Introduction to JavaScript
Topics

- What is JavaScript?
- Why JavaScript?
- Including JavaScript in HTML
- Hello World Example Script
- JavaScript Comments
What is JavaScript?

- Created by Netscape
  - Originally called LiveWire then LiveScript
- A client-side scripting language
  - Client-side refers to the fact that it is executed in the client (software) that the viewer is using. In the case of JavaScript, the client is the browser.
  - A server-side language is one that runs on the Web server. Examples: PHP, Python, Perl
- Interpreted on-the-fly by the client
  - Each line is processed as it loads in the browser
JavaScript is not Java

- Completely different types of languages that just happen to be similarly named
  - JavaScript - programs are interpreted in the browser
  - Java - programs are compiled and can be run as stand alone applications
Why JavaScript?

- It’s easier to learn than most programming languages
- It allows you to make interactive Web pages
- It can be fun!
Including JavaScript in HTML

- Two ways to add JavaScript to Web pages
  - Use the `<script>…</script>` tag
  - Include the script in an external file -- more about this later in the semester
- Initially, we will only use the `<script>…</script>` tag
Hello, World!

- Typically, in any programming language, the first example you learn displays “Hello, World!”
- We are going to take a look at a Hello World example and then examine all of its parts.
<!DOCTYPE html>
<html>
<head>
  <title>Hello World Example</title>
</head>
<body>
  <script type="text/javascript">
    <!--
    document.write("<h1>Hello, world!</h1>");
    //-->
  </script>
</body>
</html>
Hello World Screenshot

Hello, world!
The `<script>...</script>` tag

- The code for the script is contained in the `<script>...</script>` tag

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

  ...

</script>
```
Hiding JavaScript from Older Browsers

- Some older browsers do not support JavaScript
- We need to tell those browsers to ignore what is in the `<script>` tag

```html
<script type="text/javascript">
  <!--
  some JavaScript code
  //-->
</script>
```
Displaying text

- The `document.write()` method writes a string of text to the browser

```html
<script type="text/javascript">
  <!--
  document.write("<h1>Hello, world!</h1>");
  //-->

  <!---->

</script>
```
document.write()
Comments in JavaScript

- Two types of comments
  - Single line
    - Uses two forward slashes (i.e. `//`)
  - Multiple line
    - Uses `/*` and `*/`
<script type="text/javascript">

<!--

// This is my JavaScript comment

document.write("<h1>Hello!</h1>");

//-->

</script>
Multiple Line Comment Example

```html
<script type="text/javascript">
<!--
    /* This is a multiple line comment. */
    * The star at the beginning of this line is optional.
    * So is the star at the beginning of this line.
    */
    document.write("<h1>Hello!</h1>" Untitled Script);
//-->
</script>
```
Find the Bug!

<script type="text/javascript">
<!--

/* This is my JavaScript comment
 * that spans more than 1 line.
 *

document.write("<h1>Hello!</h1>");

//-->

</script>