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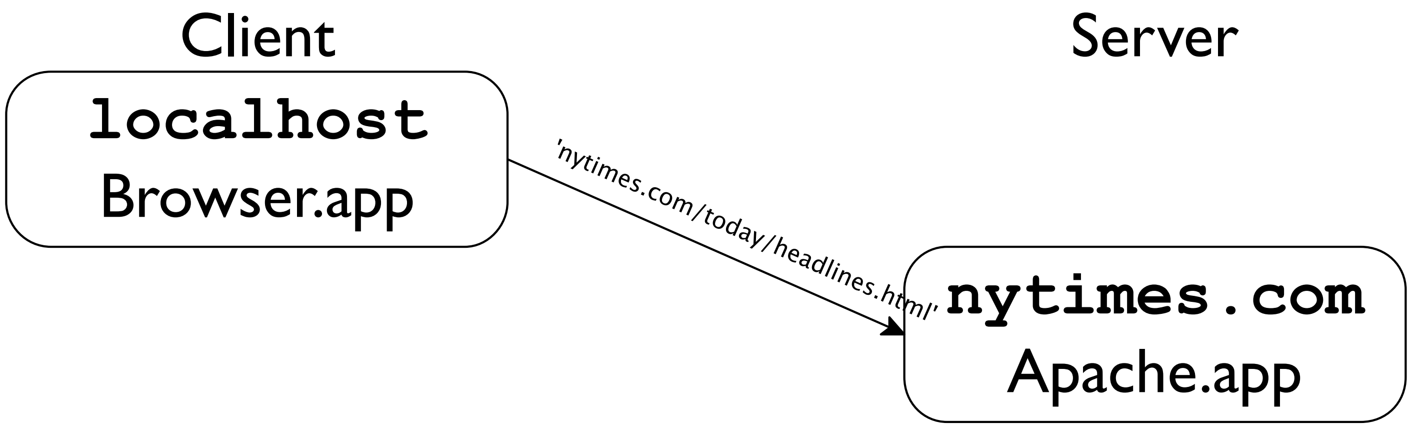
Let's consider what happens in that simple transaction:

- What computers are involved?
- We will repeatedly consider: What decisions do they each make?

