

JavaScript: Variables

The
Complete
Web
Developer in
2018

The Complete Web Developer in 2018
Zero to Mastery
Andrei Neagoie
Lecture Notes by Stephanie

Javascript Variables

var
let
const

```
> var george = "Pretzels make me thirsty" + " mofo!"  
< undefined  
> george  
< "Pretzels make me thirsty mofo!"
```

Variables must start with letter, \$, _ (not number or symbol)

firstName <<< camel case

User Input

```
> prompt()
```

www.google.com says

Stephanie is the best!

Cancel

OK

Go

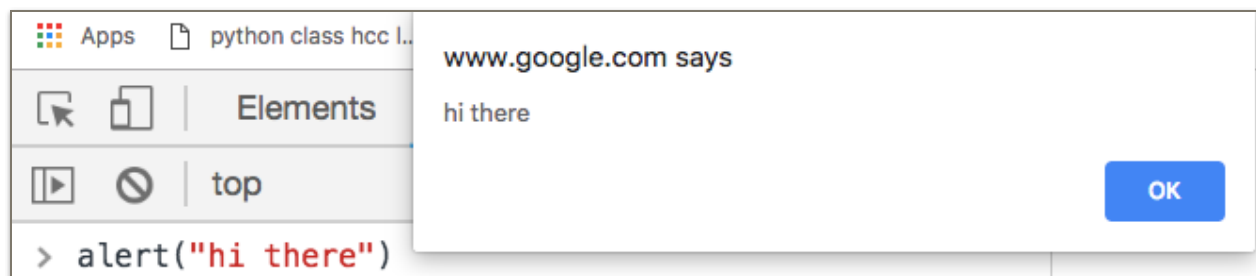
```
> prompt()  
< "Stephanie is the best!"
```

Use var and prompt() together to store user input
prompt() saves input as string by default
Shift + Enter to add line of code
Number() converts string to number

```
> Number()
```

```
> var first = prompt("enter first number");  
var second = prompt("enter second number");  
< undefined  
  
> first  
< "80"  
  
> second  
< "99"  
  
> Number(first)  
< 80  
  
> var sum = Number(first) + Number(second);  
< undefined  
  
> sum  
< 179
```

```
> alert()
```



>>> alert() is an expression (returns value)
so we need to use semicolon

Make a simple calculator....

```
> var first = prompt("enter first number");  
var second = prompt("enter second number");  
var sum = Number(first) + Number(second);  
alert("The sum is: " + sum);
```

www.google.com says

enter first number

Cancel

OK

www.google.com says

enter second number

Cancel

OK

www.google.com says

The sum is: 135

OK

Variables can hold anything:
booleans, strings, numbers, undefined...


```
> var booleanVar = true
< undefined
> booleanVar
< true
```

undefined used when nothing is assigned to a variable
(undefined is the 4th javascript type)

```
> var newVar;
< undefined
> newVar
< undefined
```

Before you use a **variable** in a **JavaScript** program, you must **declare** it. **Variables** are **declared** with the **var** keyword as follows. Storing a value in a **variable** is called **variable** initialization. You can do **variable** initialization at the time of **variable** creation or at a later point in time when you need that **variable**.

```
<h3>JavaScript Variables</h3>
<p>In this example, x, y, and z are variables</p>
<script language="javascript">
  <p id="demo"></p>
  <script>
    var x = 5;
    var y = 6;
    var z = x + y;
    document.getElementById('demo').innerHTML = z;
  </script>
</body>
</html>
```



www.wikihow.com

Declare variable

```
> var newVariable
< undefined
```

Initialize variable - store value in variable

```
> newVariable = 777
< 777
```

Declare + Initialize in one step

```
> var newVariable2 = 444
< undefined
> newVariable2
< 444
```

- Error because variable firstName not declared yet
- Would NOT get error if var was declared but not initialized, even though value would be "undefined")

```
> if (firstName === "Bob" && lastName === "Smith") {
  alert("Hi Bob Smith");
}
```

```
✖ ▼ Uncaught ReferenceError: firstName is not defined VM4133:1
    at <anonymous>:1:1
    (anonymous) @ VM4133:1
```

Exercise 2

// Evaluate what answers you would get if you ran this in the
// Javascript Console in Google Chrome. Answer the questions then
// check them by copying them and running it in the console yourself
// line by line

// add variable "firstName" and "lastName" // so that they equal
your name

// create a variable that holds the answer // of "firstName" + " " +
"lastName"

```
> var firstName = prompt("enter first name");  
var lastName = prompt('enter last name');  
var fullName = firstName + " " + lastName;  
fullName;  
◀ "doug bays"
```

// Evaluate this question. What is a + b?

var a = 34;

var b = 21;

a = 2;

a + b // what is the answer here?

// What is c equal to?

var c;

```
> var a = 34;  
var b = 21;  
a = 2;  
a+b  
◀ 23  
  
> var c  
◀ undefined
```

Exercise 3

// Make a Calculator! using prompt(), and variables, make a program that does the following:

// 1. Prompts the user for first number.

// 2. Stores that first number

// 3. Prompts the user for the second number.

// 4. stores that number and responds with the SUM by using an alert.

// BONUS: Make a program that can subtract, multiply, and also divide!

```
> var firstNumber = prompt("Enter first number");  
var secondNumber = prompt("Enter second number");  
alert(  
  "First number: " + firstNumber +  
  "\nSecond number: " + secondNumber +  
  "\nThe sum is: " +  
  (Number(firstNumber) + Number(secondNumber)) +  
  "\nThe difference is: " +  
  (Number(firstNumber) - Number(secondNumber)) +  
  "\nMultiply them: " +  
  (Number(firstNumber) * Number(secondNumber)) +  
  "\nDivide them: " +  
  (Number(firstNumber) / Number(secondNumber)));
```

www.google.com says

First number: 2000

Second number: 10

The sum is: 2010

The difference is: 1990

Multiply them: 20000

Divide them: 200

OK