

JavaScript: Conditionals, Control Flow, & Logical Operators

The
Complete
Web
Developer in
2019

The Complete Web Developer in 2019
Zero to Mastery
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CONTROL FLOW



execute code in straight line



conditional execution

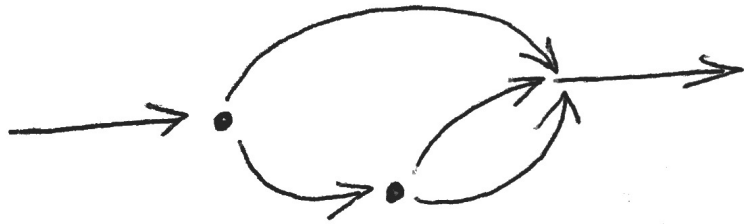
JAVASCRIPT CONDITIONALS

aka "conditional statements"

- if
- else
- else if
- ternary operator
- switch

expressions
return
values

note: an if statement is not an expression,
so it does NOT require a semicolon



conditional execution can be complex

```
ex: if ( ) {  
    ~~~~~;  
} else if ( ) {  
    ~~~~~;  
} else {  
    ~~~~~;  
}
```

if - else statement

```
> if (name === "Billy") {  
    alert("hi Billy!");  
} else {  
    alert("hmmm I dont know you");  
}
```

Note: these are conditional statements, do NOT need semicolon

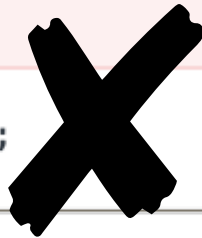
else if statement

```
> if (name === "Billy") {  
    alert("hi Billy!");  
} else if (name === "Susy") {  
    alert("hi Susy!");  
} else {  
    alert("I dont know you");  
}
```

Note: if you use = instead of ===, you will create a new variable instead of checking the condition!!! Be very careful!!!



```
> firstName5  
✖ ▶ Uncaught ReferenceError: firstName5 is VM1709:1  
   not defined  
   at <anonymous>:1:1  
> if (firstName5="Bob") {  
    alert("what up bob");  
}  
< undefined  
> firstName5  
< "Bob"
```



An embedded page at www.google.com says
what up bob



OK

ternary operator

For this function:

```
> function isValid(bool) {  
    return bool;  
}
```

Instead of using this:

```
> function conditionFunxn(boolEntry) {  
    if (isValid(boolEntry)) {  
        return "Enter here";  
    } else {  
        return "Access denied";  
    }  
}
```

To get:

```
> conditionFunxn(true)  
< "Enter here"  
> conditionFunxn(false)  
< "Access denied"
```

We can use a ternary operator!

(condition) ? (expression1) : (expression2);

if condition = true, then expression1

if condition = false, then expression2

```
> function ternaryOperatorFunxn(boolEntry) {  
    return (isValid(boolEntry) ?  
        "Enter here" : "Access denied");  
}
```

```
> ternaryOperatorFunxn(true)  
< "Enter here"  
> ternaryOperatorFunxn(false)  
< "Access denied"
```

switch

Instead of using if - else if - else if - else if - else statement:

```
> function moveCommand(direction) {  
  var whatHappens;  
  switch (direction) {  
    case "forward":  
      whatHappens = "encounter monster!";  
      break; // exit switch statement  
    case "back":  
      whatHappens = "arrive at home";  
      break;  
    case "right":  
      whatHappens = "find river";  
      break;  
    case "left":  
      whatHappens = "see troll";  
      break;  
    default:  
      whatHappens = "please enter valid direction";  
  }  
  return whatHappens;  
}
```

To get:


```
> moveCommand("back")  
< "arrive at home"  
> moveCommand("forward")  
< "encounter monster!"  
> moveCommand("lalalalal")  
< "please enter valid direction"
```

Exercise: Advanced Control Flow

Section 13, Lecture 134

It's time to code some javascript! Get your sublime text ready for this exercise, and use Google Chrome javascript console to test your code. You can find the exercise file and the solution file attached. Good luck!

Resources for this lecture

 [exercise2-SOLUTIONS.js](#)

 [exercise2.js](#)

```

> //#1 change this function into a ternary and assign it
// to variable called experiencePoints
function experiencePoints() {
    if (winBattle()) {
        return 10;
    } else {
        return 1;
    }
}

//solution:
function expPointsTernary() {
    return (winBattle() ? 10 : 1);
}

```

```

> //Using this function, answer the questions below:
function moveCommand(direction) {
    var whatHappens;
    switch (direction) {
        case "forward":
            break;
            whatHappens = "you encounter a monster";
        case "back":
            whatHappens = "you arrived home";
            break;
            break;
        case "right":
            return whatHappens = "you found a river";
            break;
        case "left":
            break;
            whatHappens = "you run into a troll";
            break;
        default:
            whatHappens = "please enter a valid direction";
    }
    return whatHappens;
}

```

```

//#2 return value when moveCommand("forward");
undefined

//#3 return value when moveCommand("back");
"you arrived home"

//#4 return value when moveCommand("right");
"you found a river"

//#5 return value when moveCommand("left");
undefined

```


Javascript Logical Operators

&& and

|| or

! not

AND operator: &&

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

OR operator: ||

```
> if (name === "Billy" || name === "Ann") {  
    alert("Hi Billy or Ann!");  
}
```

NOT operator: !

```
> !false  
< true  
> !true  
< false
```

```
> name = "Barry"  
< "Barry"  
> if (!(name === "Malia")) {  
    "You're not Malia";  
}  
< "You're not Malia"
```

```
// Exercise 4
// Make a keyless car!
// This car will only let you drive if you are over 18. Make it do the
following:
```

```
//using prompt() and alert(), ask a user for their age.
// IF they say they are below 18, respond with:
// "Sorry, you are too young to drive this car. Powering off"

// IF they say they are 18, respond with:
// "Congratulations on your first year of driving. Enjoy the ride!"

// IF they say they are over 18, respond with:
// "Powering On. Enjoy the ride!"
```

My solution:

```
> var age = Number(prompt("How old are you
    bro?"));
    if (age < 18) {
        alert("Sorry, too young kiddo");
    } else if (age === 18) {
        alert("Congrats, 18!!");
    } else {
        alert("you old");           // age > 18
    }
```