Client

Server

Client
localhost
Browser.app
Server


Client
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'nytimes.com/today/headlines.html'
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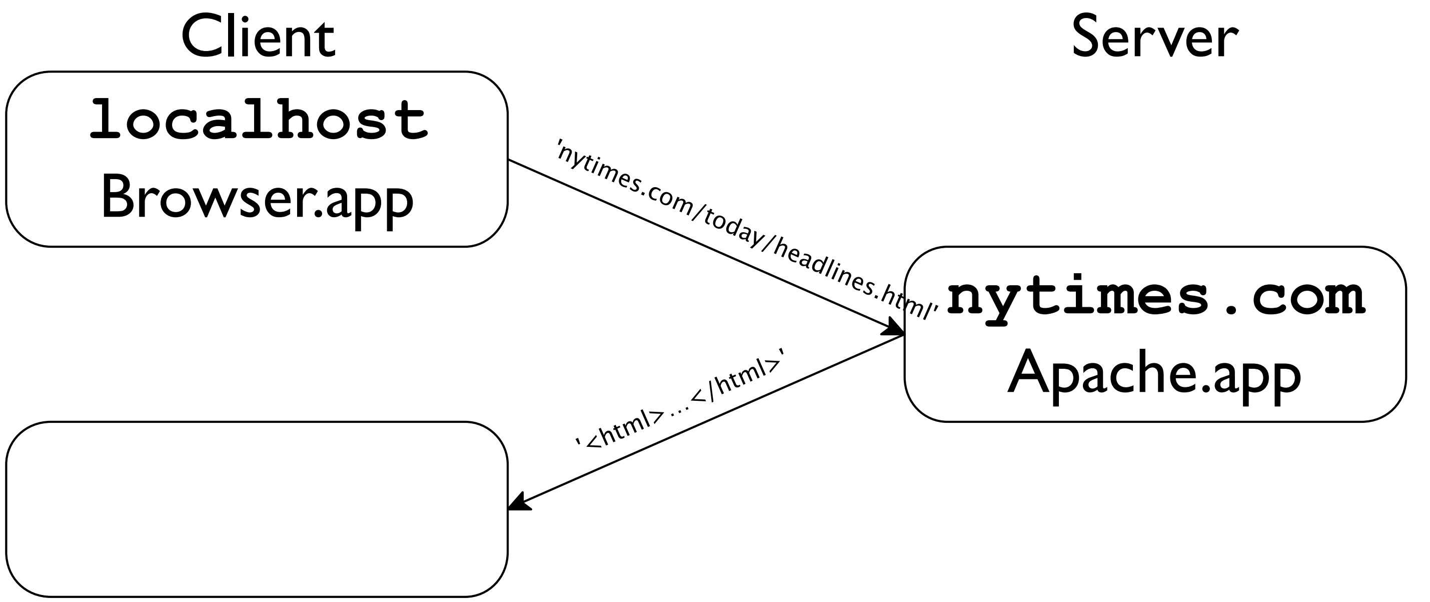
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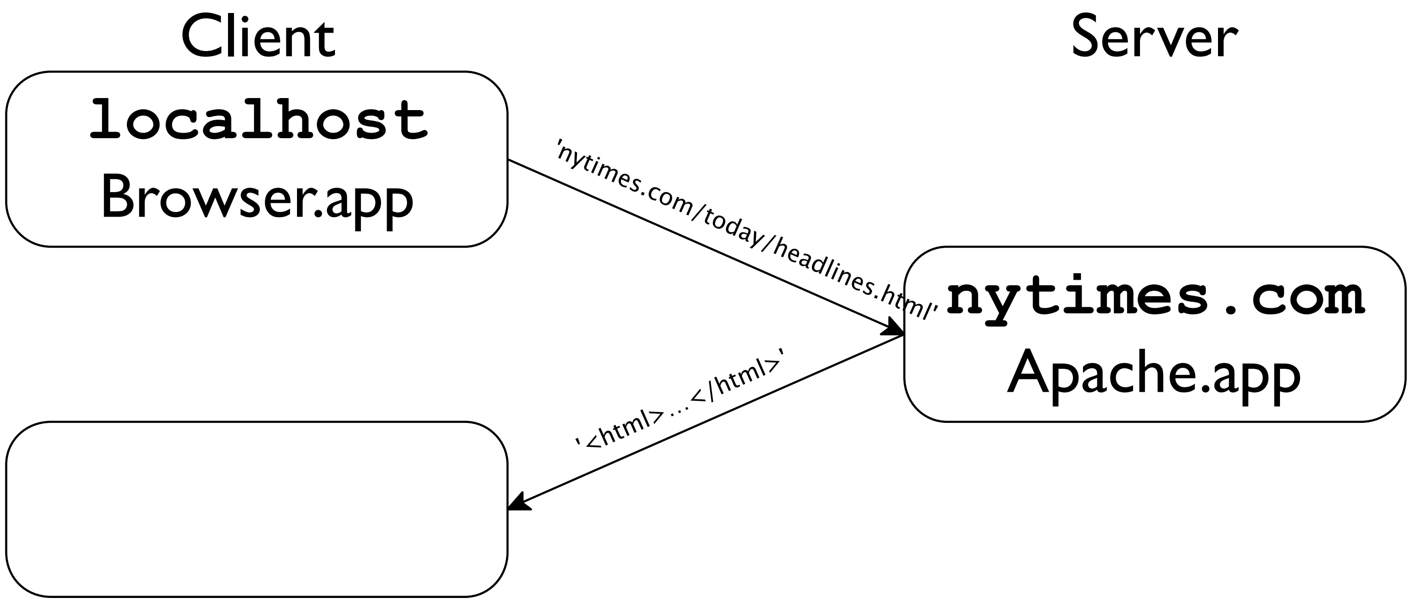

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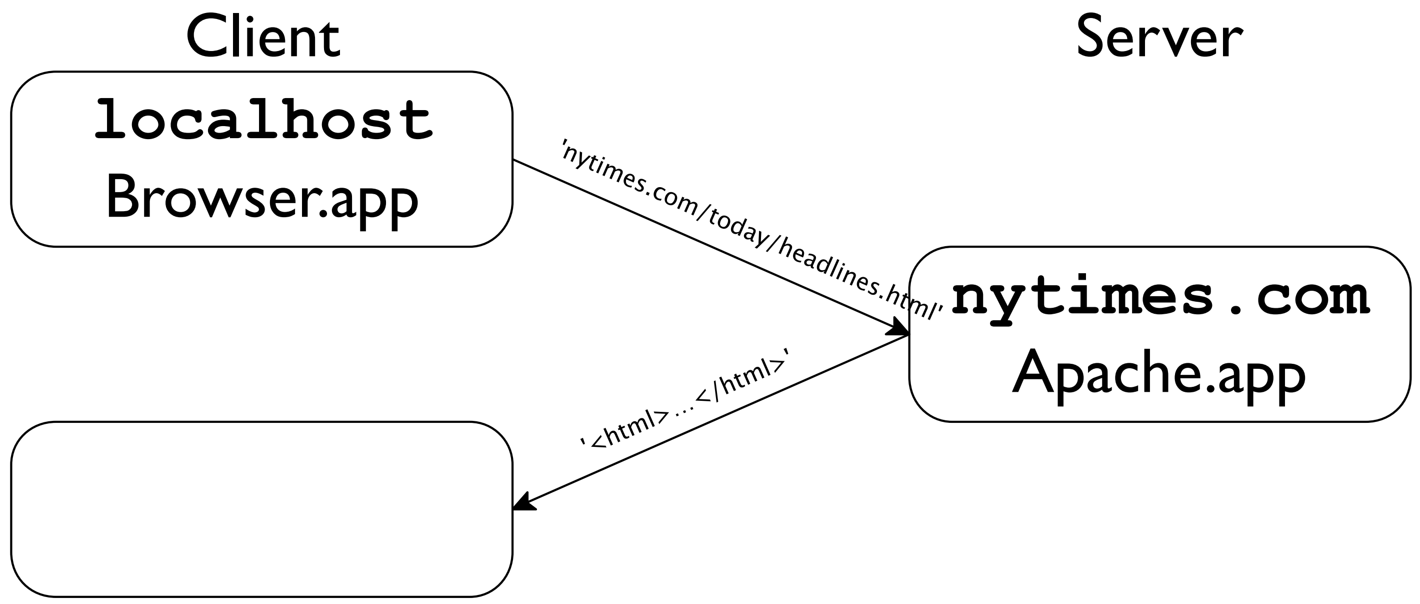

