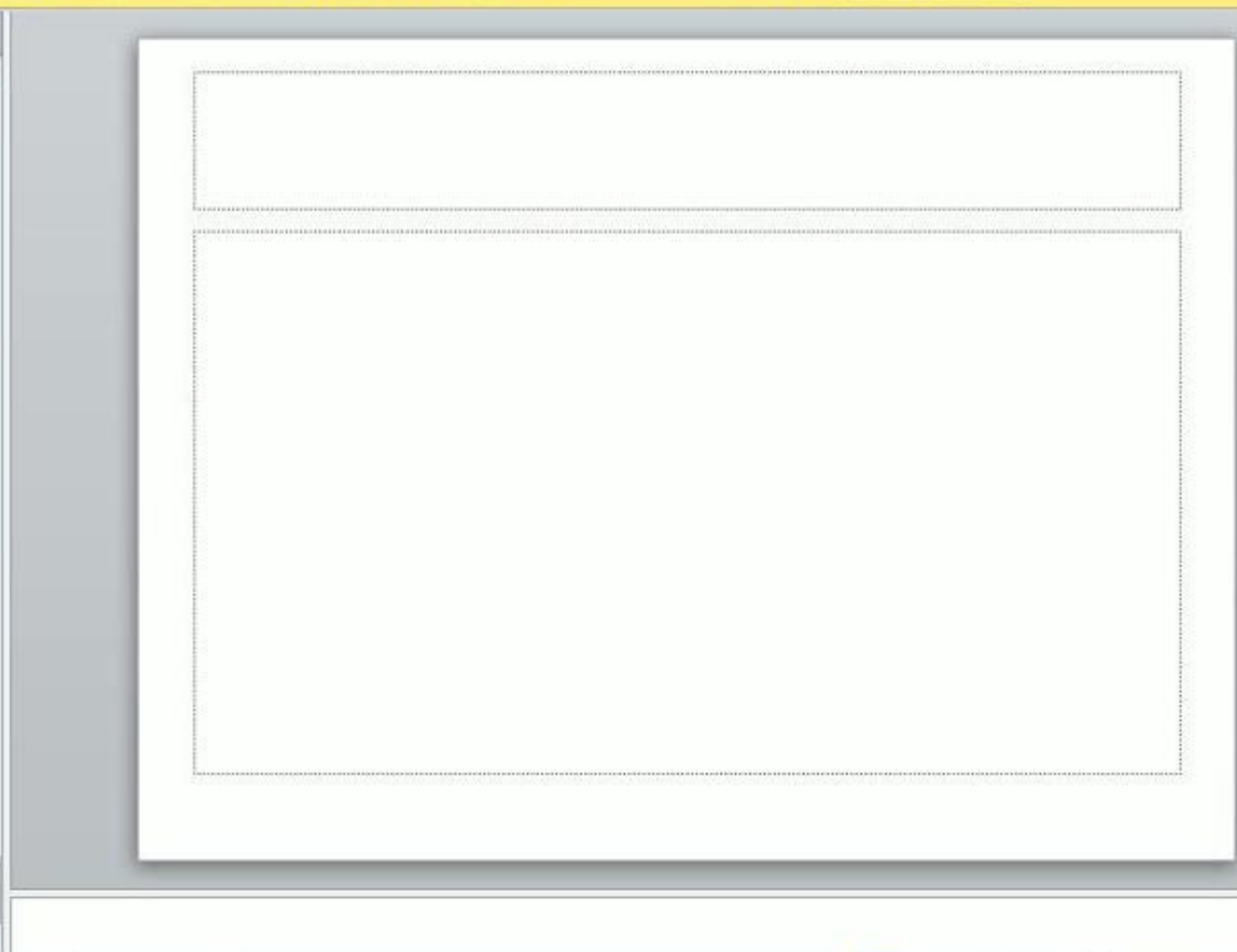
58

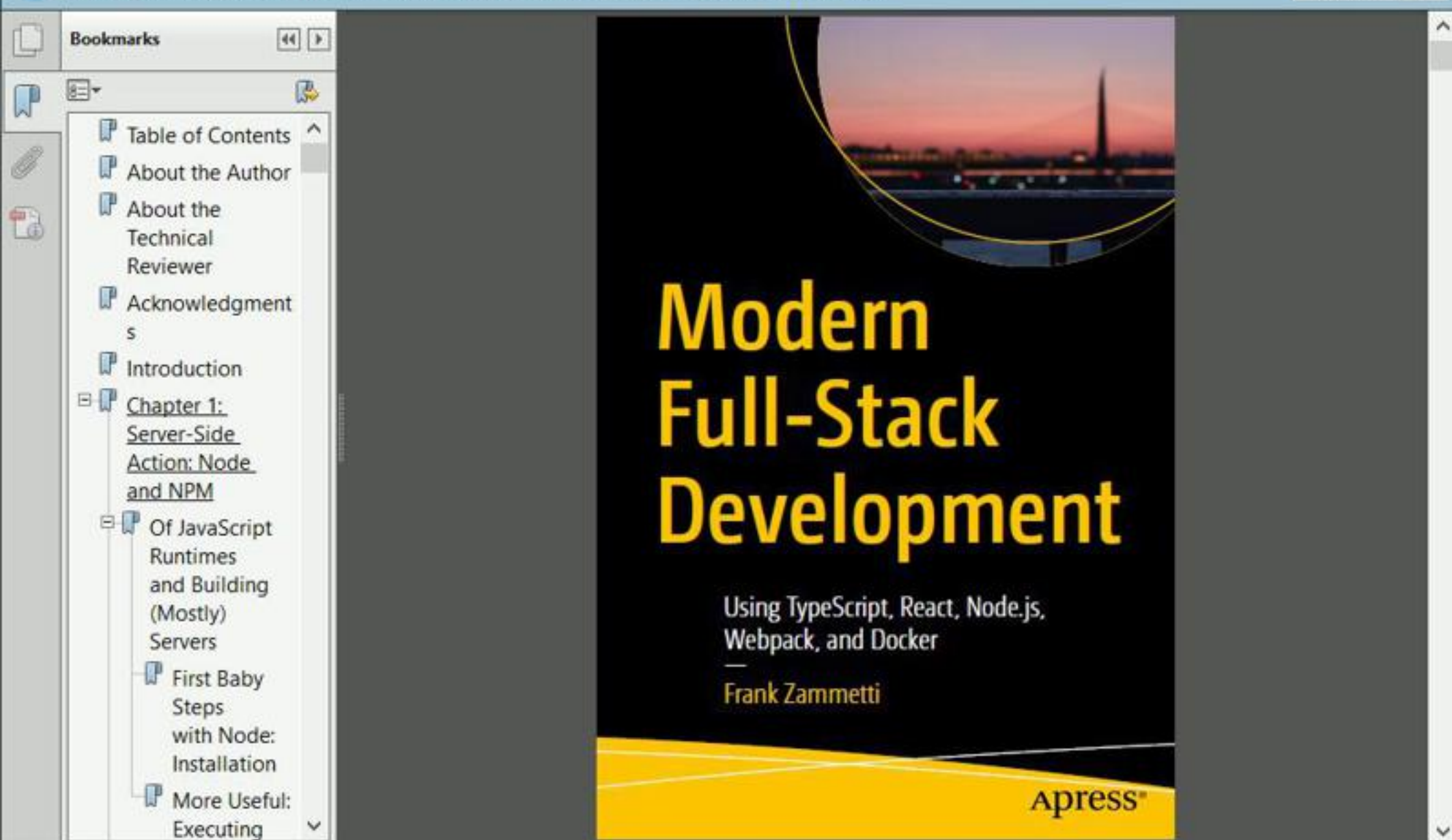
59

60

61

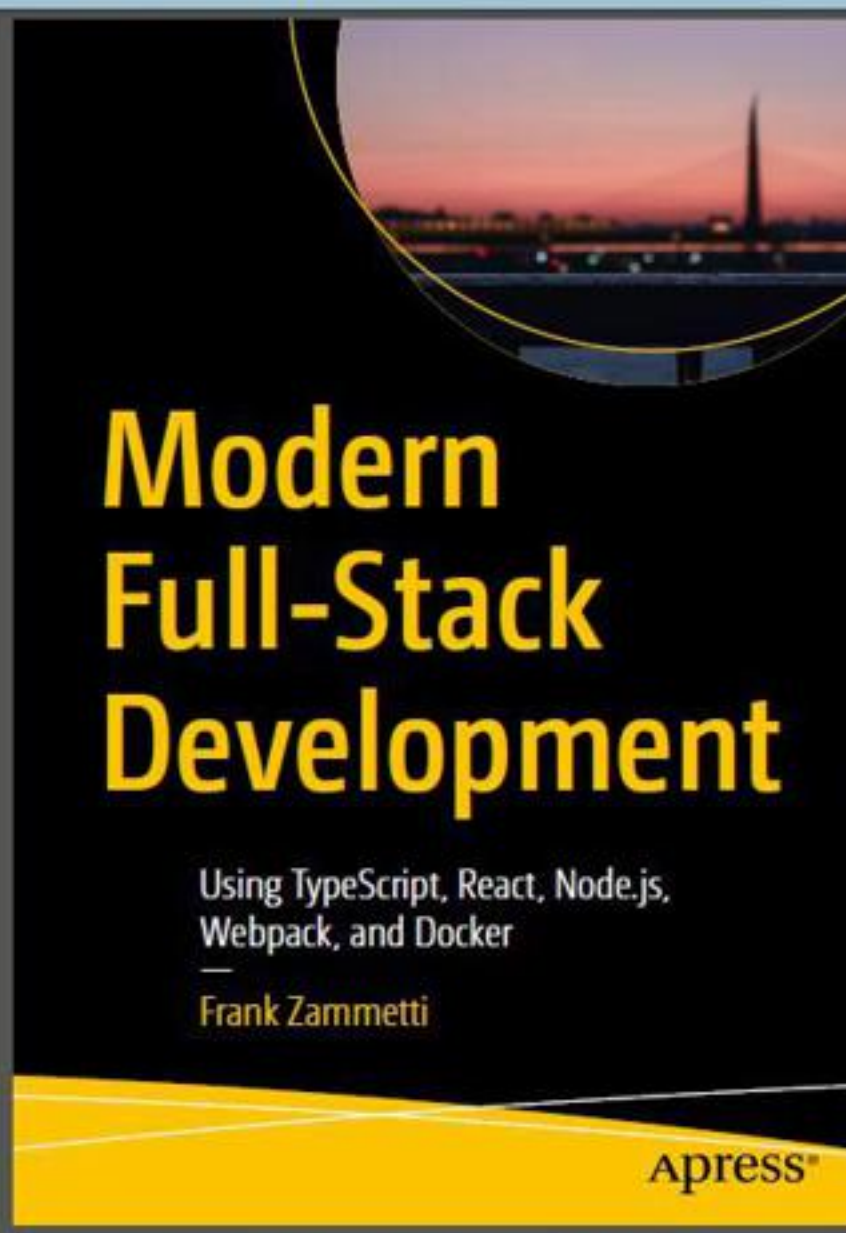
62





























Bookmarks

- In the End, Why React?
- Summary
- Chapter 4: A Few More Words: Advanced React
 - A Better Way to Write React Code: JSX
 - Yeah, Okay, So What Babel Land
 - Compile JSX
 - And Now, Put It All Together
 - Whither Props?
 - Default Props...
 - Whither Props?
 - Default Props



| Bookmarks | |
|---|--|
