Conditionals

UC Berkeley Graduate School of Journalism

Conditionals

IF true ...

```
var score = 5;

if(score == 10){

   $('#results').html("You won!!");

}
```

IF true ...

```
var score = 5;

if(score == 10){

   $('#results').html("You won!!");

}
```

Sets up a conditional

IF true ...

```javascript
var score = 5;

if(score == 10){

    $('#results').html("You won!!");

}
```

The condition.
Result with be either TRUE or FALSE

IF true ...

```
var score = 5;

if(score == 10){

   $('#results').html("You won!!");

}
```

Code will *only* execute if condition was true.

Operators

Operator	Description
==	Equivalency
!=	Not equal
>	More than
<	Less than
>=	More than or equal to
<=	Less than or equal to

Pop Quiz

```javascript
var score = 5;

if(score < 10){

    $('#results').html("You won!!");

}
```

Pop Quiz

```
var score = 5;

if(score < 10){

    $('#results').html("You won!!");

}

true
```

Pop Quiz

```
var score = 10;

if(score < 10){

    $('#results').html("You won!!");

}
```

Pop Quiz

```
var score = 10;

if(score < 10){

    $('#results').html("You won!!");

}

false
```

Pop Quiz

```javascript
var score = 30;

if(score >= 30){

  $('#results').html("You won!!");

}
```

Pop Quiz

```
var score = 30;

if(score >= 30){

    $('#results').html("You won!!");

}

true
```

Pop Quiz

```
var score = 30;
var topscore = 50;

if(score > topscore){

  $('#results').html("High scorer!!");

}
```

Pop Quiz

```
var score = 30;
var topscore = 50;

if(score > topscore){

  $('#results').html("High scorer!!");

}
false
```

Pop Quiz

```javascript
var age = 21;
var drinkingAge = 21;

if(age < drinkingAge){

  $('#results').html("No beer 4 u!!");

}
```

Pop Quiz

```
var age = 21;
var drinkingAge = 21;

if(age < drinkingAge){

  $('#results').html("No beer 4 u!!");

}


false
```

Pop Quiz

```
var age = 21;
var drinkingAge = 21;

if(age >= drinkingAge){

  $('#results').html("Bottom's up!");

}
```

Pop Quiz

```
var age = 21;
var drinkingAge = 21;

if(age >= drinkingAge){

   $('#results').html("Bottom's up!");

}
```

 true

Pop Quiz

```
var password = "abcdefg";

if(password != "rosebud"){

  $('#results').html("Wrong password");

}
```

Pop Quiz

```
var password = "abcdefg";

if(password != "rosebud"){

  $('#results').html("Wrong password");

}

true
```

Else

```
var score = 5;

if(score == 10){

  $('#results').html("You won!!");

} else {

  $('#results').html("You lost");

}
```

Else

```
var score = 5;

if(score == 10){

  $('#results').html("You won!!");

} else {

  $('#results').html("You lost");

}
```

if it's a FALSE statement

Pop Quiz

```
var height = 45;

if(height <= 44){

  $('#results').html("Too short to ride");

} else {

  $('#results').html("Welcome aboard");

}
```

Pop Quiz

```
var height = 45;

if(height <= 44){

  $('#results').html("Too short to ride");

} else {

  $('#results').html("Welcome aboard");

}

Welcome aboard
```

Pop Quiz

```javascript
var firstName = "keyser";

if(firstName == "KEYSER"){

  $('#results').html("Keyser Söze!?");

} else {

  $('#results').html("Wrong guy");

}
```

Pop Quiz

```
var firstName = "keyser";

if(firstName == "KEYSER"){

  $('#results').html("Keyser Söze!?");

} else {

  $('#results').html("Wrong guy");

}
```
Wrong guy

Pop Quiz

```javascript
var person = "Jim Smith";

if(person == "Jim" + " " + "Smith"){

    $('#results').html("Hi Jim");

} else {

    $('#results').html("Wrong guy");

}
```

Pop Quiz

```javascript
var person = "Jim Smith";

if(person == "Jim" + " " + "Smith"){

    $('#results').html("Hi Jim");

} else {

    $('#results').html("Wrong guy");

}
```
Hi Jim

Pop Quiz

```javascript
var person = "Jack";

if(person != "Jack Smith"){

    $('#results').html("Wrong Jack");

} else {

    $('#results').html("Hey Jack");

}
```

Pop Quiz

```
var person = "Jack";

if(person != "Jack Smith"){

    $('#results').html("Wrong Jack");

} else {

    $('#results').html("Hey Jack");

}
```

Wrong Jack

Pop Quiz

```javascript
var num = 55;

if(num != (16 - 5) * (3 + 2)){

    $('#results').html("Answer A");

} else {

    $('#results').html("Answer B");

}
```

Pop Quiz

```
var num = 55;

if(num != (16 - 5) * (3 + 2)){

    $('#results').html("Answer A");

} else {

    $('#results').html("Answer B");

}
```
Answer B

else vs no else

```
if(name == "Joe"){
   $('#msg').html("Hi Joe!");
} else {
   $('#msg').html('Welcome');
}
```