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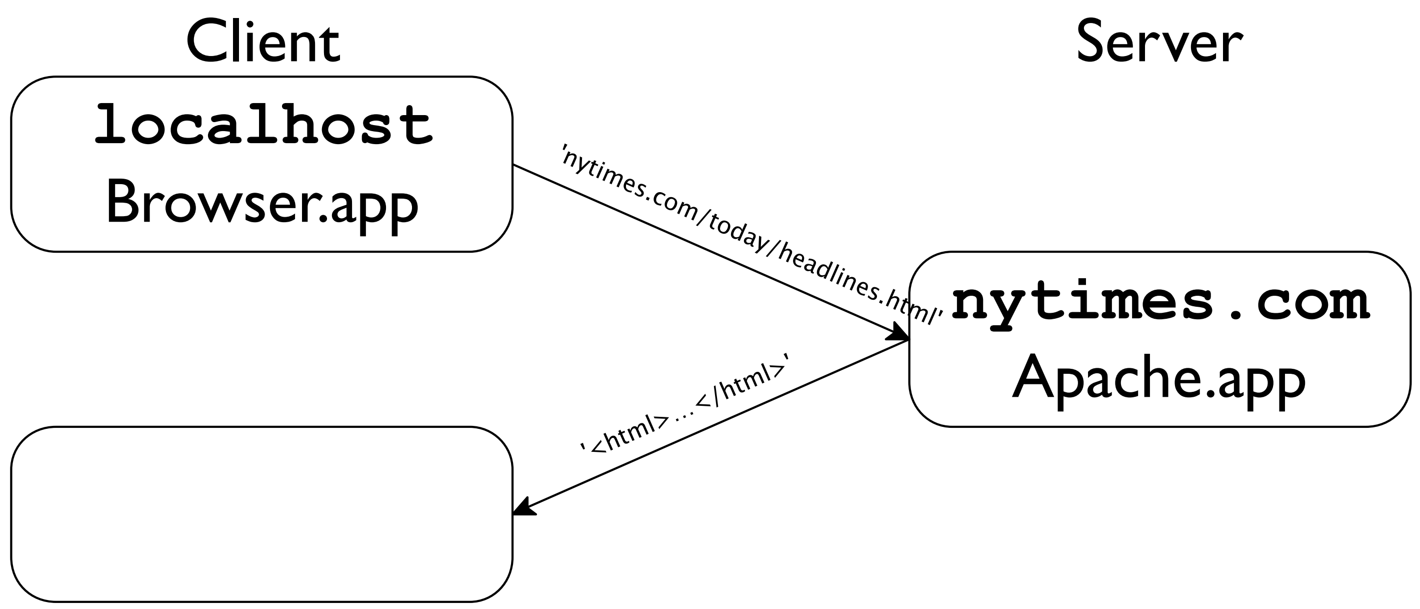

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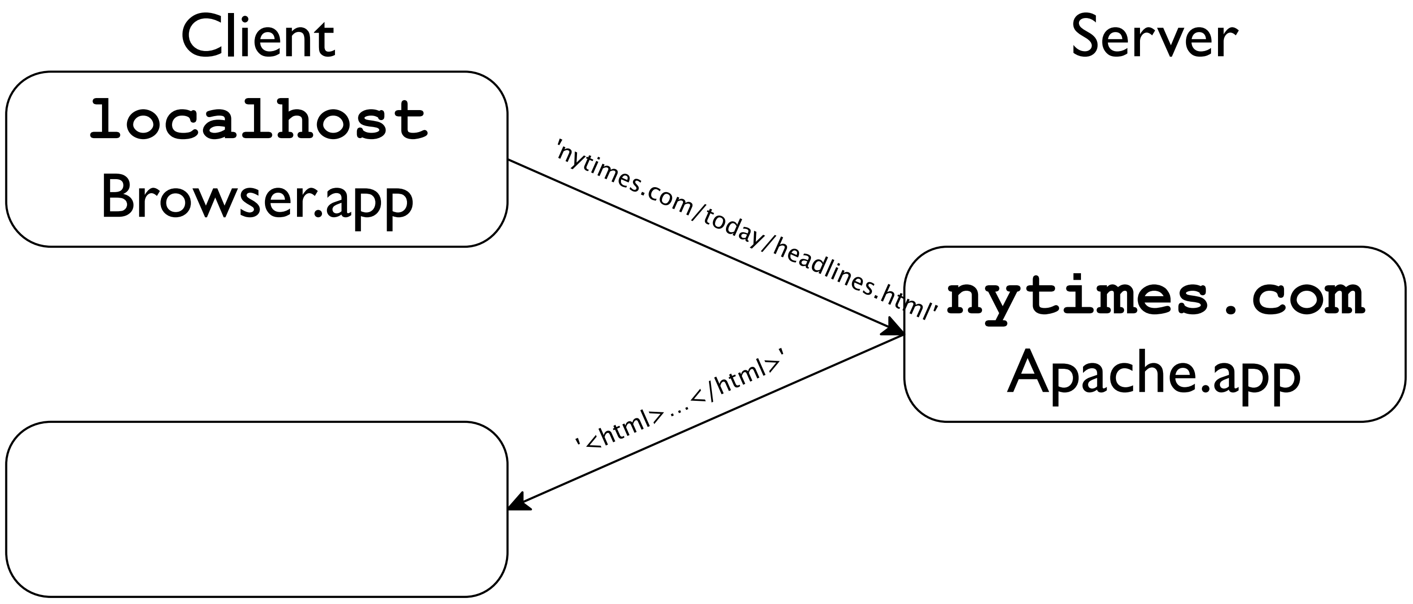