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- A Slight Detour into Babel Land
- Compile JSX
- And Now, Put It All Together
- Whither Props?
 - Default Props
 - Typing Props
- Component Lifecycle**
- Summary
- Chapter 5: Building a Strong Foundation: TypeScript
 - What Is TypeScript?
- Jumping into the Deep End

CHAPTER 4 A FEW MORE WORDS: ADVANCED REACT

for you to add your own just by appending them on to the `PropTypes` class or, more usually, just passing a function in `propTypes`:

```
static propTypes = { description : descriptionValidator };
```

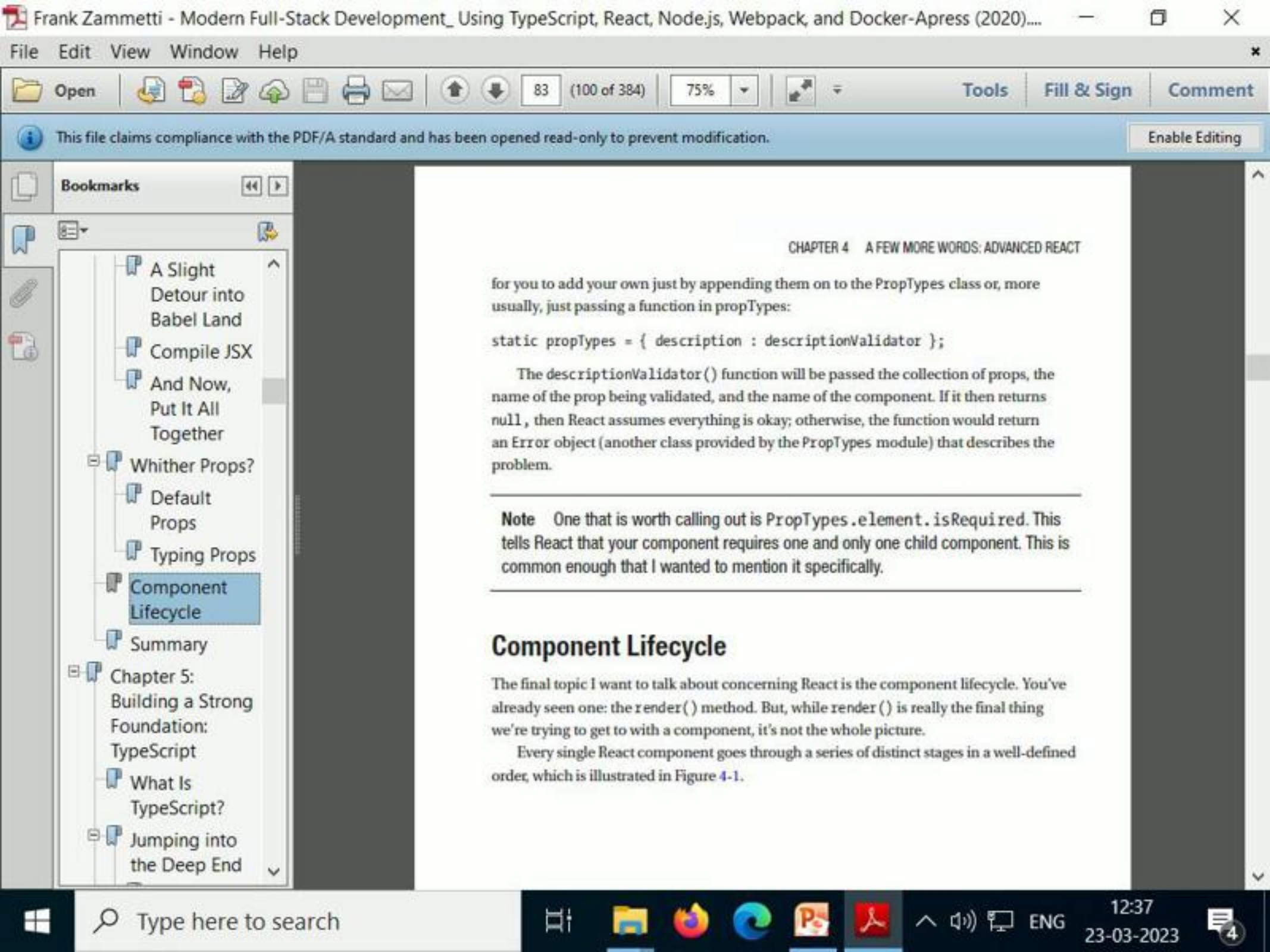
The `descriptionValidator()` function will be passed the collection of props, the name of the prop being validated, and the name of the component. If it then returns `null`, then React assumes everything is okay; otherwise, the function would return an `Error` object (another class provided by the `PropTypes` module) that describes the problem.














