Comp 125 - Visual Information Processing

Spring Semester 2018 - week 7 - monday

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JavaScript - functions - basic usage - part 4

parameters and arguments

- custom functions may also be modified by defining accepted **parameters**
  - *parameter values may be used in the executed logic*
- parameters allow a developer to pass values into the function
  - *may be used to modify the logic and executed code*
- parameters are always defined between a function's parentheses
- as we call the function, we pass the required values as **arguments**
  - *also specified between the parentheses for the function call*

JavaScript - functions - basic usage - part 5

using parameters and arguments - example

- structure for a function with parameter

```
function (parameter) {
    // test output of parameter
    console.log("function parameter = " + parameter);
}
```

- example usage might be as follows

```
function sayHello(name) {
    // output greeting to person
    console.log('Hello' + name + ', how are you?');
}
```

- then call this function
  - *passing an argument for the required function parameter*

```
sayHello('Amelia');
```

JS Functions - parameters and arguments - example

add a custom function with a parameter, and call function with passed argument...

JS - function call 3

JavaScript - functions - basic usage - part 6

using parameters and arguments - multiple

- functions may also specify multiple parameters
- function calls may pass multiple arguments

```
function nameGenerator(first, last) {
  ...
}
```

- each parameter is separated by a comma
- function body may use either or both parameter

JavaScript - functions - basic usage - part 7

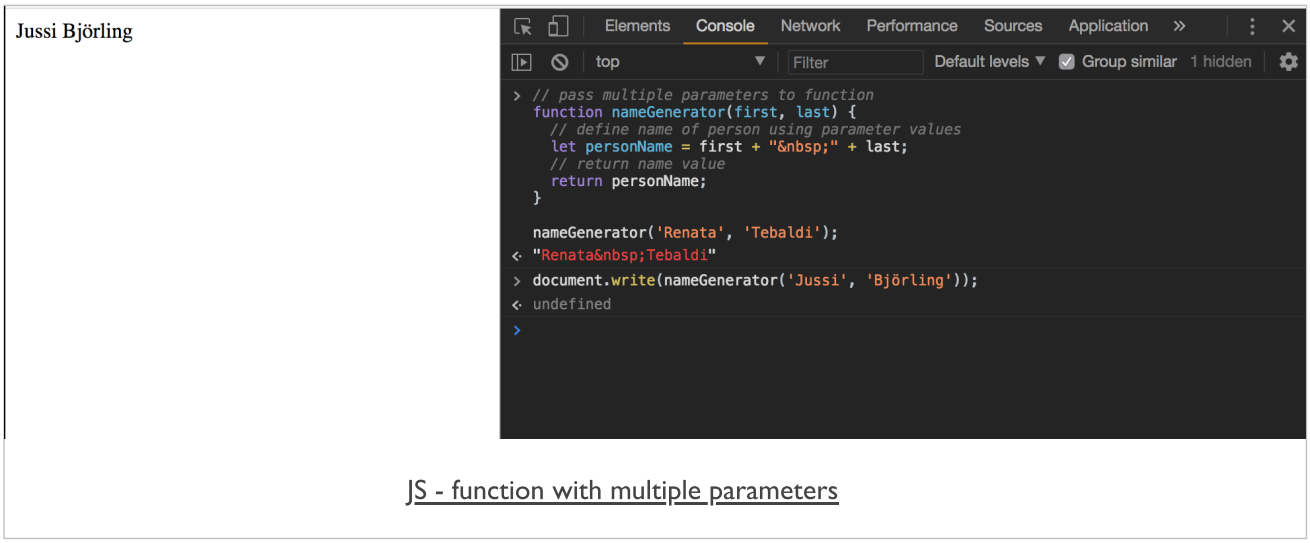
using parameters and arguments - multiple

```
// pass multiple parameters to function
function nameGenerator(first, last) {
  // define name of person using parameter values
  let personName = first + " " + last;
  // return name value
  return personName;
}

nameGenerator('Renata', 'Tebaldi');
```

JS Functions - parameters and arguments - example

custom function with multiple parameters...



