



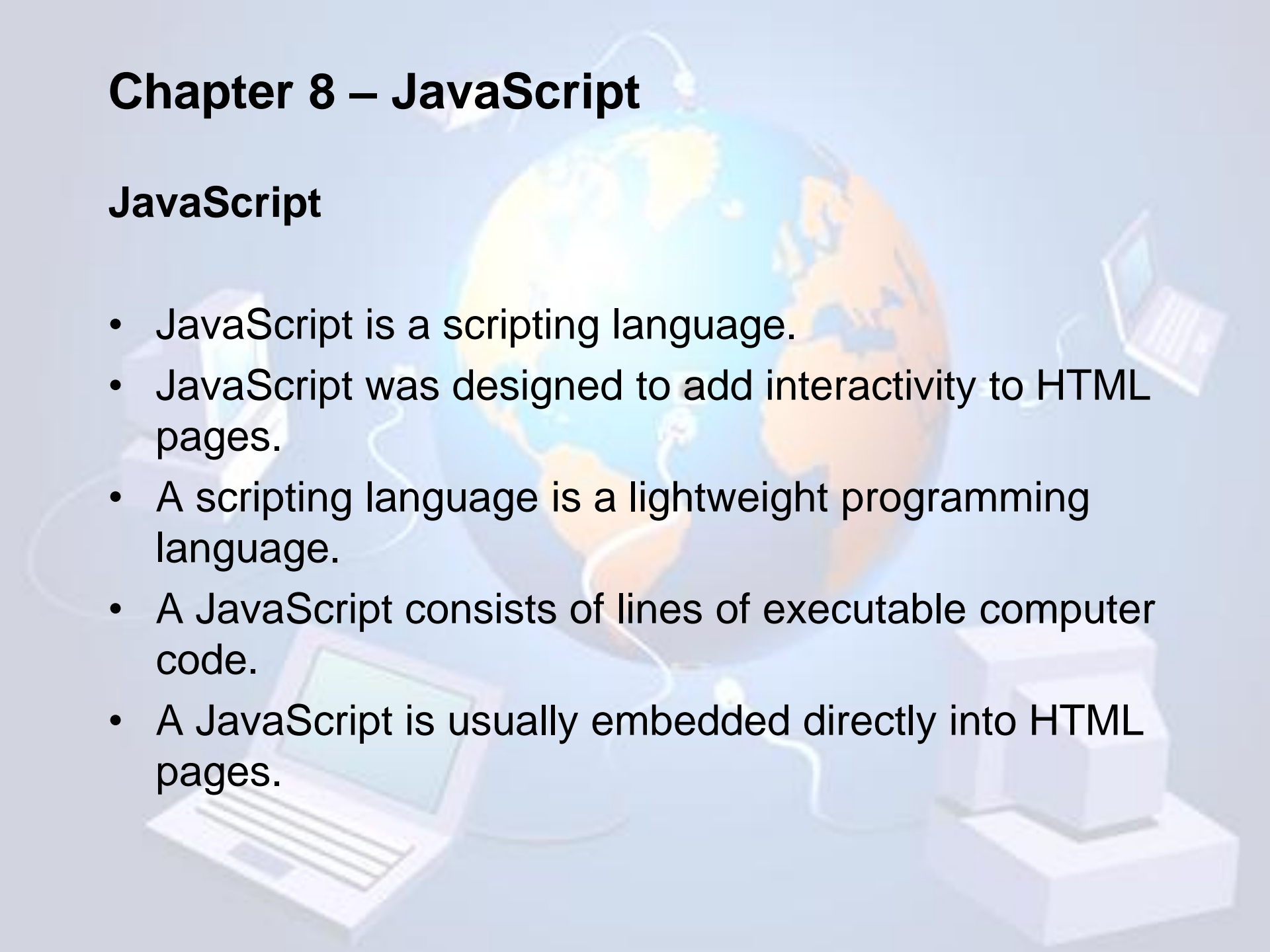
MMGD0204

Web Application Technology

Chapter 8

JAVASCRIPT

Chapter 8 – JavaScript



JavaScript

- JavaScript is a scripting language.
- JavaScript was designed to add interactivity to HTML pages.
- A scripting language is a lightweight programming language.
- A JavaScript consists of lines of executable computer code.
- A JavaScript is usually embedded directly into HTML pages.