Note One that is worth calling out is `PropTypes.element.isRequired`. This tells React that your component requires one and only one child component. This is common enough that I wanted to mention it specifically.

Component Lifecycle

The final topic I want to talk about concerning React is the component lifecycle. You've already seen one: the `render()` method. But, while `render()` is really the final thing we're trying to get to with a component, it's not the whole picture.

Every single React component goes through a series of distinct stages in a well-defined order, which is illustrated in Figure 4-1.



| Bookmarks | |
|---|--|
|  |  |
|  | A Slight Detour into Babel Land |
|  | Compile JSX |
|  | And Now, Put It All Together |
|  | Whither Props? |
|  | Default Props |
|  | Typing Props |
|  | Component Lifecycle |
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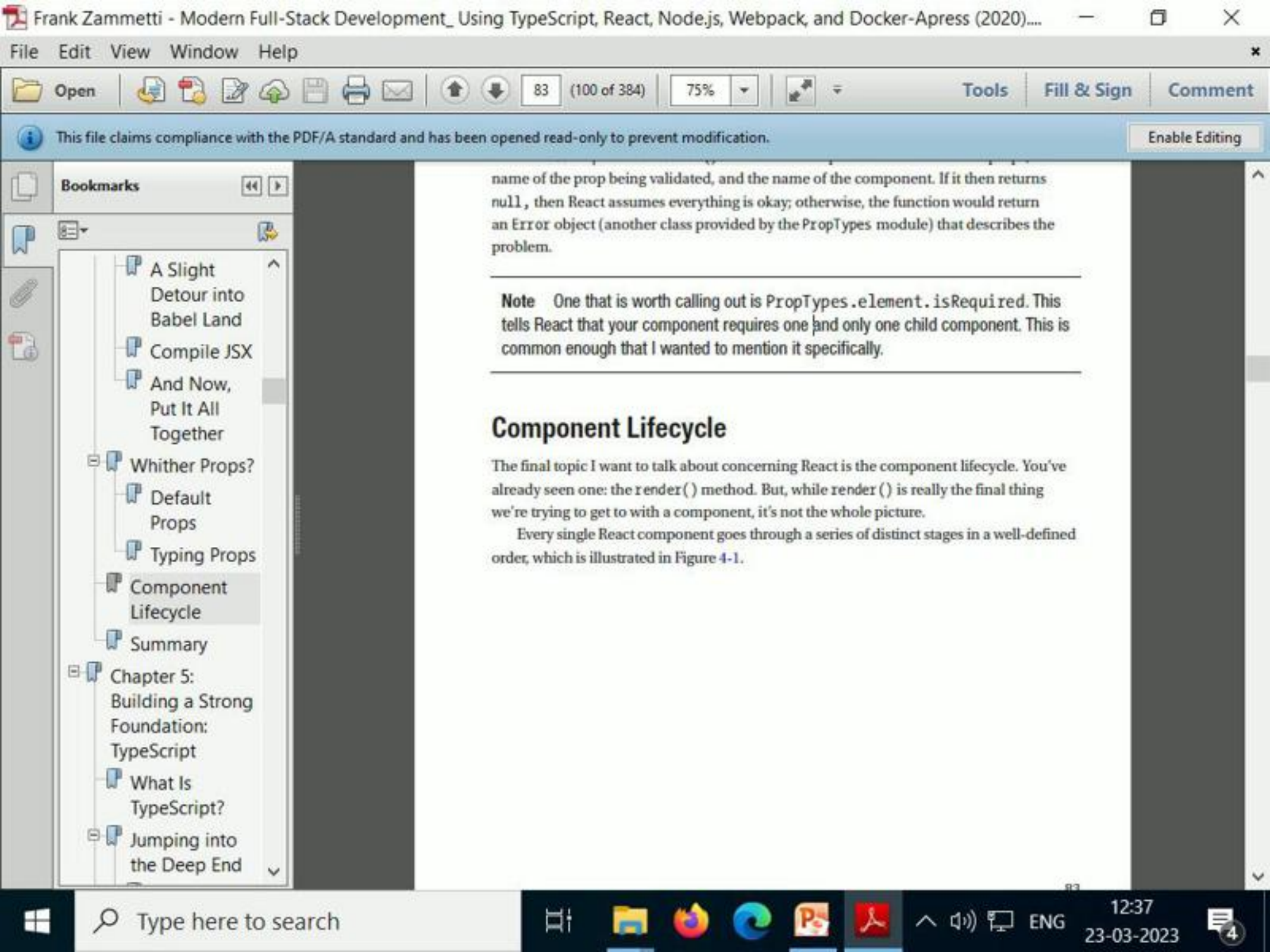
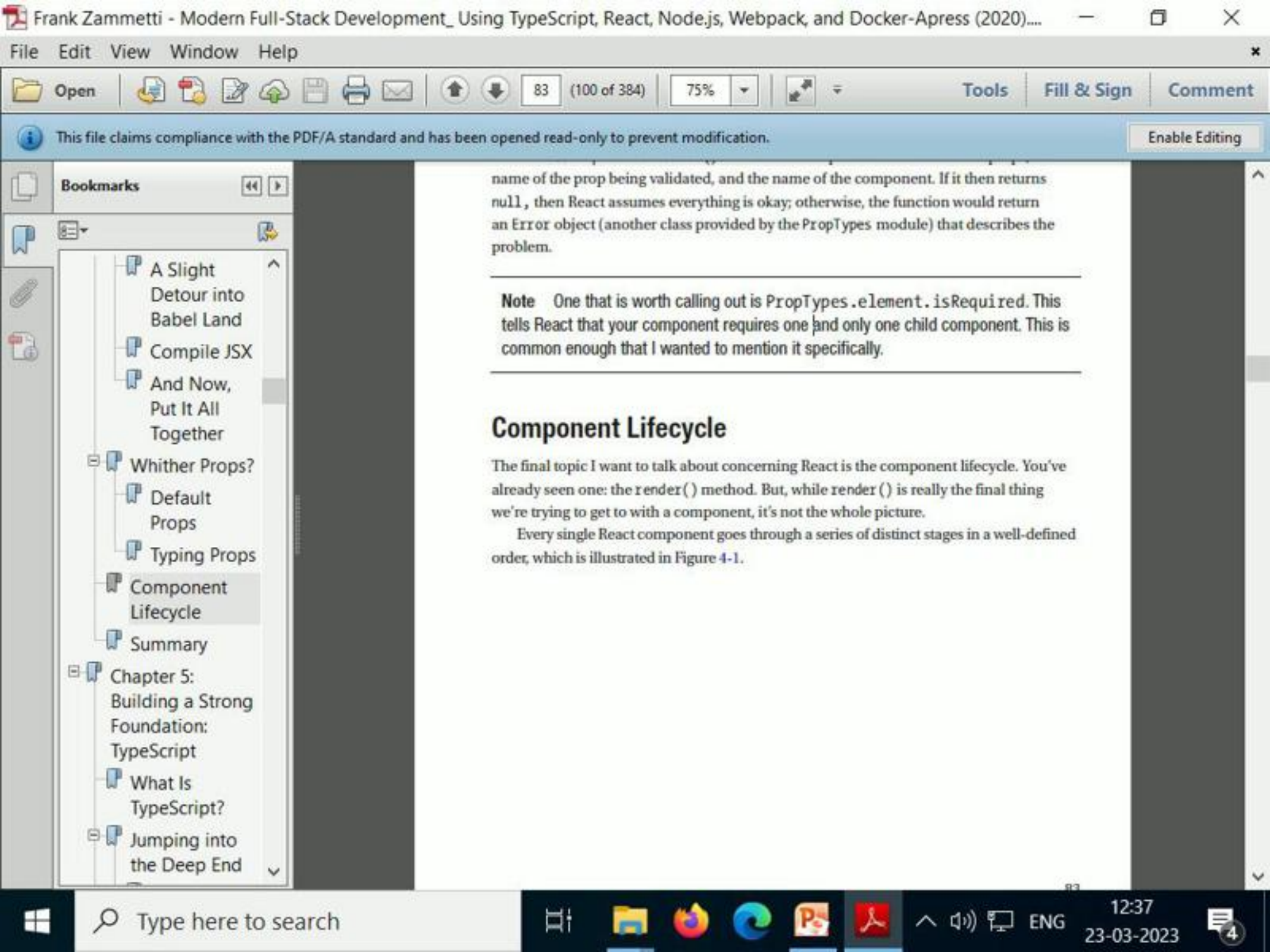
The `descriptionValidator()` function will be passed the collection of props, the name of the prop being validated, and the name of the component. If it then returns `null`, then React assumes everything is okay; otherwise, the function would return an `Error` object (another class provided by the `PropTypes` module) that describes the problem.