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Client-side processing is a large part of Web I. Before we look more at server-side processing (Web II), let's think through one more client-side question:

Whence images?

When requesting **`http://foo.com/aPage.html`** the response is merely a string (starting with the 6 chars " **`<html>`** "), presumably.

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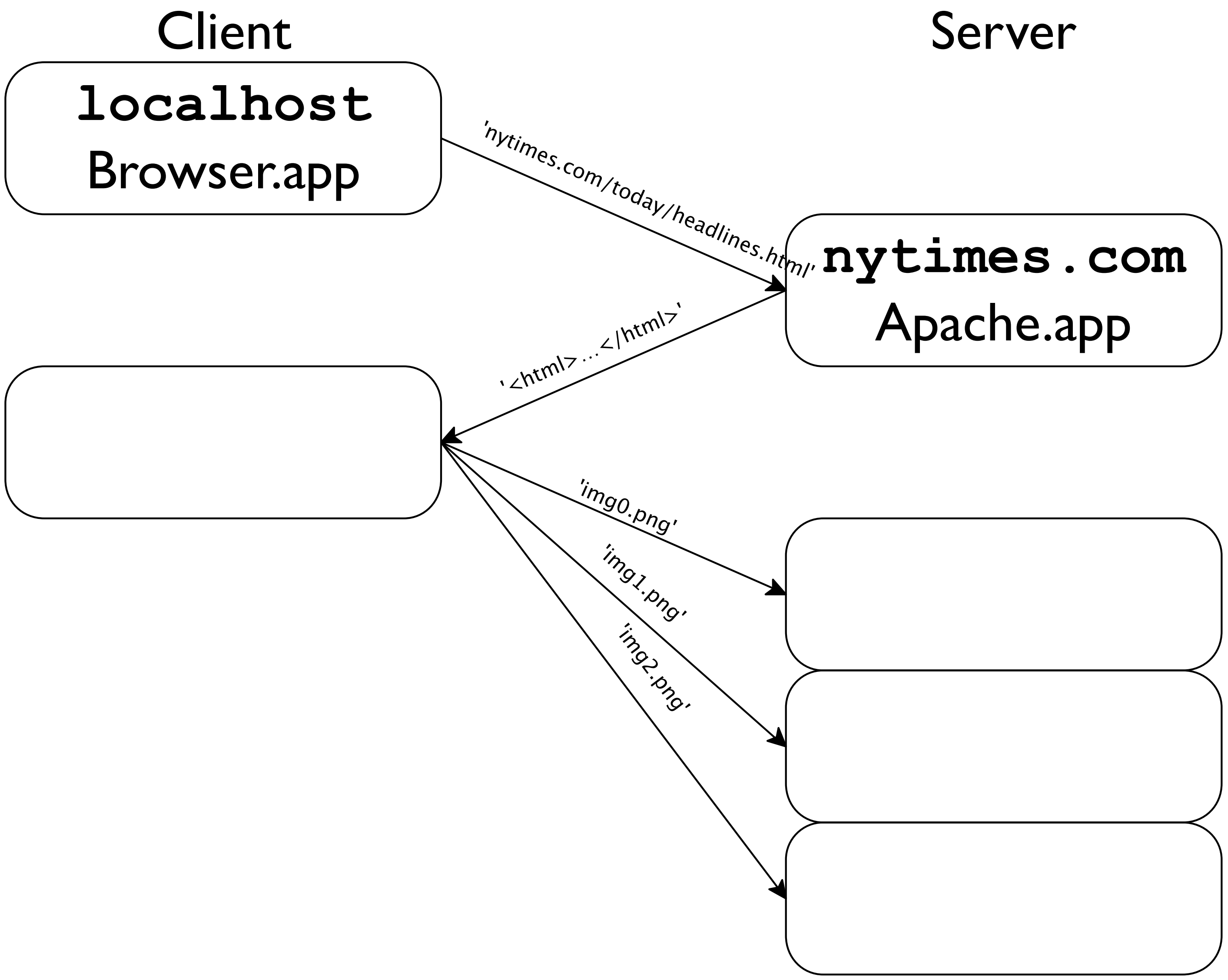
Well, embedded in that string might be the chars **`<img src='http://foo.com/aPic.jpg'/>`**. But still, that's just some characters – not an image.

