

CSC309 *Programming on the Web*

week 9: event loop revisit, jsonp

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motivation

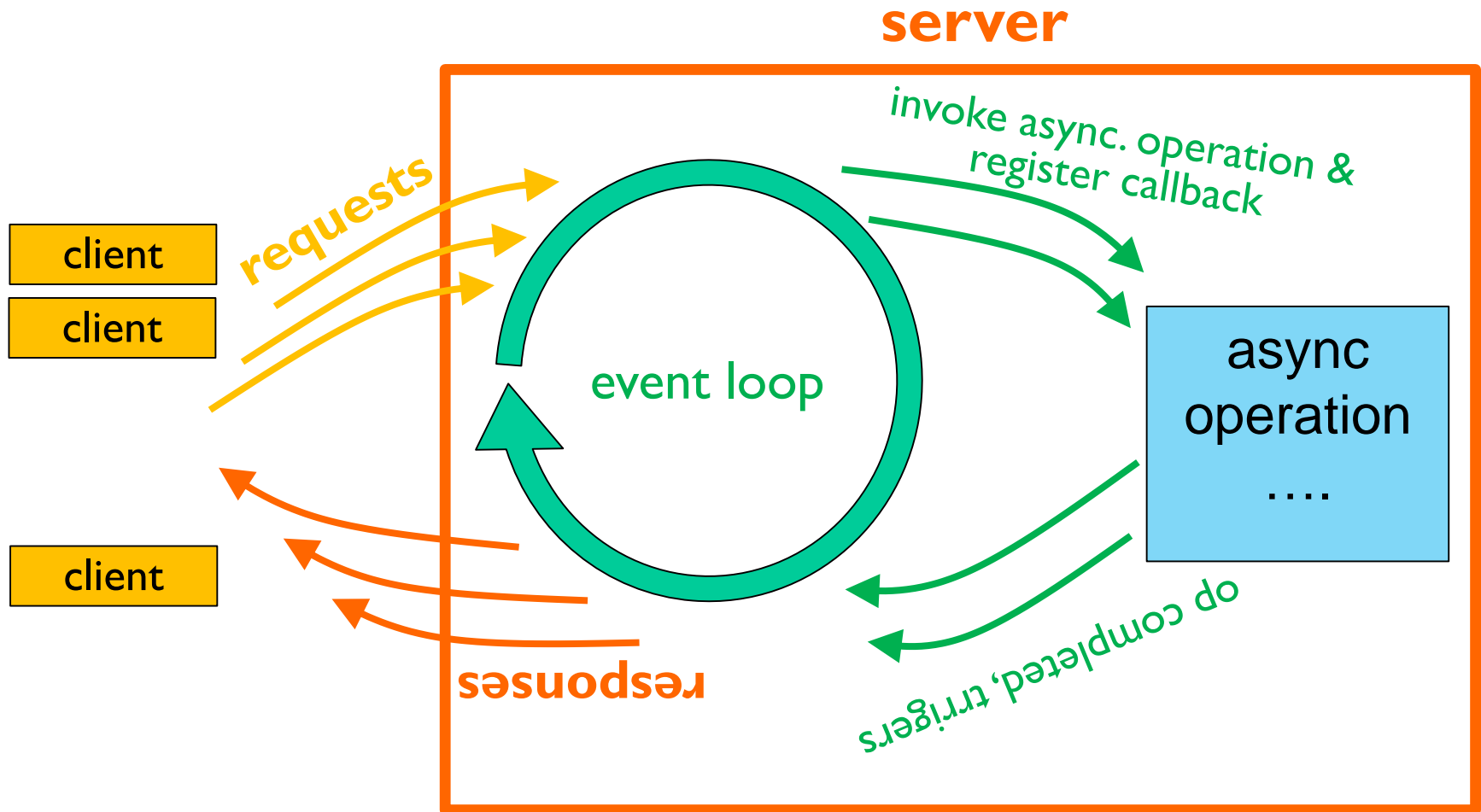
❖ **understanding event loop**

- a couple of examples in week 6
- more details (and live-coding) this week

❖ **cross-origin resource sharing**

- requesting data from other domains
- we saw http, XMLHttpRequest (XHR) already
- jsonp this week

event loop



case study

// assume

// req1 is non-blocking: async part: ~4 s ; rest: ~0 s.