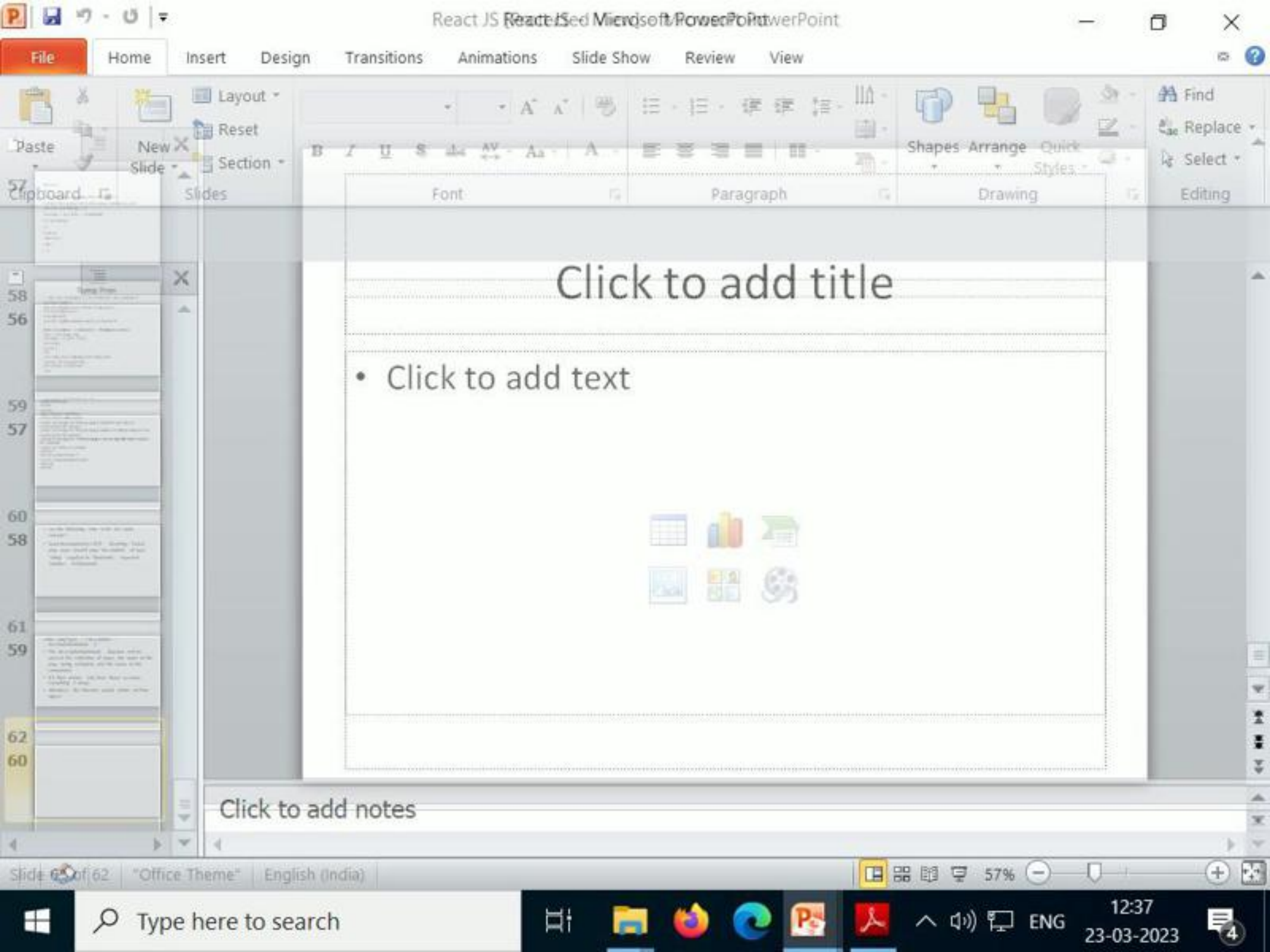
Note One that is worth calling out is `PropTypes.element.isRequired`. This tells React that your component requires one and only one child component. This is common enough that I wanted to mention it specifically.