Chapter 8 – JavaScript

What Can a JavaScript Do?

- JavaScript gives HTML designers a programming tool.
- JavaScript can put dynamic text into an HTML page.
- JavaScript can react to events.
- JavaScript can read and write HTML elements.
- JavaScript can be used to validate data.
- JavaScript can be used to detect the visitor's browser.
- JavaScript can be used to create cookies.

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Differences Between JavaScript and Java

- Java is an OOP programming language while JavaScript is an OOP scripting language.
- Java creates applications that run in a virtual machine or browser while JavaScript code is run on a browser only.
- Java code needs to be compiled while JavaScript code are all in text.



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Using JavaScript

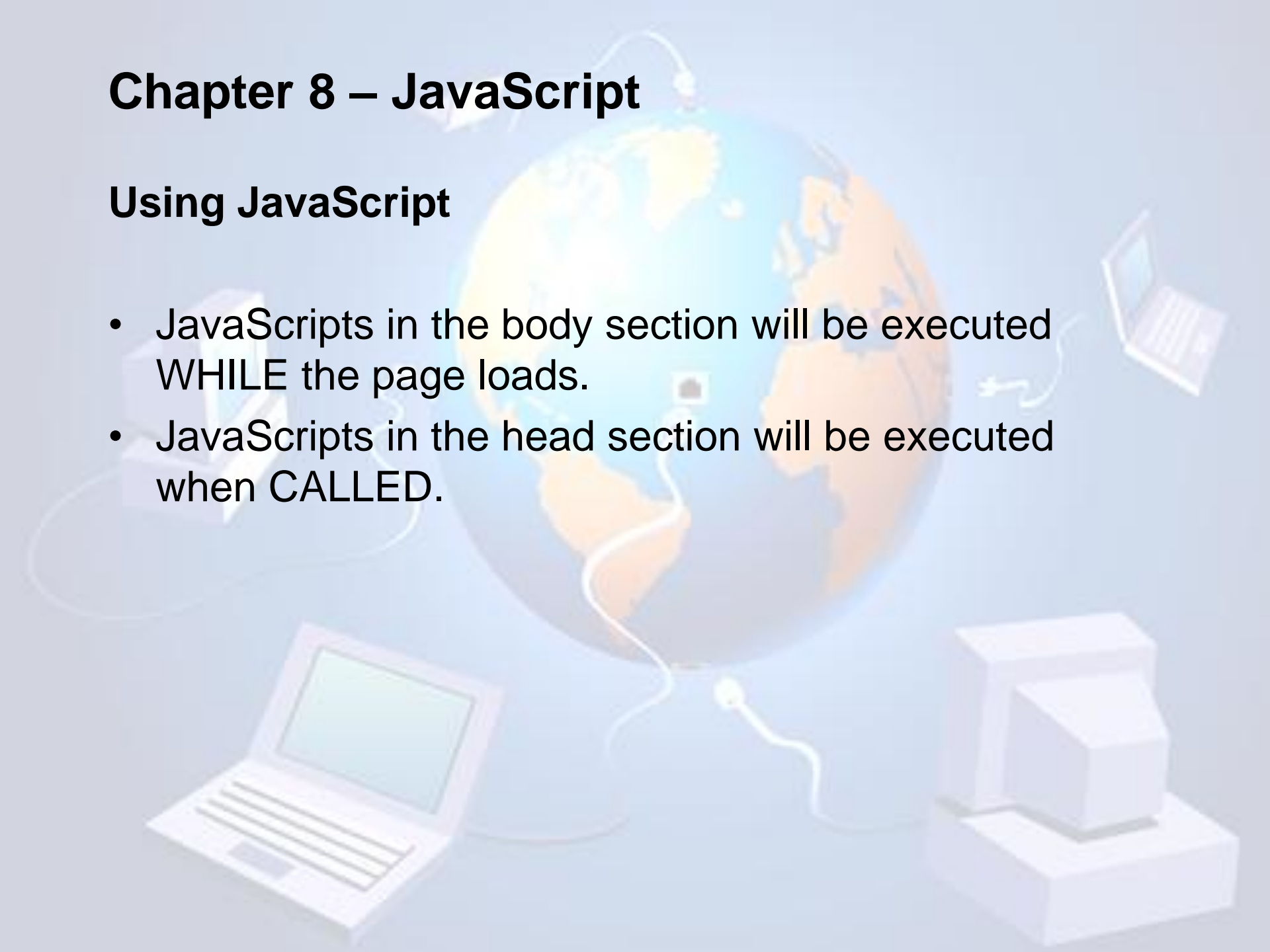
- To insert a JavaScript into an HTML page, we use the `<script>` tag.
- Inside the `<script>` tag we use the "type=" attribute to define the scripting language.
- The `<script type="text/javascript">` and `</script>` tells where the JavaScript starts and ends.

