Lesson12

Javascript Basics

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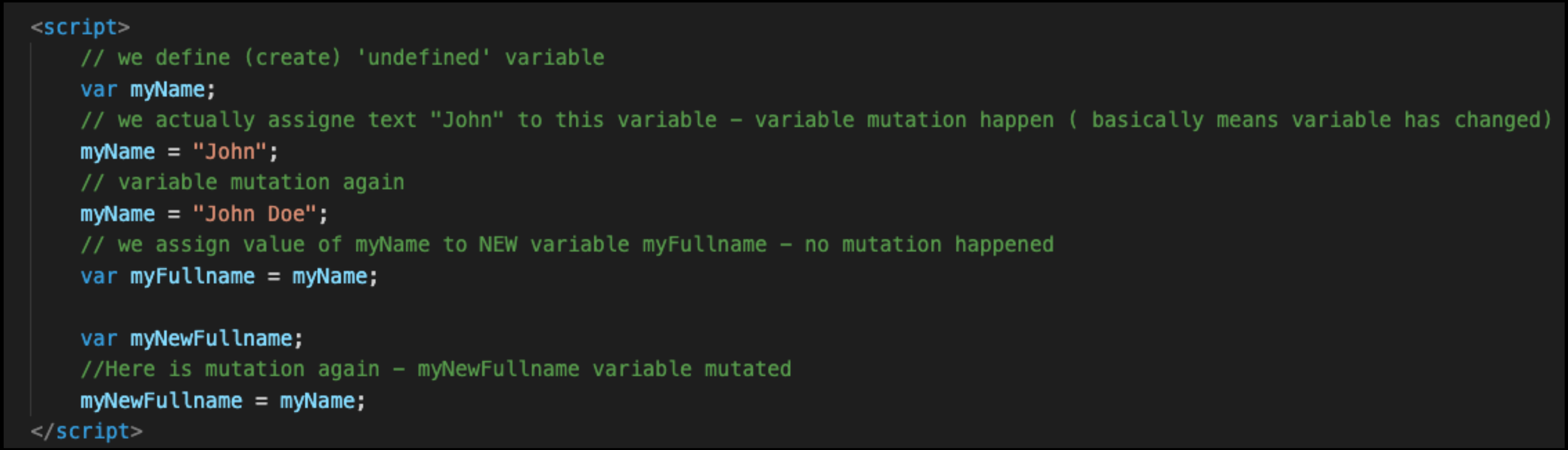
PHP Fullstack course, Code Academy 2020

What we will learn today?

- Variable Mutation
- Basic Operators
- Type Coercion
- IF ELSE statements
- Comparison operators
- Logical Operators
- Boolean logic