Seeing this, the browser is programmed to make *another* request! Loading one URL *may* lead to many more requests.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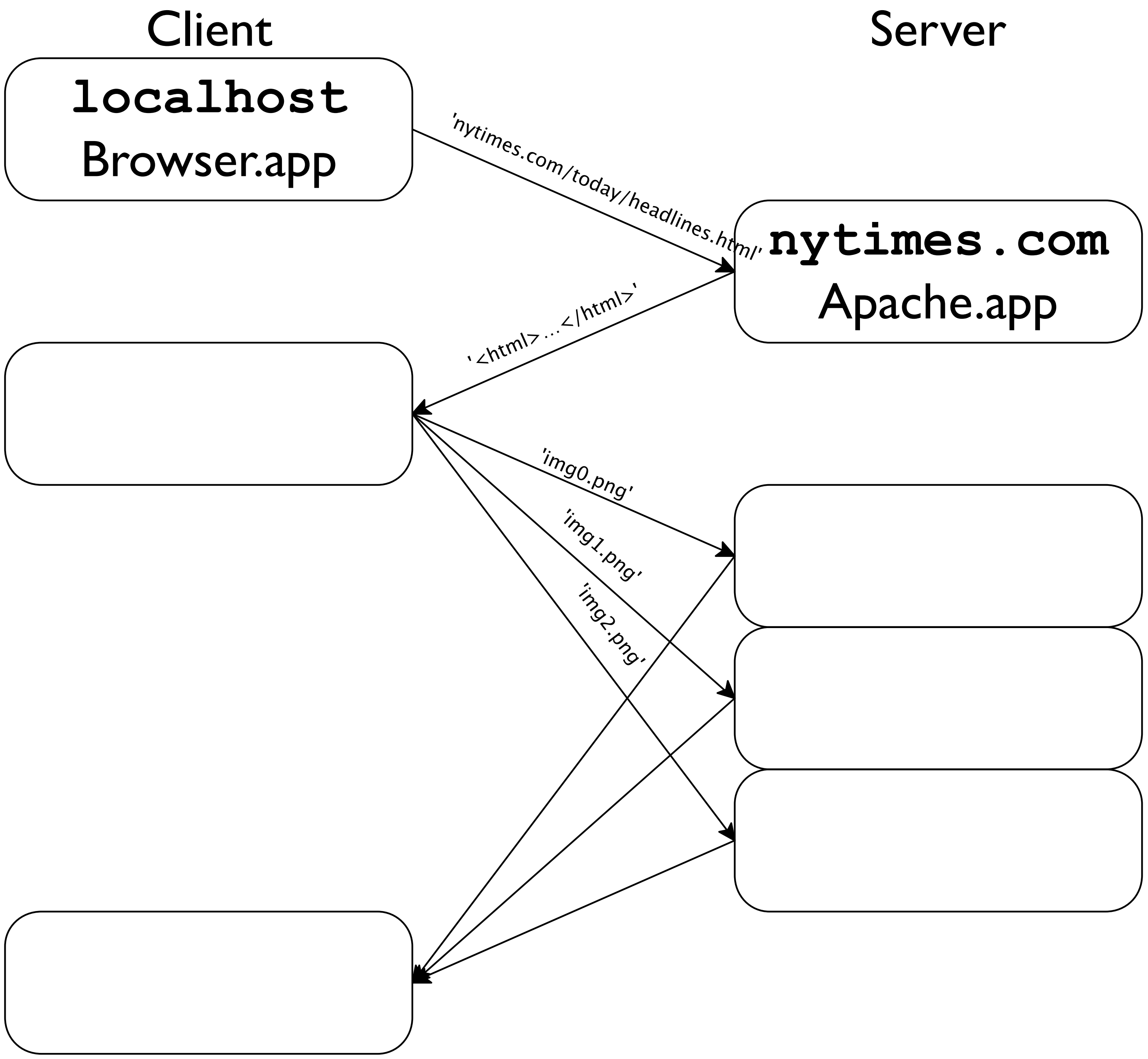
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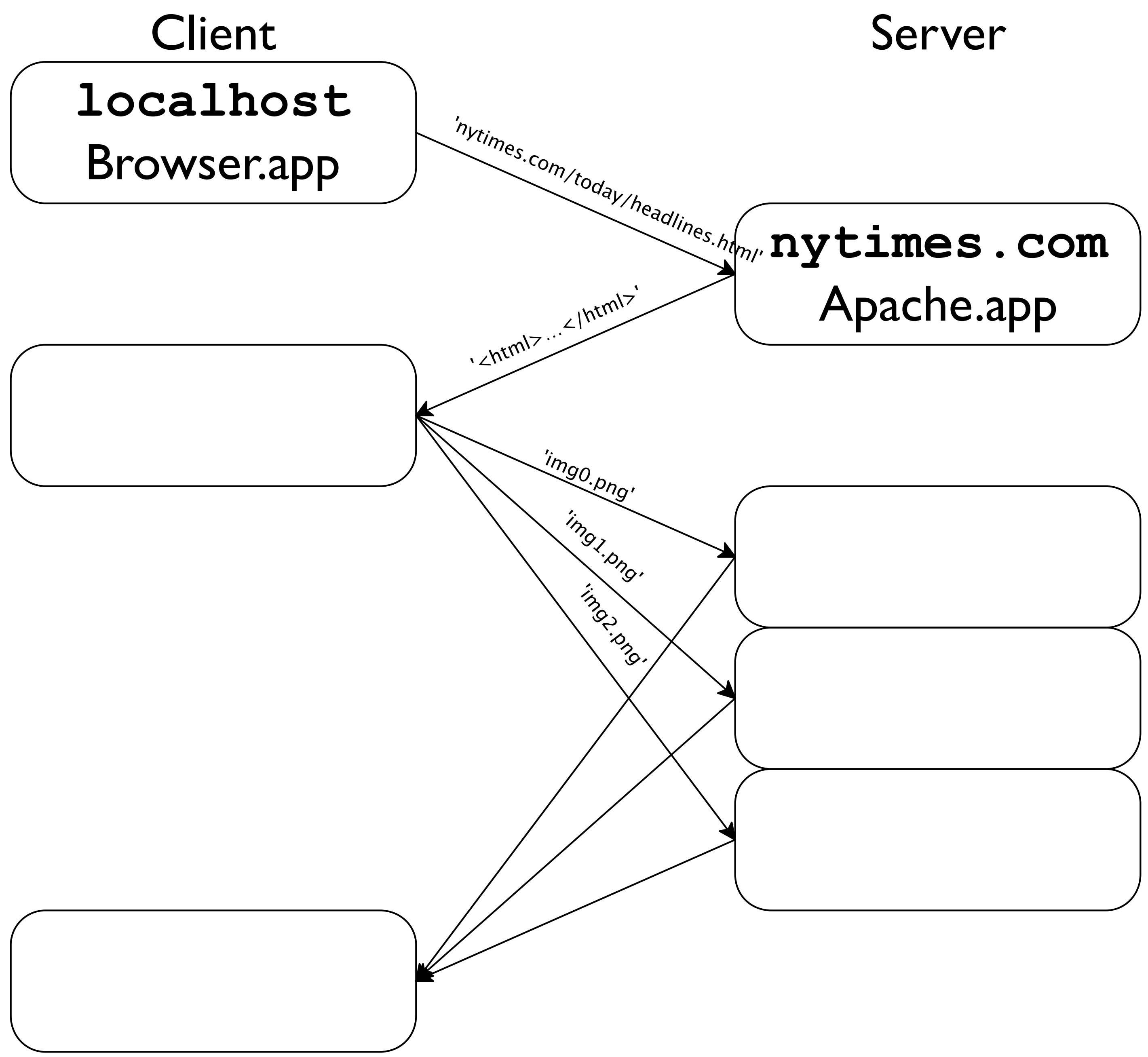