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Using JavaScript

```
<html>  
<body>  
<script type="text/javascript"> document.write("Hello World!");  
</script>  
</body>  
</html>
```

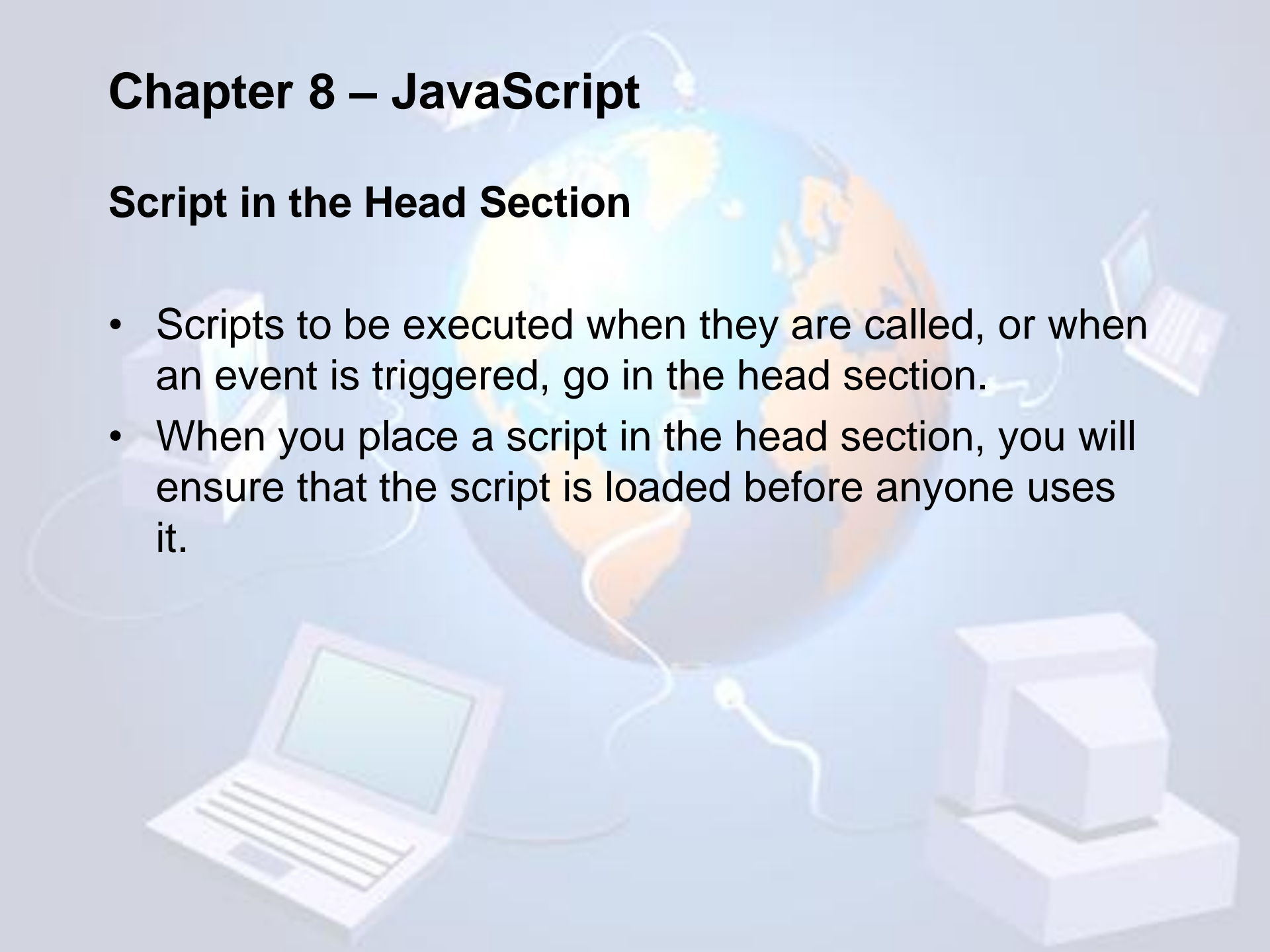
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Using JavaScript