Variable mutation

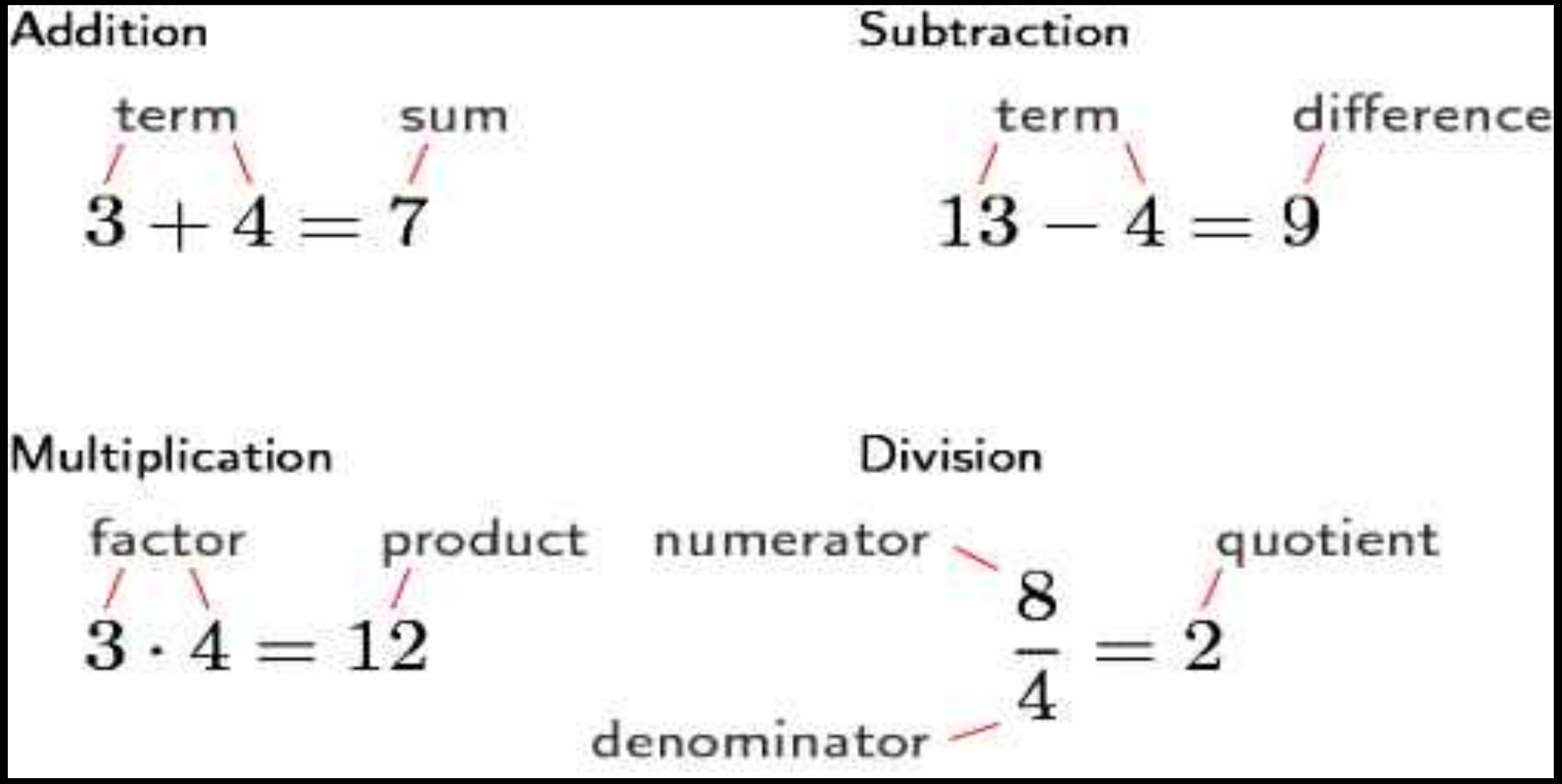
- String variables Concatenation (joining) with plus (+) sign
- Variable mutation basically means change the value of variable
- 

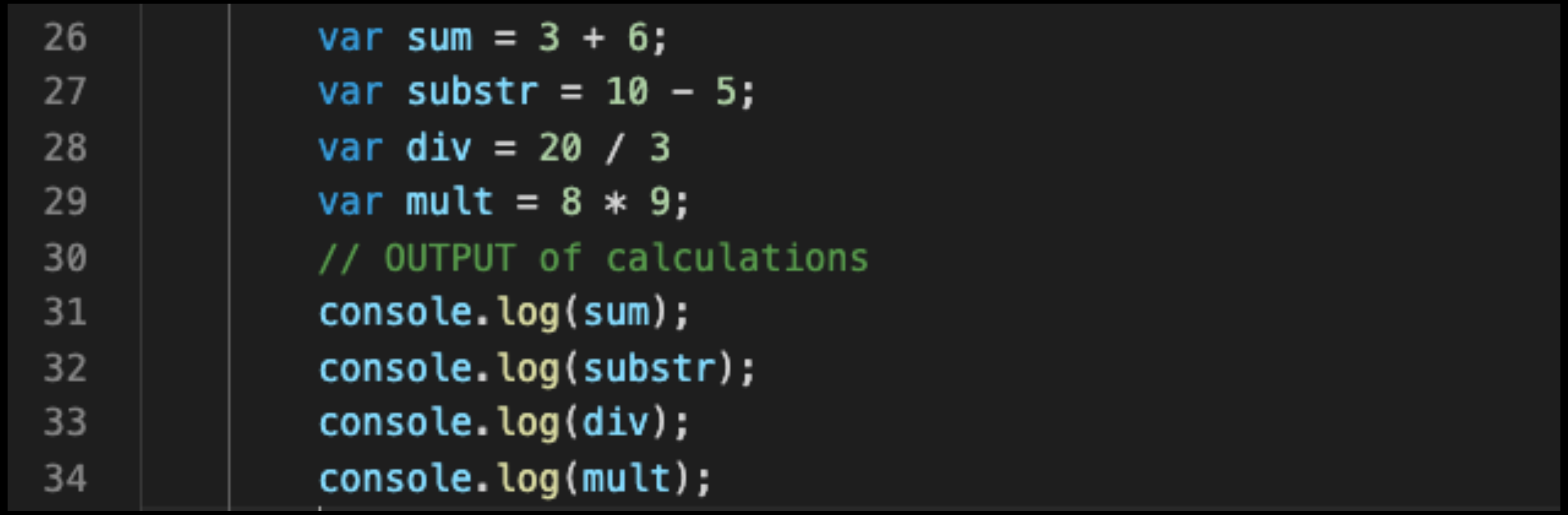
```
<script>
    // we define (create) 'undefined' variable
    var myName;
    // we actually assigne text "John" to this variable - variable mutation happen ( basically means variable has changed)
    myName = "John";
    // variable mutation again
    myName = "John Doe";
    // we assign value of myName to NEW variable myFullname - no mutation happened
    var myFullname = myName;

    var myNewFullname;
    //Here is mutation again - myNewFullname variable mutated
    myNewFullname = myName;
</script>
```