Component Lifecycle


The final topic I want to talk about concerning React is the component lifecycle. You've already seen one: the `render()` method. But, while `render()` is really the final thing we're trying to get to with a component, it's not the whole picture.

Every single React component goes through a series of distinct stages in a well-defined order, which is illustrated in Figure 4-1.






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 And Now,
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Every single React component goes through a series of distinct stages in a well-defined order, which is illustrated in Figure 4-1.

Bookmarks

- A Slight Detour into Babel Land
- Compile JSX
- And Now, Put It All Together
- Whither Props?
 - Default Props
 - Typing Props
- Component Lifecycle
 - Summary
- Chapter 5: Building a Strong Foundation: TypeScript
 - What Is TypeScript?
 - Jumping into the Deep End

CHAPTER 4 A FEW MORE WORDS: ADVANCED REACT

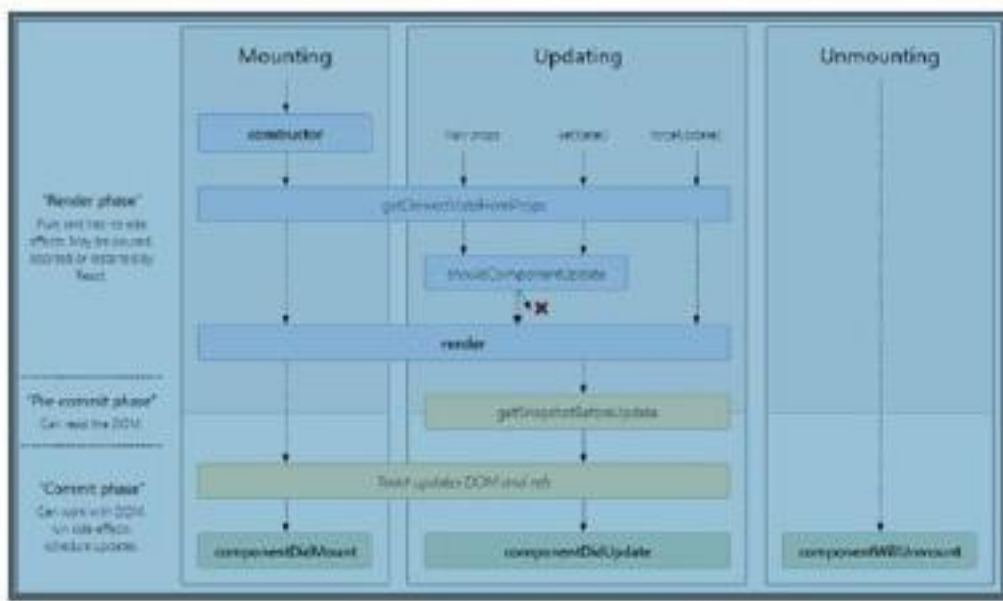


Figure 4-1. The lifecycle events of a React component

In sequence, during initial construction, the order will be as follows:

