

CSC309 Programming on the Web

week 7: jquery, ajax

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review

❖ so far:

- **front-end**
 - structure & semantic, appearance, behavior
 - many design tips
- **back-end**
 - databases
 - structured & semi-structured data
- **interacting with backend**
 - http, rest, node, express

❖ this week:

- using jquery/ajax for the interaction

jquery/ajax 7-2

review

❖ http (underlying protocol for client/server interaction)

GET /allWords.html HTTP/1.1 Host: www.project.org
HTTP/1.1 200 Ok Content-Type: text/html <html><p>Hello</p></html>

❖ rest (architectural styling/mindset)

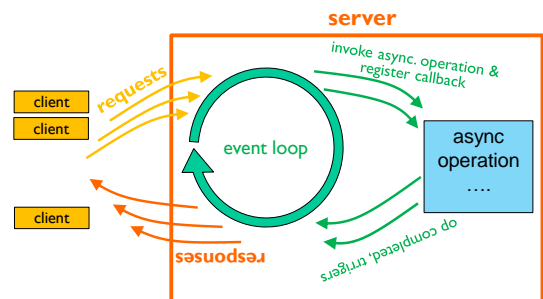
www.project.org/allWords
www.project.org/words/computer

❖ node (asynchronous and event driven)

```
...  
fs.readFile("some.txt", readCompletedCallback);  
//do other tasks ...  
function readCompletedCallback( error, dataBuffer) {  
  response.writeHead(200, {'Content-Type': 'text/plain'});  
  response.end('<html><p>Hello</p></html>');  
  ...  
}
```

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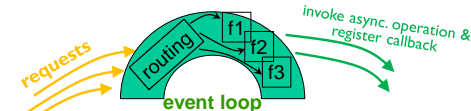
review



jquery/ajax 7-4

review

❖ express (robust routing)



❖ routings in lab 6:

```
app.get('/name', getName);  
app.post('/name', setName);  
app.get('/logout', logout);  
app.post('/addmsg', addMessage);  
app.get('/messages', getMessages);
```

```
function getName(req, res) {  
  if (req.session.name) {  
    return res.json({name: req.session.name});  
  }  
  else {  
    return res.json({name: ''});  
  }  
}
```

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jquery

❖ a js library for

- **traversing and manipulating dom**
- **event handling**

```
<html>  
<head>  
  <title>jquery example</title>  
  <script type = "text/javascript"  
    src = "https://ajax.googleapis.com/ajax/libs/jquery/3.1.1/jquery.min.js">  
  </script>  
  <script type = "text/javascript">  
    $(function){document.write("Hello World!");};  
  </script>  
</head>  
<body>  
  <p>this is dummy</p>  
</body>  
</html>
```

jquery/ajax 7-6

\$(selector).event(action())

dom selector

```
window.onload = function(){...}
```

cf slide 4.14

```
getElementsByName("p")  
getElementById("123")
```

css selector (slides 3.4, 3.8, 3.9)

```
p, div {...}  
div p {...}  
div > p {...}  
.welcome {...}  
[type] {...}  
a[target="_blank"]
```

jquery selector

```
$(document).ready(function(){...});  
or  
$(function(){ ... });
```

```
$("#p")  
$("#123")  
$("p, div")...  
$("div p")...  
$("div > p")...  
$(".welcome")...  
$("type")...  
$("a[target='_blank']")...
```

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traverse

```
$("#p").parent("div")...  
$("#p").parents("div")...  
$("#p").parentsUntil("div")...
```

```
$("#div").children("p")...  
$("#div").children("p").first()...  
$("#div").children("p").last()...  
$("#div p:nth-child(2)")...  
$("#div").find("p")...
```

```
$("#div").siblings("p")...  
$("#div").next("p")...  
$("#div").nextAll("p")...  
$("#div").nextUntil("p")...
```

```
$("#div").prev("p")...  
$("#div").prevAll("p")...  
$("#div").prevUntil("p")...
```

```
$("#p:nth-of-type(3)")...
```

```
$("#p").eq(2)...
```

```
$("#p").filter(".welcome")...  
$("#p").not(".welcome")...
```

```
$("#p").first()...
```

```
$("#p").last()...
```

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effect

```
$("#p").slideDown(speed, easing, callback)
```

```
$("#p").animate(param, speed, callback)  
{left: "250px", "slow", myFunc()
```

❖ queuing

```
$("#p").animate({left: "250px"}, "slow", myFunc());  
$("#p").animate({top: "400px"}, "slow", aFunc());
```

❖ chaining

```
$("#p").animate({left: "250px"}, "slow", myFunc())  
    .animate({top: "400px"}, "slow", aFunc());
```

```
$("#a").parent("li").siblings().find('a');
```

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misc.

❖ implicit loop

```
$("#p").addClass("intro");
```

❖ add/remove styling

```
$("#p").eq(2).removeClass("intro");  
$("#p").eq(2).toggleClass("intro");
```

❖ explicit loop

```
$("#p").each(function(index){  
    $(this).prepend(index+1);  
});
```

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