- JavaScripts in the body section will be executed WHILE the page loads.
- JavaScripts in the head section will be executed when CALLED.

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Script in the Head Section

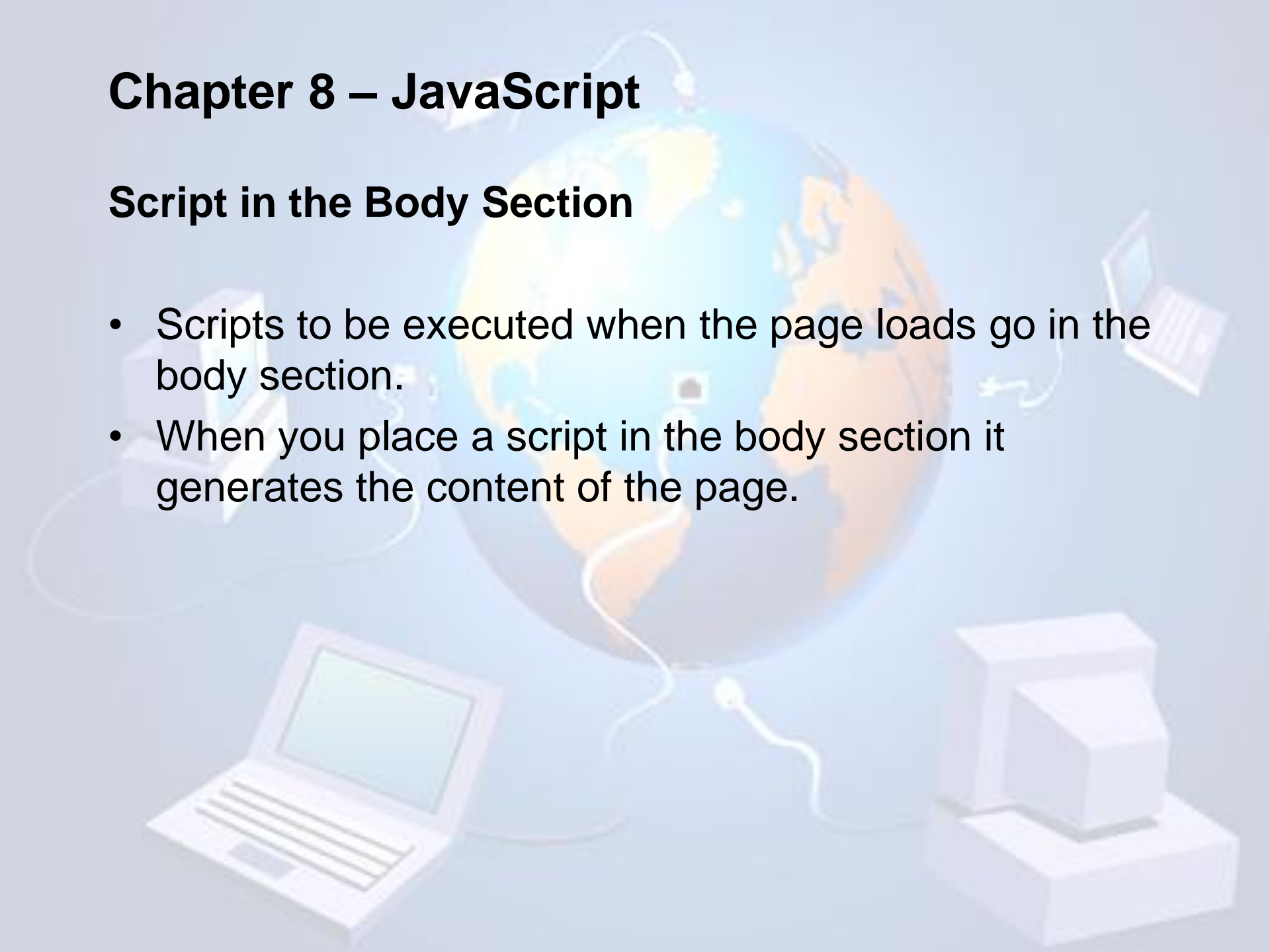
- Scripts to be executed when they are called, or when an event is triggered, go in the head section.
- When you place a script in the head section, you will ensure that the script is loaded before anyone uses it.