The browser will take the html-and-image-data, and render one big page of pixels.

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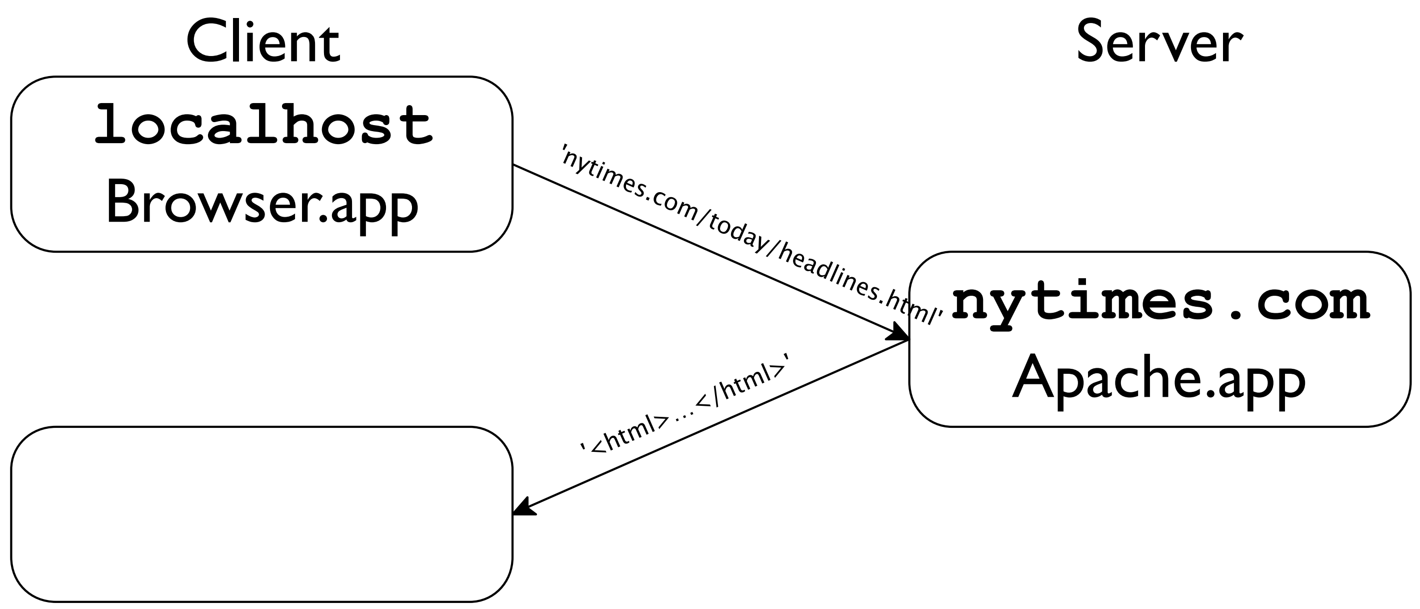
- Third-party cookies We'll discuss cookies later.



