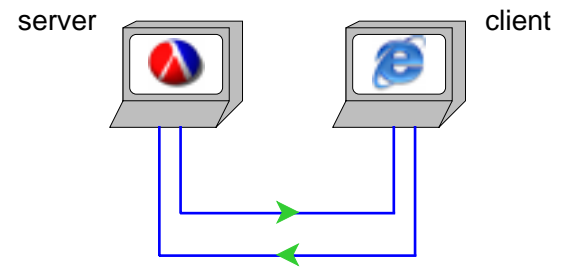


Last Reminder: Date Change for Mid-Term 2

As you know, **Mid-Term 2** will be on
Wednesday, November 5
instead of Friday, November 7

Examples in DrScheme...

Web Server Example



Connecting:

```
Server: (define 1 (tcp-listen 4000))
Client: (tcp-connect "127.0.0.1" 4000)
        → #<input-port> #<output-port>
Server: (tcp-accept 1)
        → #<input-port> #<output-port>
```

Web Page Encoding

A web page is more than plain characters:

CS 2010		
Date	Topic	Notes
Nov 3	Java	slides
Nov 5	<i>Mid Term 2</i>	

To encode fonts, color, table layout, links, etc., web servers and clients communicate using **XML** ... roughly

```
<html><p align="center"><font size="+2">CS 2010</font></p>
<table><tr><td><b>Date</b></td>
      <td><b>Topic</b></td>
      <td><b>Notes</b></td></tr>
<tr><td>Nov 3</td> ...</tr>
...</table></html>
```

Examples in DrScheme...

Generating XML

Since XML has an S-expression like structure, and since we're using Scheme, it makes sense to generate S-expressions and convert them to XML

```
(xexpr->string '(html () "Hello"))
"should be" "<html>Hello<html>"

(xexpr->string '(html () "0 < 1"))
"should be" "<html>0 &lt; 1<html>"

(xexpr->string '(html ()
                  (font ((size "+2"))
                        "Hello")))
"should be"
"<html><font size=+2>Hello</font><html>"
```

If you're using Java, then you'll generate object trees instead of S-expressions, but it's the same idea

Family tree server in DrScheme...