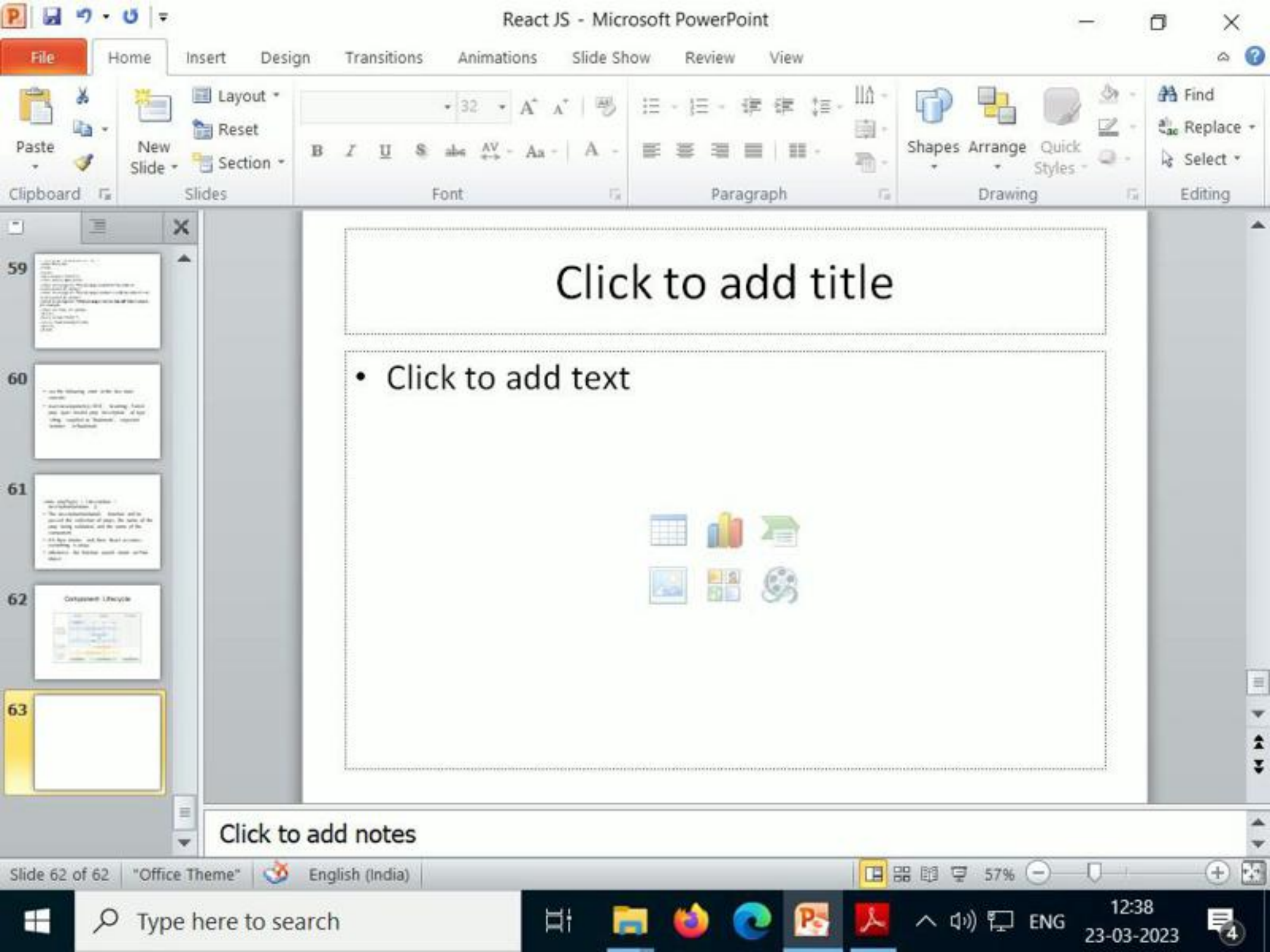
1. The component class's constructor is called. That should be pretty obvious: it's a JavaScript class after all, and if they define a constructor, then that always gets called first (and if they don't specify a constructor, then an automatically added one will be called).
2. The `getDerivedStateFromProps()` method is called. This is responsible for returning an object to update the state, or null if there is nothing to update. This is called during the initial construction of the component, called "mounting" because it's

