1. Numbers: NEVER USE QUOTES for a number if you want to do math on it!

```javascript
var money = 100;
var tempInAlaska = -32.4;
var todaysMonth = 2;
```

2. Strings: use quotes on anything that you want it to be considered as string, especially anything contains not just numbers.

```javascript
var moneyString = "$100.00";
var temp = "32.4 degrees";
var todaysMonthString = "Feb.";
```

3. Conditionals:

<table>
<thead>
<tr>
<th>Condition</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>less than</td>
<td><code>a &lt; b</code></td>
</tr>
<tr>
<td>greater than</td>
<td><code>a &gt; b</code></td>
</tr>
<tr>
<td>less than or equal</td>
<td><code>a &lt;= b</code></td>
</tr>
<tr>
<td>greater than or equal</td>
<td><code>a &gt;= b</code></td>
</tr>
<tr>
<td>equal</td>
<td><code>a == b</code></td>
</tr>
<tr>
<td>not equal</td>
<td><code>a != b</code></td>
</tr>
</tbody>
</table>

```javascript
var a=100; // A single equal is an assignment, which means set the value of a to 100.
if a == 100 // A double equal is an comparison, which means the condition is a equals 100.
```

4. Functions: You can define function by creating variables and assigning them the value of a function.

1) We defined a function named `printHello`, and the usage of the function is to print “Hello” “CS” “105” on the screen by using `console.log`. When we call the function for four times, it will execute what we just set for four times.

```javascript
var printHello = function()
{
console.log("Hello");
console.log("CS");
console.log("105");
}
printHello();
```
2) Variable $a$ and $b$ inside the parenthesis are called functions parameters. As they are naturally considered as variables, we do not have to define them by writing `var a` and `var b` again. In the 6th line, we set $a=10$ and $b=5$, so $c=15$; in the 7th line, we set $a=c$ and $b=10$, so $d=15+10=25$.

```javascript
var sum = function(a, b) {
    var c = a + b;
    return c;
}
var c = sum(10, 5);
var d = sum(c, 10);
console.log(d);
```

5. How to use the web browser console

For Firefox: Double click to open lecture4.html, Developer --- Browser Console

For Google Chrome: Double click to open lecture4.html, more tools --- JavaScript Console

If there is something wrong with your code, you will find the error. Click the location of the error, you are able to go to the exact location of the error in sources:
Lecture 4: Functions

Discount Calculator

Original Price: 20

Calculate!