

More Functions

Chapter 20

Exercise

- Write a function called `until100` that takes an age as a parameter and pops up a message telling you when you will be 100.
- For example, if you call `until100(18)`, then the message that appears should be:

```
You will be 100 in 82 years.
```

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Solution

```
function until100(age) {  
  alert("You will be 100 in " + (100 - age) +  
    " years.");  
}
```

- To test, call the function with different values:

```
until100(18);  
until100(53);  
until100(2);  
until100(0);
```

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Exercise

- Write a function called `doubleTalk` that takes a message as a parameter and pops up a box that displays the message twice.
- For example, the following function call:
`doubleTalk("Woohoo!");`
would pop up a box with the message:
Woohoo! Woohoo!

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Solution

```
function doubleTalk(message) {  
  alert(message + " " + message);  
}
```

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Exercise

- Write a function called `square` that takes a number and *returns* the square of the number.
- Example function call:
`var x = square(8);`
(`x` should now have the value 64)

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Solution

```
function square(x) {  
  return x * x;  
}
```

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Exercise

- Write a function called `min` that takes two numbers as parameters and *returns* the smaller value of the two (or either number if they are equal).
- Example function call:
`var smaller = min(18, 10);`
(smaller should now have the value 10)

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Solution

```
function min(a, b) {  
  if (a < b) {  
    return a;  
  } else {  
    return b;  
  }  
}
```

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Exercise

- Write a function called `squaredMin` that takes two numbers as parameters and *returns* the square of the smaller value of the two (or the square of either number if they are equal).
- Example function call:
`var answer = squaredMin(18, 10);`
(answer should now have the value 100)

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Solution

```
function min(a, b) {  
  if (a < b) {  
    return a;  
  } else {  
    return b;  
  }  
}  
  
function square(x) {  
  return x * x;  
}  
  
function squaredMin(a, b) {  
  return square(min(a,b));  
}
```

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Calling Functions

- **passing parameters:** calling a function and specifying *values* for its parameters
- Example:
`var smaller = min(9*2, 10);`
passing 18 and 10 to min

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Passing Parameters

- When a function is called:
 - the values *passed* to the function are *copied* into the parameter variables
 - the function's code executes using those values

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Tracing A Function Call

```
function min(a, b) {   a: 18  b: 10
  if (a < b) {
    return a;
  } else {
    return b;
  }
}

var first = min(9*2, 10);
var second = min(77, 11+3);
```

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