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Script in the Head Section

```
<html>  
<head>  
<script type="text/javascript">  
....  
</script>  
</head>
```

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Script in the Body Section

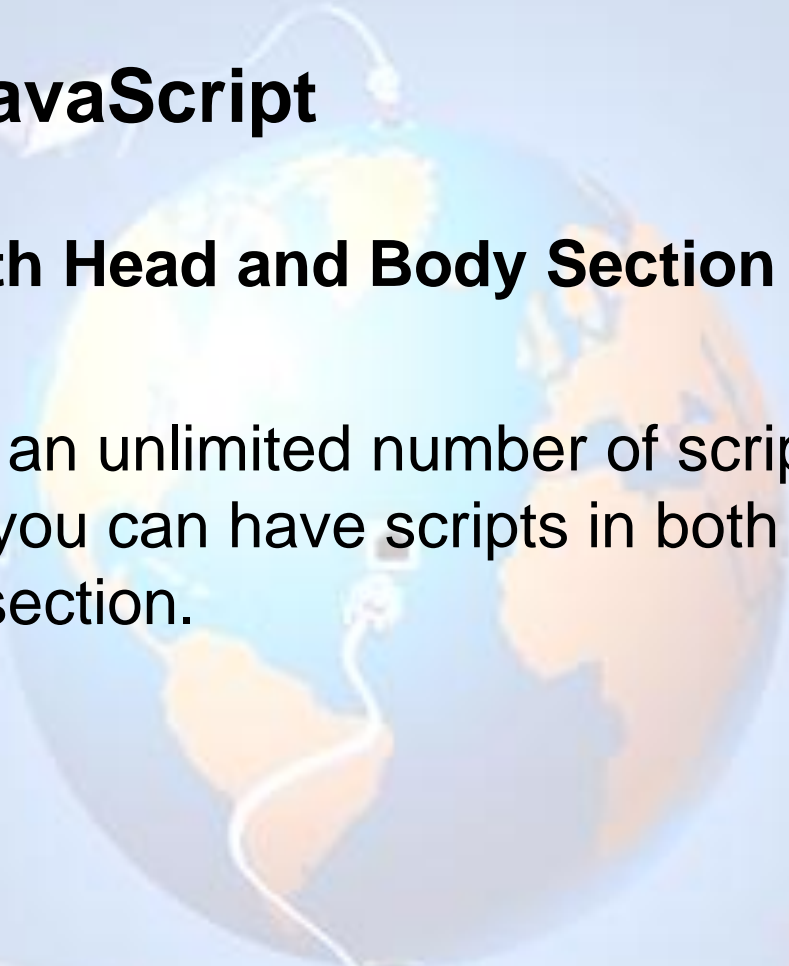
- Scripts to be executed when the page loads go in the body section.
- When you place a script in the body section it generates the content of the page.