Hi Joe!

```
if(name == "Joe"){
   $('#msg').html("Hi Joe!");
}

$('#msg').html('Welcome');
```

Hi Joe!
Welcome

Multiple Conditions

```
var fruit1 = "Apple";
var fruit2 = "Pear";

if(fruit1 == "Apple" && fruit2 == "Pear")
{
    $('#results').html("Both are true");
}

else

{
    $('#results').html("One or more is false");
}
```

Multiple Conditions

```
var fruit1 = "Apple";
var fruit2 = "Pear";

if(fruit1 == "Apple" && fruit2 == "Pear")
{
    $('#results').html("Both are true");
}

else

{
  $('#results').html("One or more is false");
}
```

Multiple Conditions

```
var fruit1 = "Apple";
var fruit2 = "Pear";

if(fruit1 == "Apple" && fruit2 == "Pear")
{
    $('#results').html("Both are true");
}


else

{
   $('#results').html("One or more is false");
}
```

Multiple Conditions

```
var fruit1 = "Apple";
var fruit2 = "Pear";

if(fruit1 == "Apple" && fruit2 == "Pear")
{
    $('#results').html("Both are true");
}


else

{
   $('#results').html("One or more is false");
}
```

Multiple Conditions

Operator	Description
&&	AND
||	OR

Multiple Conditions

```
var num = 5;

if(num == 6 || num == 5)
{
   $('#results').html("One or both are true");
}

else

{
   $('#results').html("Both are false");
}
```

Pop Quiz

```
var num = 5;

if(num > 3 || num < 5)
{
   $('#results').html("True");
}
else
{
   $('#results').html("False");
}
```

Pop Quiz

```
var num = 5;

if(num > 3 || num < 5)
{
    $('#results').html("True");
}
else
{
    $('#results').html("False");
}

True
```

Pop Quiz

```javascript
var num = 5;

if(num > 3 && num < 5)
{
   $('#results').html("True");
}
else
{
   $('#results').html("False");
}
```

Pop Quiz

```javascript
var num = 5;

if(num > 3 && num < 5)
{
    $('#results').html("True");
}
else
{
    $('#results').html("False");
}

False
```

Pop Quiz

```
var num = 45;

if(num > 44 && num < 46)
{
    $('#results').html("True");
}
else
{
    $('#results').html("False");
}
```

Pop Quiz

```
var num = 45;

if(num > 44 && num < 46)
{
    $('#results').html("True");
}
else
{
    $('#results').html("False");
}

True
```

Pop Quiz

```
var num = 45;

if(num != 45 && num == 45)
{
  $('#results').html("True");
}
else
{
  $('#results').html("False");
}
```

Pop Quiz

```javascript
var num = 45;

if(num != 45 && num == 45)
{
    $('#results').html("True");
}
else
{
    $('#results').html("False");
}
```

False

Pop Quiz

```
var num = 45;

if(num != 3 || num == 45)
{
   $('#results').html("True");
}
else
{
   $('#results').html("False");
}
```

Pop Quiz

```javascript
var num = 45;

if(num != 3 || num == 45)
{
    $('#results').html("True");
}
else
{
    $('#results').html("False");
}
```

True

Pop Quiz

```javascript
var pass = "rosebud";

if(pass == "rose" || pass == "bud")
{
   $('#results').html("True");
}
else
{
   $('#results').html("False");
}
```

Pop Quiz

```javascript
var pass = "rosebud";

if(pass == "rose" || pass == "bud")
{
    $('#results').html("True");
}
else
{
    $('#results').html("False");
}
```

False

Pop Quiz

```
var guy = {age: 34, height: 60};

if(guy.height > 50 || guy.age <= 36)
{
    $('#results').html("True");
}
else
{
    $('#results').html("False");
}
```

Pop Quiz

```
var guy = {age: 34, height: 60};

if(guy.height > 50 || guy.age <= 36)
{
    $('#results').html("True");
}
else
{
    $('#results').html("False");
}

True
```

Pop Quiz

```
var i = [23, 43, 6, 88, 3];

if(i[0] > 50 || i[2] >= 10)
{
    $('#results').html("True");
}
else
{
    $('#results').html("False");
}
```

Pop Quiz

```
var i = [23, 43, 6, 88, 3];

if(i[0] > 50 || i[2] >= 10)
{
    $('#results').html("True");
}
else
{
    $('#results').html("False");
}

False
```

Boolean rules

`if(          )`

Number	0 is false all others true
String	"" is false all others true
Array	Always true
Object	Always true

Boolean rules

```
if(                )
```

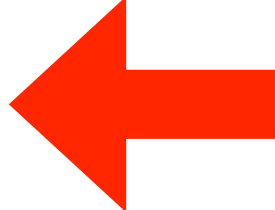|	
Number	0 is false all others true
String	"" is false all others true
Array	Always true
Object	Always true