JS - function with multiple parameters

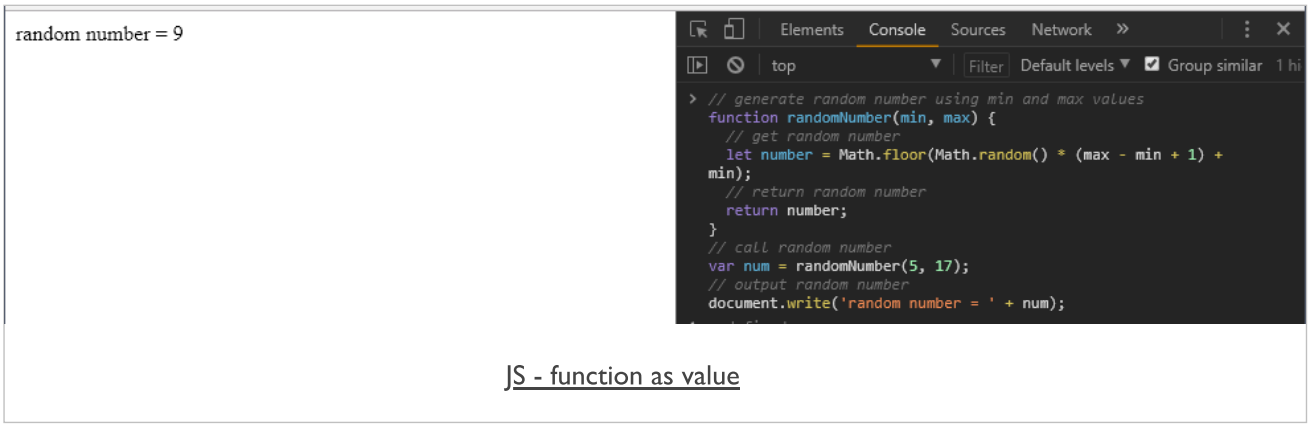
JS Functions - functions as values

- `return` value from a function may be used within a block of code
- function calls may be used as values
- enables dynamic values for variables &c.

```
// generate random number using min and max values
function randomNumber(min, max) {
  // get random number
  let number = Math.floor(Math.random() * (max - min + 1) + min);
  // return random number
  return number;
}
// call random number
var num = randomNumber(5, 17);
```

JS Functions - functions as values - example

use function as value...



JS - function as value

JS Functions - functions as argument

- pass function as argument
  - *get return value from passed function*
- e.g. call another function with random number as argument
  - *dynamic value will always be passed to function as argument*

```
// count down from passed value
function countDown(count) {
  // use count in for loop
  for (i = count; i <= count; i--) {
        // log value of each iteration of loop
    console.log('<br>count = ' + i);
    // check end of count
    if (i === 0) {
      return true;
    }
  }
}
// use random number as qrgument to countDown
countDown(randomNumber(3, 13));
```

JS Functions - functions as values - example

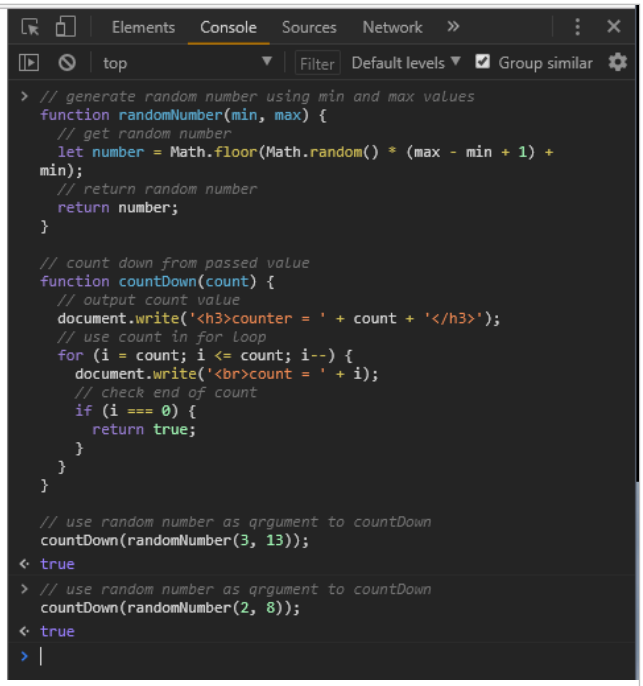
use function as argument...

counter = 10

count = 10
count = 9
count = 8
count = 7
count = 6
count = 5
count = 4
count = 3
count = 2
count = 1
count = 0

counter = 3

count = 3
count = 2
count = 1
count = 0



JS - function as value

HTML - markup for headings - part 1

- HTML is flexible in markup usage
  - *due to presentational versus structural considerations*
- headings might be perceived as purely presentational, e.g.

```
<span class="heading">Chapter 1</span>
```

- issues with presentational markup, e.g.
  - *visual browsers with CSS will render as expected*
  - *no CSS, and browsers will render as normal text*
  - *non-visual browsers = normal text and no heading*
  - *accessibility issues...*
- search engines, ranking, spiders...
  - *will not process this markup as a heading*
  - *no semantic meaning...*
  - *recorded as normal text*
- CSS styles can be unique
  - *but restricted to `class` usage with `heading`*

HTML - markup for headings - part 2

- many different ways to markup content with HTML, e.g.

```
<p><b>Chapter 1</b></p>
```

- issues still exist with variant markup options, e.g.
  - *visual browsers will render text in bold & same size as default*
  - *unique styling is problematic...*
  - *search engines, ranking, spiders...*
    - will not process this markup as a heading
    - no semantic meaning...
    - recorded as normal text

HTML - markup for headings - part 3

- use markup correctly with structure and meaning, e.g.

```
<h3>Chapter 1</h3>
```

- benefits of this markup, e.g.
  - *conveys meaning to contained text*
  - *visual and non-visual browsers treat heading correctly*
    - regardless of any associated styles...
  - *easy to add unique styles with CSS*
  - *search engines &c. will interpret this markup correctly*
    - extract keywords, semantics, structure...

References

- W3Schools - HTML5
- headings
- W3Schools - JS
- conditionals
- For loop
- functions