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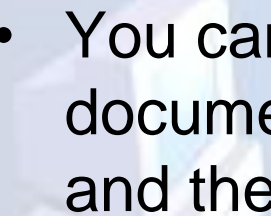
Script in the Body Section

```
<html>
<head>
</head>
<body>
<script type="text/javascript">
....
</script>
</body>
```

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Script in the Both Head and Body Section

- You can place an unlimited number of scripts in your document, so you can have scripts in both the body and the head section.
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- 
- 
- 

Chapter 8 – JavaScript

Script in the Both Head and Body Section

```
<html><head>  
<script type="text/javascript">  
....  
</script></head>  
<body>  
<script type="text/javascript">  
....  
</script>  
</body>
```

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JavaScript Statement

- A JavaScript statements is a command to the browser.
- The purpose of the command is to tell the browser what to do.
- It is normal to add a semicolon at the end of each executable statement.

```
document.write("Hello Dolly");
```

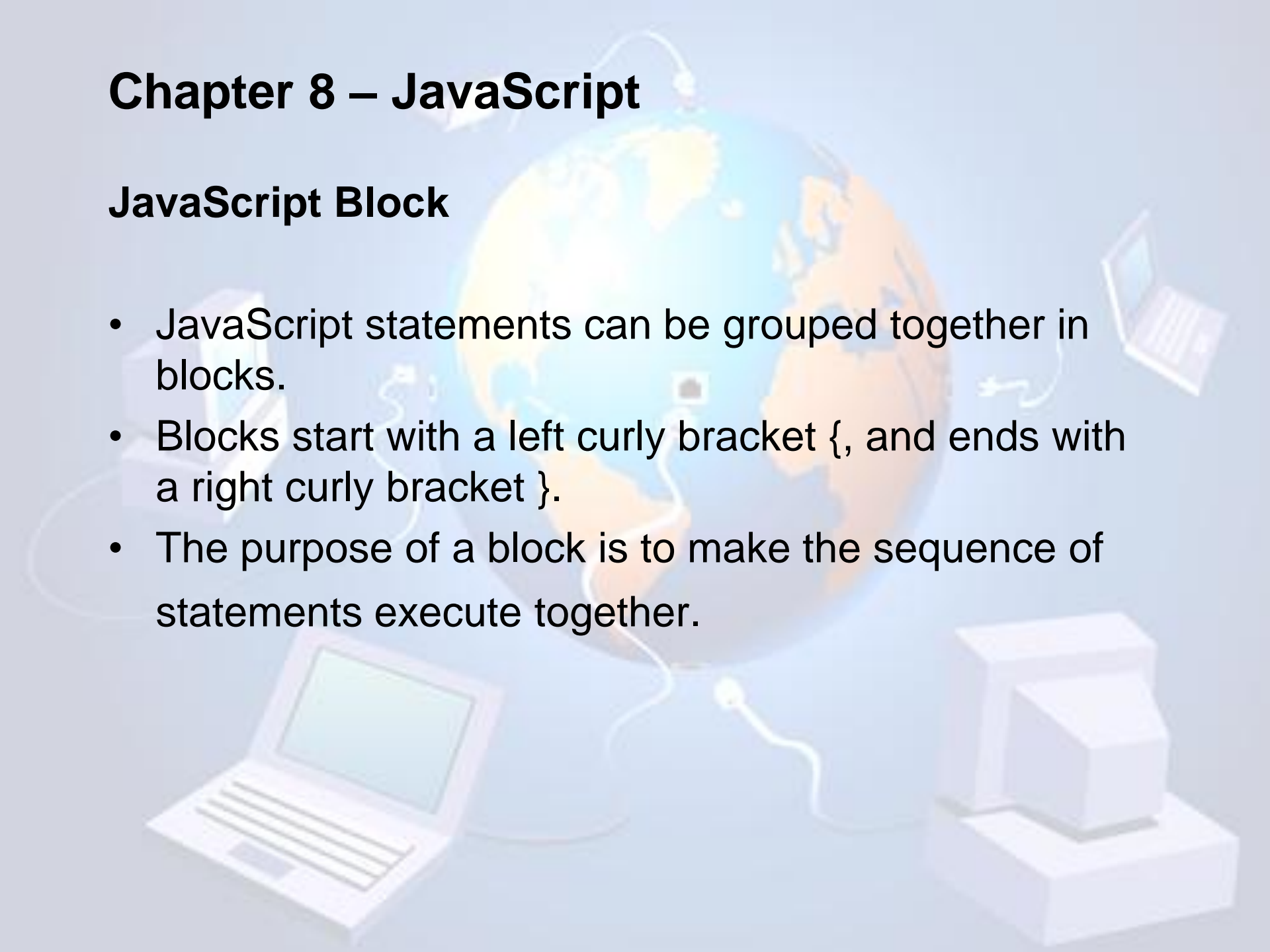
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JavaScript Code