Web II

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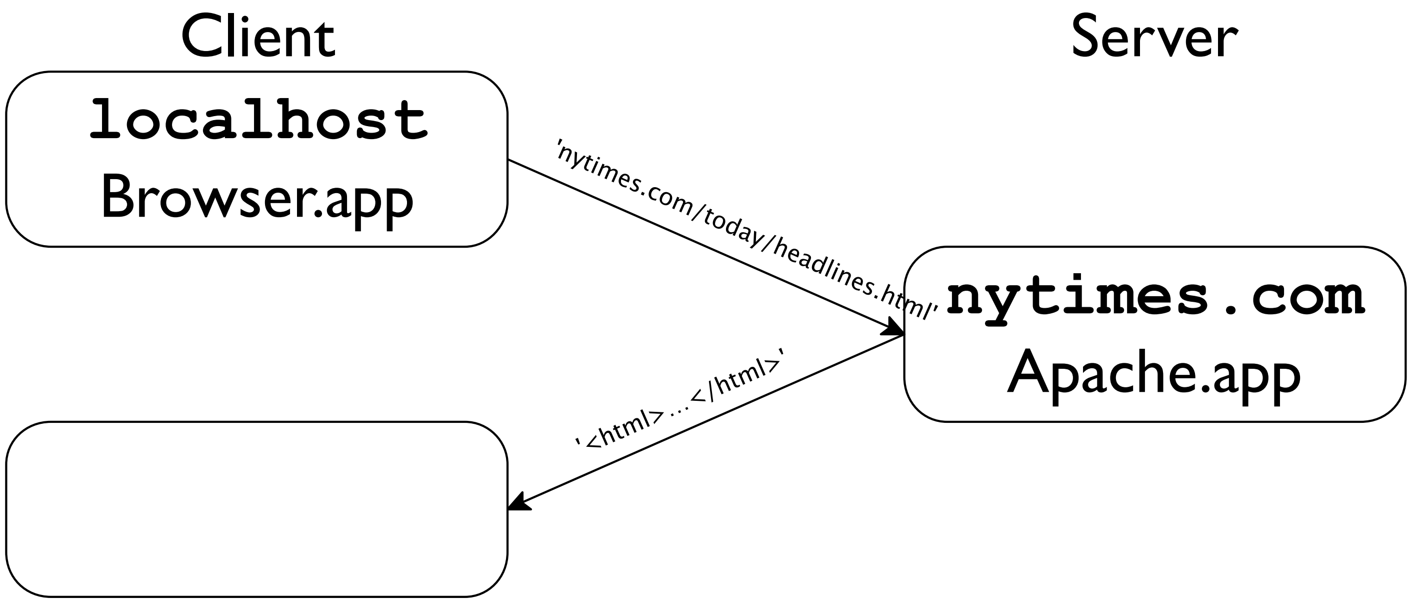
What *type* of info does the server take in?



