



CS55.11 JavaScript

Fall 2016 ~ Ethan Wilde

ewilde@santarosa.edu



**SANTA ROSA
JUNIOR COLLEGE**

Course Outline

1 Intro to Javascript, Part 1	10 Data Visualization with D3
2 Intro to Javascript, Part 2	11 Further Explorations with D3
3 <i>no class meeting</i>	12 Browser Games: Phaser
4 Exploring the jQuery Library	13 Further with Phaser
5 Exploring the jQuery UI Library	14 Extending Phaser with JSON
6 Exploring jQuery Plug-ins	15 Single Page Apps: Angular.js
7 Exploring Google Maps API	16 Server-side JS + Final Review
8 AJAX: Working with JSON	17 Final Exam
9 Midterm Review + Midterm	

- Get all of the details in the complete syllabus on Canvas.

SRJC File Transfer Apps

File Transfer (SFTP/FTP)		
FireFTP add-on for Firefox (free)	Fugu or Fetch (free, Mac only)	WinSCP (Win only)

- SRJC has a **free Fetch license** for students:
 - go to <http://fetchsoftworks.com>
 - Serial Number Name: Santa Rosa Junior College
 - Serial Number: FETCHEX001-GE8F-XPQK-PQVJ-RJYK-3RTU
- SRJC offers free hosting accounts and File Transfer software at <https://stuserver.santarosa.edu>

SRJC Student Account Setup

- Step One: Apply for a student account at <https://stuserver.santarosa.edu>
- Step Two: Open a SSH (Secure SHell) connection to the student server using your new username (and password when prompted):

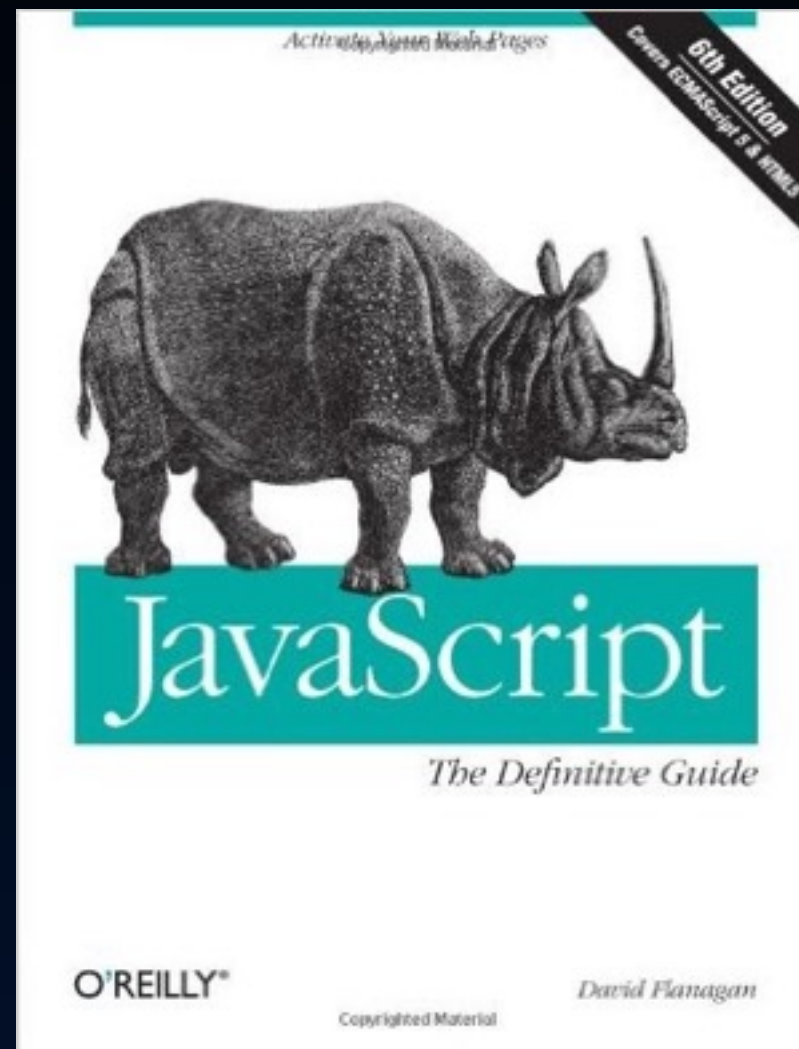
```
$ ssh myname@student.santarosa.edu
```

- Step Three: Enter the following command to create the web document root folder:

```
$ sudo wwwme
```

- Step Four: Connect using a file transfer program to upload files.

Textbook



JavaScript: The Definitive Guide (6th)

David Flanagan

ISBN 0596805527

Textbook

- **Reading for Week 5**
JavaScript: The Definitive Guide
- **Ch 9: The jQuery Library**
 - pp. 523 - 558

jQuery Basics

- 1. History**
- 2. Versions**
- 3. Using jQuery to find objects**
- 4. jQuery selectors**
- 5. What jQuery returns**
- 6. Useful built-in jQuery methods**

jQuery Basics

- 1. History**
- 2. Versions**
- 3. Using jQuery to find objects**
- 4. jQuery selectors**
- 5. What jQuery returns**
- 6. Useful built-in jQuery methods**

History of jQuery Library

version	date
1	Aug 2006
1.9	Jan 2013
2	Apr 2013
2.2	Jan 2016
3	Jun 2016
3.1	Jul 2016

10+ years

jQuery Basics

1. **History**
2. **Versions**
3. **Using jQuery to find objects**
4. **jQuery selectors**
5. **What jQuery returns**
6. **Useful built-in jQuery methods**