// req2 is synchronous: requires ~6 s.

// req3 is non-blocking: async part: ~2 s ; rest: ~0 s.

// req4 is synchronous: requires ~0 s.

// Question 1: req2 and req4 enter at time 12, in order;

// what time is each responded?

// Question 2: req4 and req2 enter at time 12, in order;

// what time is each responded?

case study

// req1 is non-blocking: async part: ~4 s ; rest: ~0 s.

// req2 is synchronous: requires ~6 s.

// req3 is non-blocking: async part: ~2 s ; rest: ~0 s.

// req4 is synchronous: requires ~0 s.

// Question 3: req3, req4, req1, and req2 enter at time 12;

// what time is each responded?

// Question 4: req3, req4, req2, and req1 enter at time 12;

// what time is each responded?

// Question 5: req2, req3, and req4 enter at time 12;

// what time is each responded?

case study

// this simulates request 1, with an **asynchronous** function

```
$("req1").click(function()) {  
    $("#21").html(" request 1 started at "+time());  
  
    setTimeout (function timer() {  
        $("#21").append(" and processed at "+time());  
    }, 4000);  
  
});
```

case study

// this simulates request 2, a **blocking** one

```
$("req2").click(function(){  
    $("#22").html(" request 1 started at "+time());  
    for( var k = 0; k<200000; k++) {  
        console.log(k);  
    }  
    function x() {  
        $("#22").append(" and processed at "+time());  
    }  
    x = x();  
});
```

case study

// this simulates request 3, with an **asynchronous** function

```
$("#23").html(" request 1 started at "+time());
```

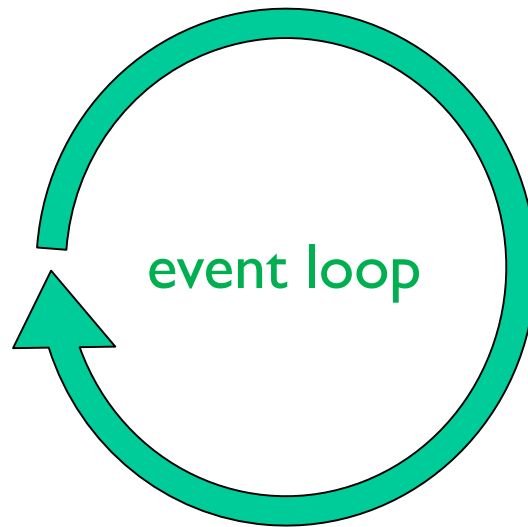
```
setTimeout (function timer() {  
    $("#23").append(" and processed at "+time());  
}, 2000);
```

// this simulates request 4

```
$("#24").html(" request 4 processed at "+time());
```

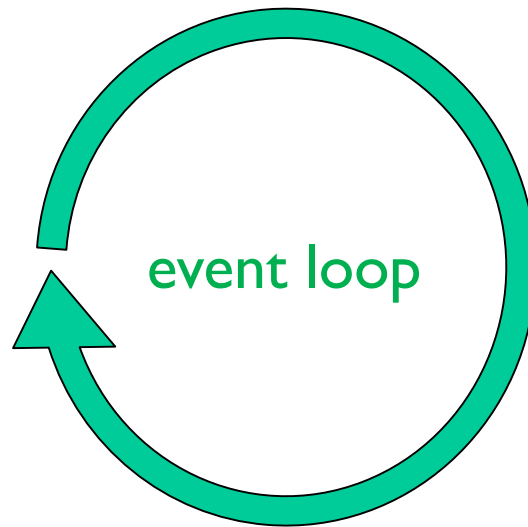

Question 3:

req3, req4, req1, and req2 enter at time 12;



Question 4:

req3, req4, req2, and req1 enter at time 12;



Question 5:

req2, req3, and req4 enter at time 12;