Component Lifecycle

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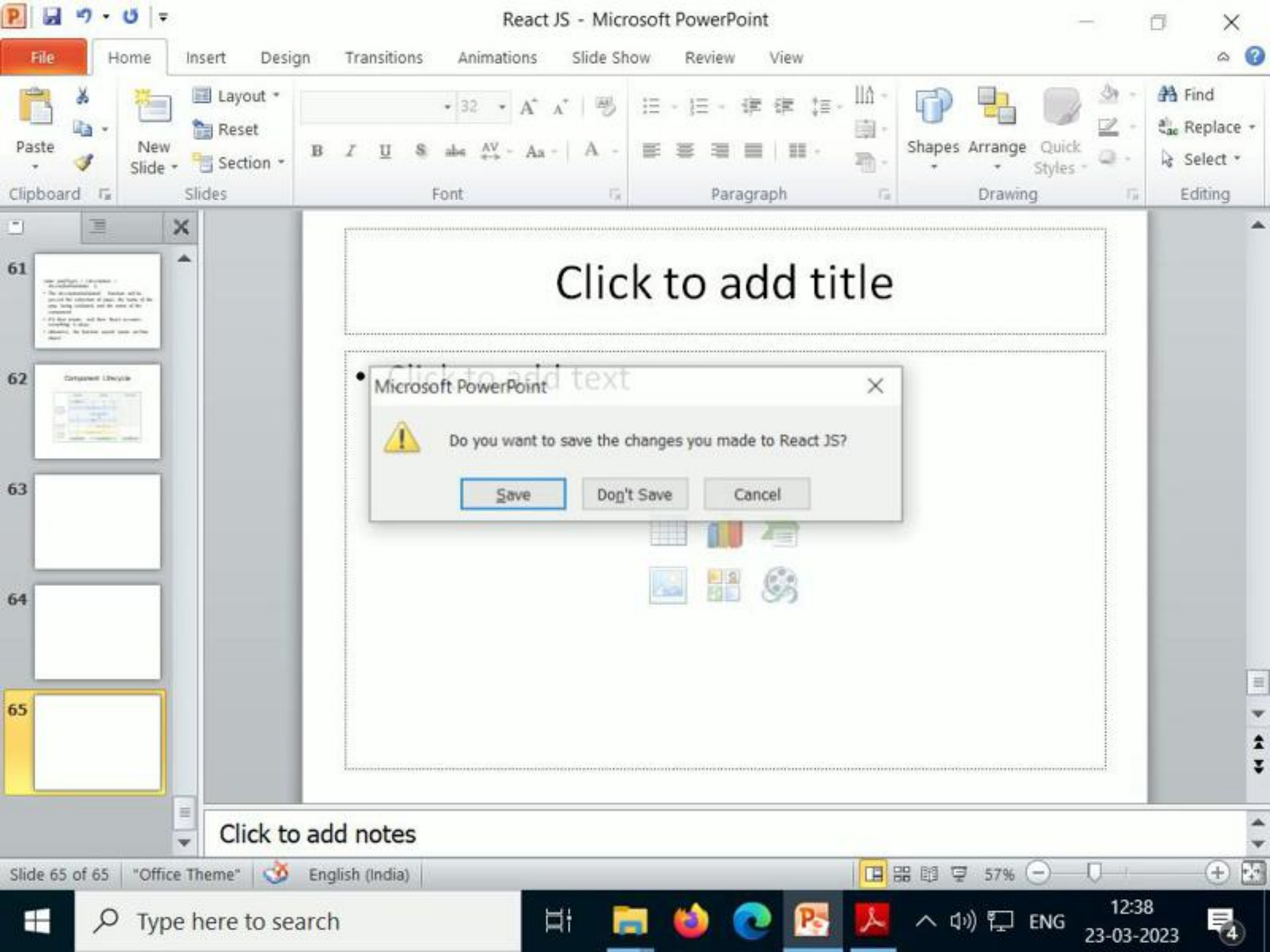
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Bookmarks

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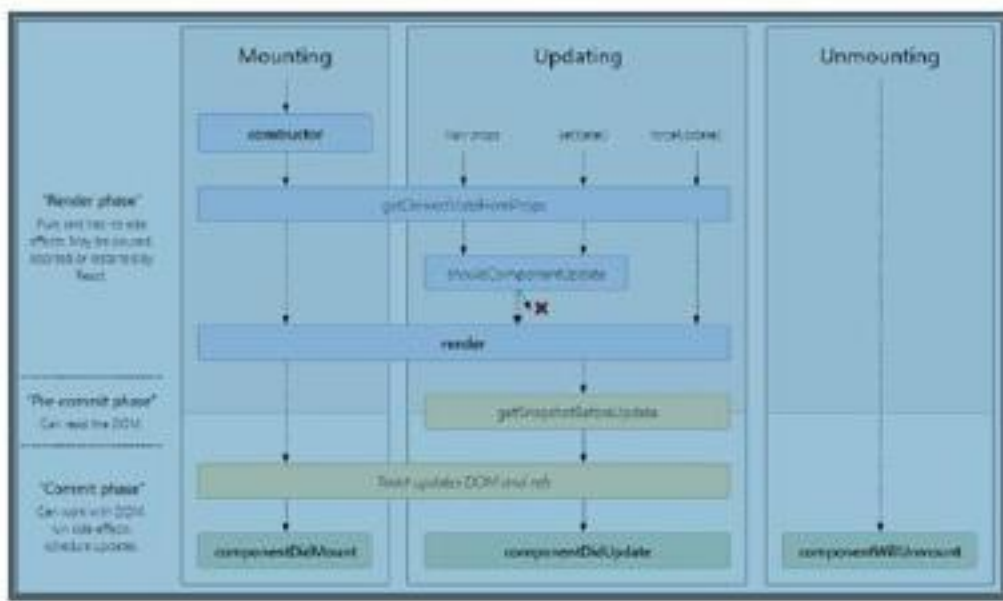


Figure 4-1. The lifecycle events of a React component

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