A few caveats

```
var someString = "";

var num = 0;
```
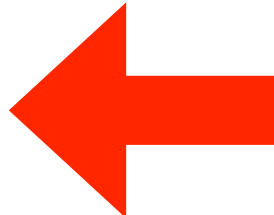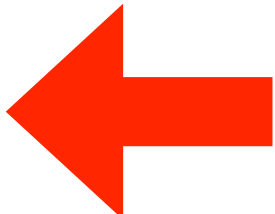
A few caveats

```
var someString = "";
```
⬅ This is false

```
var num = 0;
```

A few caveats

```
var someString = "";    ← This is false

var num = 0;    ← So is this
```

False Exceptions

```
var name = "";

if(name){

    $('#results').html("true");

} else {

    $('#results').html("false");

}
```

False Exceptions

```
var num = 0;

if(num){

    $('#results').html("true");

} else {

    $('#results').html("false");

}
```

False Exceptions

```
var num = 0;

if(!num){

    $('#results').html("true");

} else {

    $('#results').html("false");

}
```

Pop Quiz

```javascript
var num = 3 + 4;
num -= 7;

if(!num){

    $('#results').html("true");

} else {

    $('#results').html("false");

}
```

Pop Quiz

```
var num = 3 + 4;
num -= 7;

if(!num){

    $('#results').html("true");

} else {

    $('#results').html("false");

}
                  true
```

Pop Quiz

```
var num = 88;
num -= 90;

if(num + 2){

    $('#results').html("true");

} else {

    $('#results').html("false");

}
```

Pop Quiz

```javascript
var num = 88;
num -= 90;

if(num + 2){

    $('#results').html("true");

} else {

    $('#results').html("false");

}
```

false

Pop Quiz

```javascript
var i = [4, 2, 5, 6, 0];

if(i[0] && i[4] && i[1]){

    $('#results').html("true");

} else {

    $('#results').html("false");

}
```

Pop Quiz

```
var i = [4, 2, 5, 6, 0];

if(i[0] && i[4] && i[1]){

    $('#results').html("true");

} else {

    $('#results').html("false");

}
```

true

Pop Quiz

```javascript
var i = [4, 2, 5, 6, 0];

if(i[0] && i[4] && i[1]){

    $('#results').html("true");

} else {

    $('#results').html("false");

}
```

true

Pop Quiz

```javascript
var i = [4, 2, 5, 6, 0];

if((i[0] && i[3]) || (i[1] && i[4])){

    $('#results').html("true");

} else {

    $('#results').html("false");

}
```

Pop Quiz

```javascript
var i = [4, 2, 5, 6, 0];

if((i[0] && i[3]) || (i[1] && i[4])){

    $('#results').html("true");

} else {

    $('#results').html("false");

}
```

Pop Quiz

```
var i = [4, 2, 5, 6, 0];

if(((i[0] && i[3]) || (i[1] && i[4]))){

    $('#results').html("true");

} else {

    $('#results').html("false");

}
```

true

Comparison expressions are values

```
var score  = 28;
```

Comparison expressions are values

```
var score   = 28;

var name    = "John Doe";
```

Comparison expressions are values

```
var score  = 28;

var name   = "John Doe";

var lucky  = false;
```

Comparison expressions are values

```
var score  = 28;

var name   = "John Doe";

var lucky  = false;

var loser  = "heads" == "tails";
```

Comparison expressions are values

```
var score  = 28;

var name   = "John Doe";

var lucky  = false;

var loser  = "heads" == "tails";

var isTrue = 56 > 2;
```

Comparison expressions are values

```
var score  = 28;

var name   = "John Doe";

var lucky  = false;

var loser  = "heads" == "tails";

var isTrue = 56 > 2;
```

Comparison expressions are values

45

Comparison expressions are values

45   Number

Comparison expressions are values

```
    45              Number

"hello world"
```

Comparison expressions are values

45   Number

"hello world"   string

Comparison expressions are values

45   Number

"hello world"   string

[3, 4, 5, 6]

Comparison expressions are values

45	Number
"hello world"	string
[3, 4, 5, 6]	Array

Comparison expressions are values

```
        45                Number

   "hello world"          string

    [3, 4, 5, 6]          Array

{"name":"Joe", "age":3}
```

Comparison expressions are values

```
        45              Number

   "hello world"        string

    [3, 4, 5, 6]        Array

{"name":"Joe", "age":3} Object Literal
```

Comparison expressions are values

```
         45                 Number

    "hello world"           string

    [3, 4, 5, 6]            Array

{"name":"Joe", "age":3} Object Literal

        1 == 2
```

Comparison expressions are values

45   Number

"hello world"   string

[3, 4, 5, 6]   Array

{"name":"Joe", "age":3}   Object Literal

1 == 2   Boolean

Comparison expressions are values

45	Number
"hello world"	string
[3, 4, 5, 6]	Array
{"name":"Joe", "age":3}	Object Literal
1 == 2	Boolean
true	

Comparison expressions are values

45	Number
"hello world"	string
[3, 4, 5, 6]	Array
{"name":"Joe", "age":3}	Object Literal
1 == 2	Boolean
true	Also a boolean