Basic Operations

- Sum (+)
- Subtraction (-)
- Multiplication (*)
- Division (/)
- Type Coercion examples: “2” + 2 javascript will calculate as “22”, it means string + number will be converted to string





```
var sum = 3 + 6;
var substr = 10 - 5;
var div = 20 / 3
var mult = 8 * 9;
// OUTPUT of calculations
console.log(sum);
console.log(substr);
console.log(div);
console.log(mult);
```

Browser pop-ups

- prompt() - displays a dialog with an optional message prompting the user to input some text
- alert() - method displays an alert dialog with the optional specified content and an OK button
- confirm(message) - method displays a modal dialog with an optional message and two buttons: OK and Cancel

Coding Challange 1

Celsius to Farenheit

- Imagin you work for company which has weather app. For now you worked in Europe and all temperatures were shown in Celsiuses. But your company plan to expand to US and now you need to convert all Celsiuses into Farenheits.

1. Ask user with browser prompt to enter temperature in Celsius’s

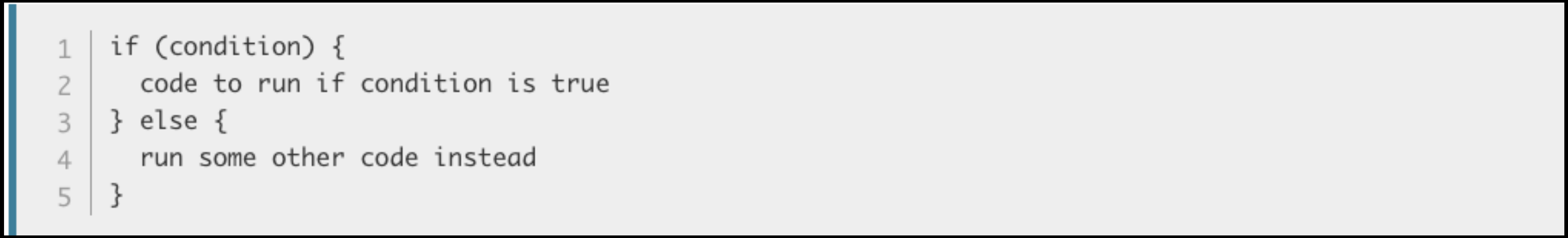
2. Store this temperature in variable

3. Use this variable in Celsius to Fahrenheit conversion formula, display the result with conosle.log

IF … ELSE statements

Conditionals

- In any programming language, the code needs to make decisions and carry out actions accordingly depending on different inputs
- Conditional statements allow us to represent decision making in Javascript
- Conditionals can be nested
- Conditional result check always should be True or False



```
if (condition) {
  code to run if condition is true
} else {
  run some other code instead
}
```

Comparison operators

- Comparison operators are used to test the conditions inside our conditional statements.
- === and !== — test if one value is identical to, or not identical to, another.
- < and > — test if one value is less than or greater than another
- <= and >= — test if one value is less than or equal to, or greater than or equal to, another.
- A values false, undefined, null, 0, NaN, empty string(‘’) returns always “false”

Logical Operators

To test multiple conditions

- **&&** — AND; allows you to chain together two or more expressions so that all of them have to individually evaluate to `true` for the whole expression to return `true`.
- || — OR; allows you to chain together two or more expressions so that one or more of them have to individually evaluate to `true` for the whole expression to return `true`.
- **!** (exclamation sign) - logical operator NOT - is used to negate an expression
- (and) - is used to group multiple conditions and checks into blocks