- JavaScript code (or just JavaScript) is a sequence of JavaScript statements.
- Each statement is executed by the browser in the sequence they are written.

```
<script type="text/javascript">  
document.write("<h1>This is a header</h1>");  
document.write("<p>This is a paragraph</p>");  
document.write("<p>This is another  
paragraph</p>");  
</script>
```

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JavaScript Block

- JavaScript statements can be grouped together in blocks.
- Blocks start with a left curly bracket {, and ends with a right curly bracket }.
- The purpose of a block is to make the sequence of statements execute together.

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JavaScript Block

```
<script type="text/javascript">
{
document.write("<h1>This is a header</h1>");
document.write("<p>This is a paragraph</p>");
document.write("<p>This is another paragraph</p>");
}
</script>
```

Chapter 8 – JavaScript

The <noscript> Tag

- The <noscript> tag is a way you can give alternate content to browsers that don't support JavaScript or to modern users who have turned JavaScript off in their browsers.

```
<noscript>
```

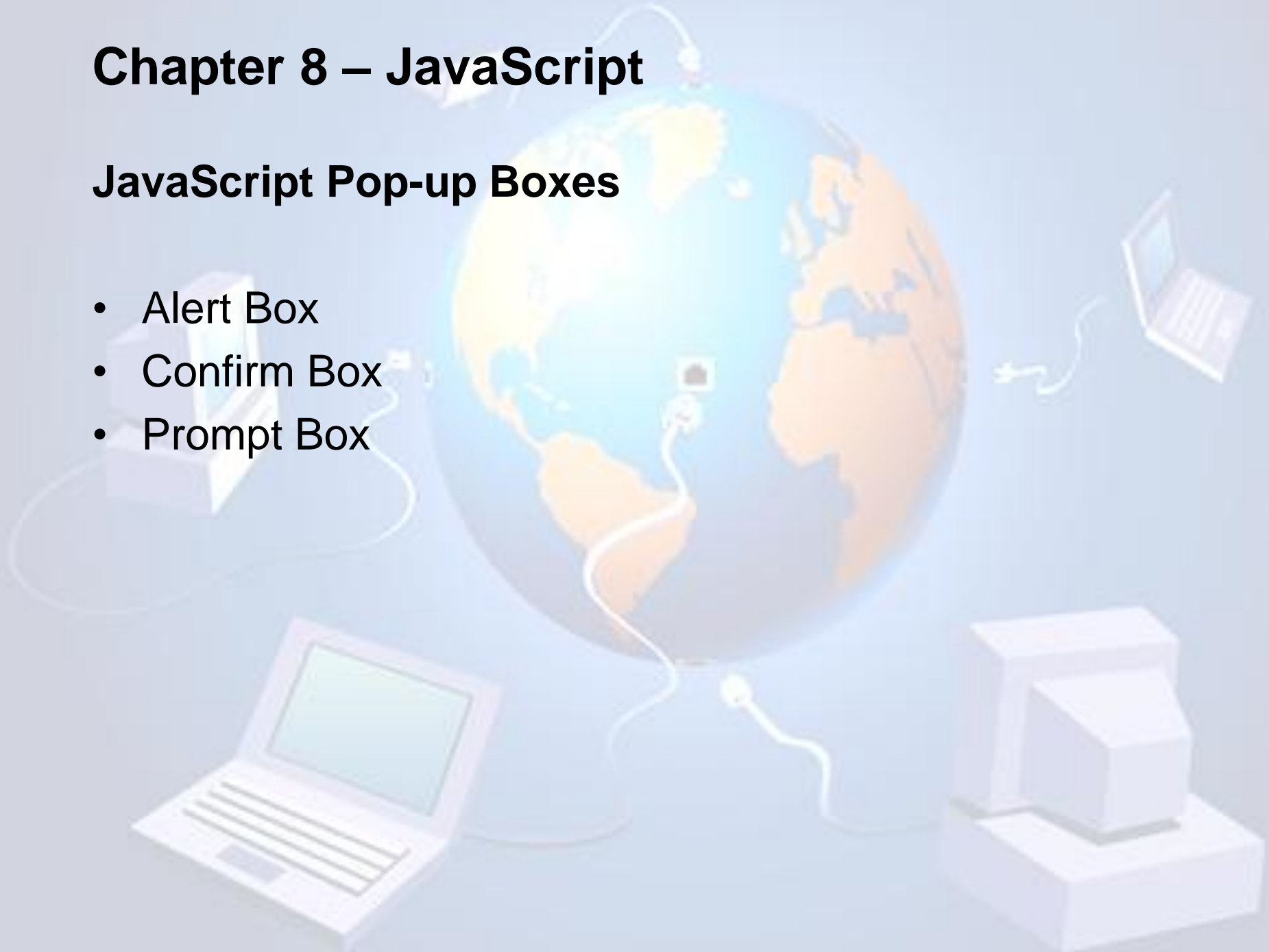
```
<p>Sorry, your browser does not support JavaScript.</p>
```

```
</noscript>
```