Versions

jQuery v1	jQuery v2	jQuery v3
works with older browsers incl. IE 6, 7 + 8 browsers	leaves behind older Internet Explorer 6, 7 + 8	jQuery-Compat 3.0.0 for IE 8, Safari 5, etc.
bigger, slower	smaller, faster	jQuery 3.0.0 for cutting-edge browser versions
n / a	https://blog.jquery.com/2013/04/18/jquery-2-0-released/	https://blog.jquery.com/2014/10/29/jquery-3-0-the-next-generations/

jQuery Basics

1. History
2. Versions
3. Using jQuery to find objects
4. jQuery selectors
5. What jQuery returns
6. Useful built-in jQuery methods

Using jQuery to Find Objects

**jQuery is designed to
find objects in HTML pages**

**Your code asks jQuery to
find one or more objects
by passing it a *selector***

jQuery Basics

1. History
2. Versions
3. Using jQuery to find objects
4. jQuery selectors
5. What jQuery returns
6. Useful built-in jQuery methods

jQuery Selectors

```
$(document).ready();
```

```
$('.pickles').html('<p>hey</p>');
```

```
$('#thing').clear();
```

DOM OBJECTS OR CSS SELECTORS

jQuery Selectors

```
<p class='pickles'>Happy</p>
```

```
<script>  
$('.pickles').css('color', 'red');  
</script>
```

CSS CLASS SELECTORS

jQuery Selectors

```
<p id='thing'>Happy</p>
```

```
<script>  
$('#thing').css('color', 'red');  
</script>
```

CSS ID SELECTORS

jQuery Basics

1. History
2. Versions
3. Using jQuery to find objects
4. jQuery selectors
5. What jQuery returns
6. Useful built-in jQuery methods

What jQuery Returns

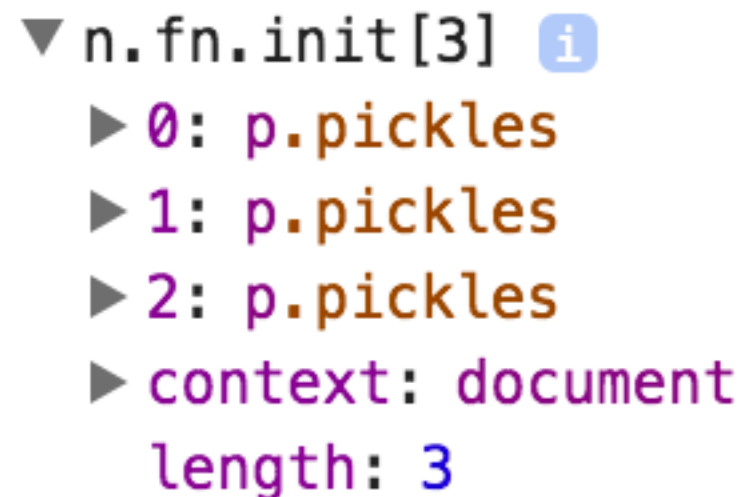
```
<p class='pickles'>Happy</p>  
<p class='pickles'>Sad</p>  
<p class='pickles'>Mellow</p>
```

```
<script>  
console.log( $('pickles') );  
</script>
```

JQUERY RETURNS AN ARRAY OF OBJECTS

What jQuery Returns

```
<script>  
console.log( $('p.pickles') );  
</script>
```



```
▼ n.fn.init[3] ⓘ  
  ► 0: p.pickles  
  ► 1: p.pickles  
  ► 2: p.pickles  
  ► context: document  
    length: 3
```

JQUERY RETURNS AN ARRAY OF OBJECTS

jQuery Basics

1. History
2. Versions
3. Using jQuery to find objects
4. jQuery selectors
5. What jQuery returns
6. Useful built-in jQuery methods

Useful Built-in jQuery Methods + *Properties*

1. **.length**
testing for existence of matched objects
2. **.append() vs .html() vs .text()**
3. **.clear()**
4. **.addClass(), .removeClass() and .hasClass()**
5. **.height() and .width()**
6. **.css()**
7. **.animate()**

PRECED E EACH WITH *\$(selector)*

Useful Built-in jQuery

Events + Loops

1. **.click()**
user events
2. **.ready()**
browser events
3. **.each()**
iterates through object (or other) arrays
4. **.this**
*current object target of event
or each() loop*

PRECED EACH WITH *\$(selector)*

Code Example

“Simone Says”



— *Me*

***A function-based example using
jQuery library’s built-in methods
to respond to user events***

Credit to Dan Purdy for original code inspiration.

BREAK

- 10 minute break
- **Please return by 7:00pm sharp**

Code Example

“Simone Says”



— *Me*

***A function-based example using
jQuery library’s built-in methods
to respond to user events***

What to Do Next

- **Reading**

- For Week 5:
Read Ch. 19, pp. 523 - 558 in *JavaScript: The Definitive Guide*

- **Homework**

- For Week 5:
Assignment Week 4:
Responding to User Events with Functions
 - » using jQuery library
 - » evolve the game of Simon Says from class example files
 - » add specific enhancements to demonstrate knowledge
 - » complete assignment details available on Canvas course site
- Homework due **uploaded** to Canvas by **11:59pm Monday 9/19**

- **Canvas Site**

- Class videos, article links and lecture materials available
- **canvas.santarosa.edu/courses/18079**

BREAK TO LAB

- 10 minute break
- **Please meet in lab at 8:00pm sharp**