



JavaScript Variables & Constants

In this JavaScript (JS) project, you'll learn how to:

1. declare a JS variable using the keyword **let**
2. assign a value to your variable
3. define a JS constant using the keyword **const**
4. assign a value to your JS constant
5. generate output using JS variables and constants

JavaScript Variables



JS Variables: Project Files

- Create two files for this JavaScript (JS) project:
 - lastname-js-variables.html
 - lastname-js-variables.js
- Make a copy of your JS template and use the copy as your starter HTML file
- Then make a copy of your (empty) JS external file and make the copy your starter JS file
- Update in your `<script>` element the name of the external JS file you're linking to for this project



Your External JavaScript File / Part 1

```
1 // Bruce Provencher
2 // 20 DEC 2019
3 // Script for JavaScript Template
4
5 // This is a single-line JavaScript comment
6
7 /* You can also
8  * add comments to
9  * your JavaScript file that
10 * span more than
11 * one line
12 */
13
```

Remember to add a comment block to your external JS file.

Please update the info in the comment block for your current project.



lastname-js-variables.js



Your External JavaScript File / Part 2

```
// Variable name always goes on the left hand side of the assignment operator (=)

let firstName = "Abraham";
let lastName = "Lincoln";

// Use BACKTICKS (not single or double quotation marks) in your template literals, i.e. ${} syntax
// See lines 21 and 23 below

alert(` ${firstName} ${lastName} was president during the Civil War.`);
console.log(` ${firstName} ${lastName} was president from March 1861 to April 1865.`);
```

REQUIRED: Add the comments shown. The comments explain what the script is doing.



lastname-js-variables.js

JavaScript Constants



Your JavaScript Constants File

1. Duplicate your JS variables file, rename it (see bottom of this slide), and update the comment block in the new file.
2. Add the code shown on the next slide to your new file.
3. View the output in your browser console.



lastname-js-constants.js



Script for Your JavaScript Constants File

```
// Declare and assign values to the variables
let dogName = "Fritz";
let dogBreed = "German Shepherd";
let dogAge = 3;
let humanYears = 0;

// Define the constant so we can do the age calculation
// We want to convert dog years into human years
const conversionFactor = 7; // One human year is equivalent to seven dog years

// Do the math (dog years to human years)
humanYears = dogAge * conversionFactor;

// Display the answer (output) in the browser console
console.log(` ${dogName} is a ${dogBreed}. In dog years, he is ${dogAge} years old. In human years, though, ${dogName} is ${humanYears} years old.`);
```

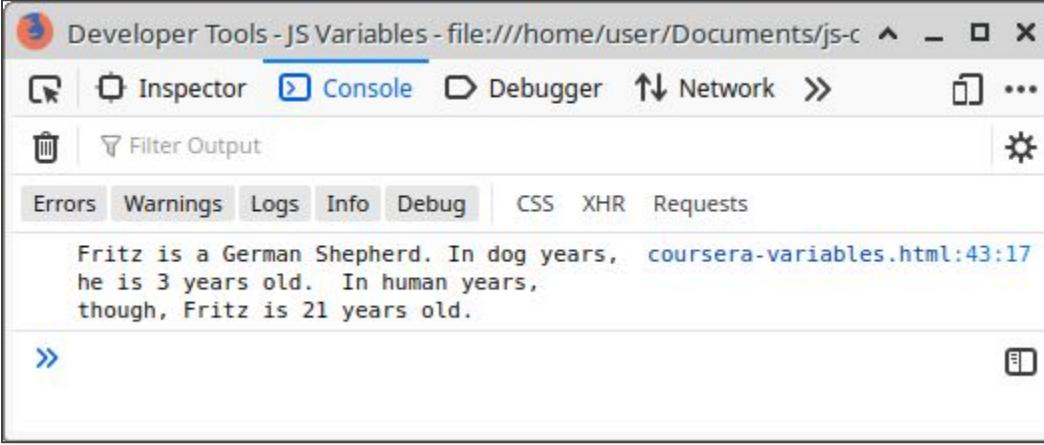
REQUIRED: Add the comments shown. The comments explain what the script is doing.



lastname-js-constants.js



Output: Your JavaScript Constants File



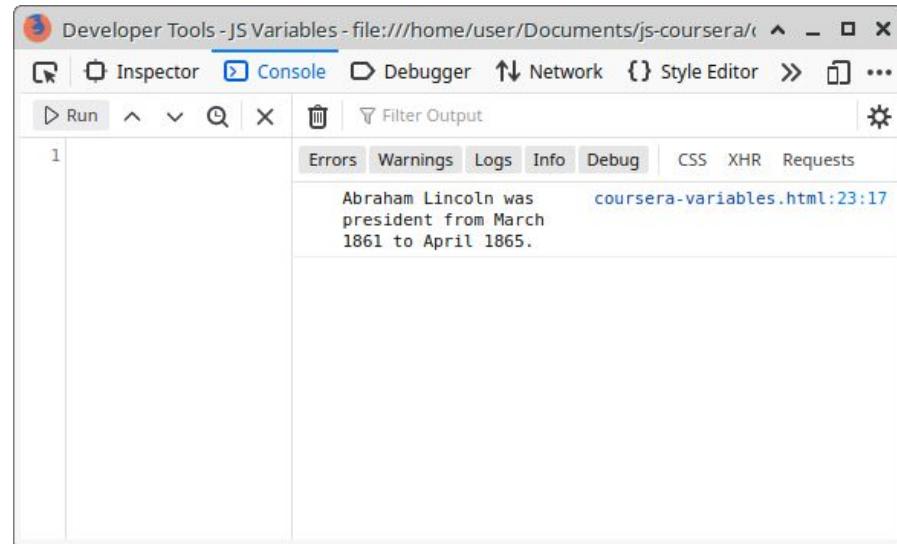
The screenshot shows the 'Console' tab of the Developer Tools in a browser. The title bar reads 'Developer Tools - JS Variables - file:///home/user/Documents/js-c'. The console output displays the following text:

```
Fritz is a German Shepherd. In dog years, coursera-variables.html:43:17
he is 3 years old. In human years,
though, Fritz is 21 years old.
```



Testing Your Work

- Double check your script for typos, missing code, etc.
- View your web page in your browser
- Note the output your script generates for you
- Right-click your page > choose Inspect (Chrome) / **Inspect Element** (Firefox) > Console to view the output sent to the browser console



A screenshot of the Chrome Developer Tools Console tab. The console output shows the following text:

```
1
Abraham Lincoln was
president from March
1861 to April 1865.
coursera-variables.html:23:17
```

All done?

- Have your page open in your browser
- Let me know you're finished so I can take a look at your code
- Be prepared to answer a couple quick questions about your project code