Chapter 8 – JavaScript

JavaScript Pop-up Boxes

- Alert Box
- Confirm Box
- Prompt Box



Chapter 8 – JavaScript

Alert Box

- An alert box is often used if you want to make sure information comes through to the user.
- When an alert box pops up, the user will have to click "OK" to proceed.



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Alert Box

```
<html>  
<body>  
<script type="text/javascript">  
alert("Hello world")  
</script>  
</body>  
</html>
```

Chapter 8 – JavaScript

Confirm Box

- A confirm box is often used if you want the user to verify or accept something.
- When a confirm box pops up, the user will have to click either "OK" or "Cancel" to proceed.
- If the user clicks "OK", the box returns true. If the user clicks "Cancel", the box returns false.



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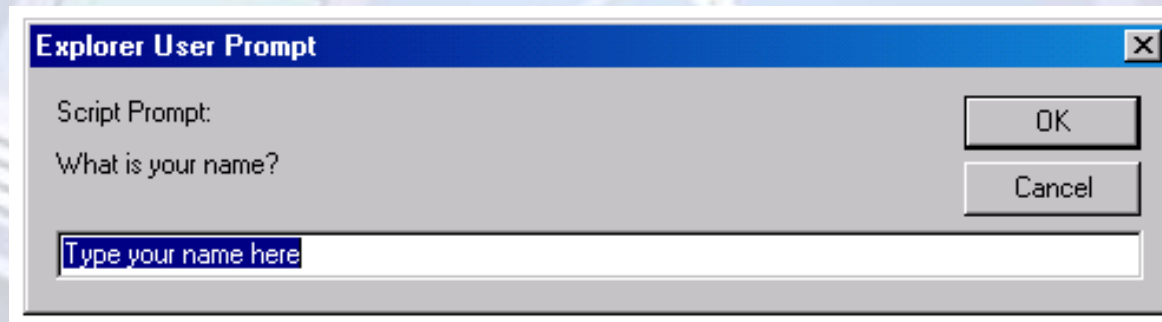
Confirm Box

```
<html>  
<body>  
<script type="text/javascript">  
confirm("Do you want to quit?");  
</script>  
</body>  
</html>
```

Chapter 8 – JavaScript

Prompt Box

- A prompt box is often used if you want the user to input a value before entering a page.
- When a prompt box pops up, the user will have to click either "OK" or "Cancel" to proceed after entering an input value.
- If the user clicks "OK" the box returns the input value. If the user clicks "Cancel" the box returns null.



Chapter 8 – JavaScript

Prompt Box

```
<html>  
<body>  
<script type="text/javascript">  
prompt("What is your name?", "Type your name here");  
</script>  
</body>  
</html>
```

Chapter 8 – JavaScript

Other JavaScript Examples:

- Browser Detection
- Animated Button
- Form Validation
- Games