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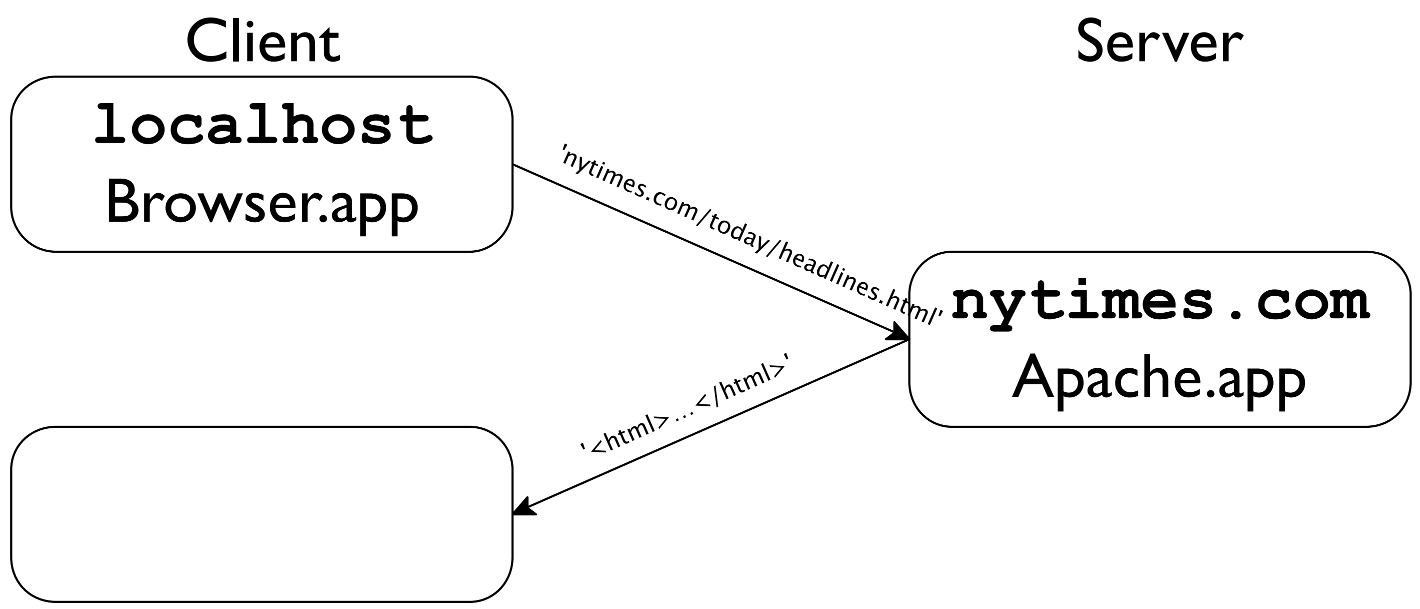

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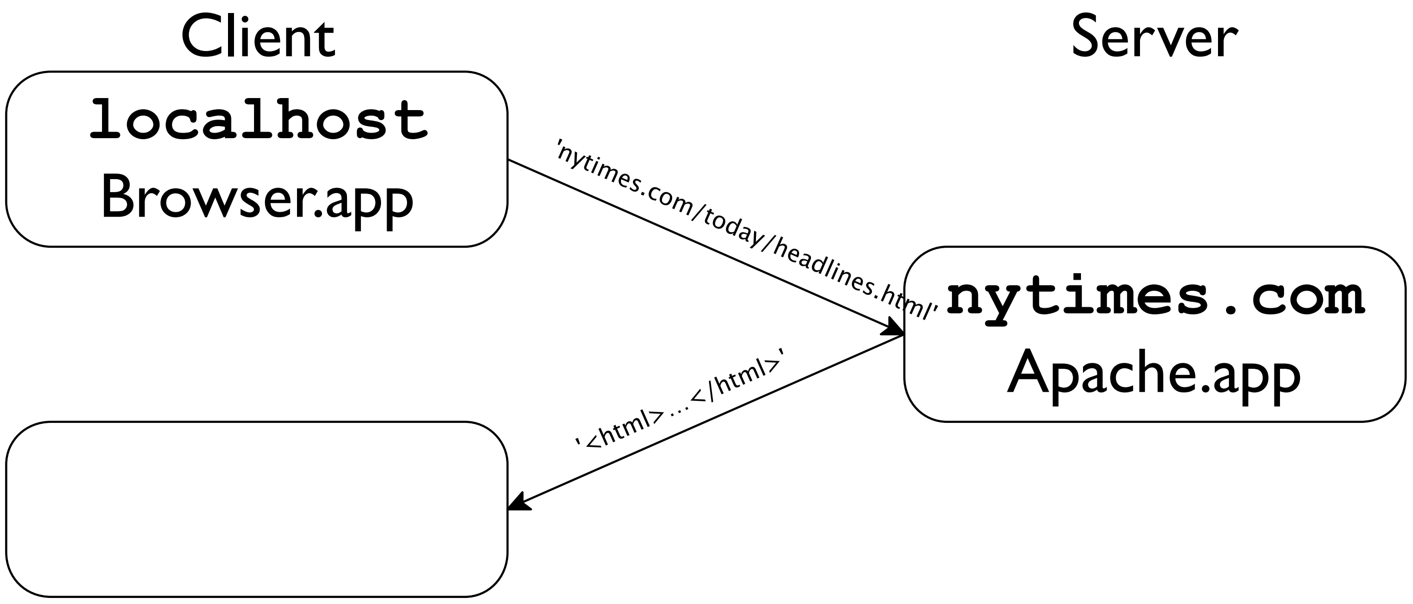

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Hey, we wrote functions like that in Java 1.

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serve : String → String
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or perhaps

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Understanding the server as a mundane function* is essential.

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One common behavior might be 'return-file-contents-as-String',

but its code can also be filled with oodles of `if-else-if` statements.

* Admittedly, the input `String` and the return `String` are "passed" via http-packets, but that's just an implementation detail. We will, though, mention http-packets again in the next lecture.

decisions, decisions

Now we'll look at some of the decisions the server makes, when creating a response.

We'll spend 20min requesting various pages; your job is to recognize when the server has an `if` statement in its code!

http://php.radford.edu/itec325/Lectures/client-server/client-server-1.html

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Examples:

- That's a directory; permission denied.
- That's a directory; I'll serve its **`index.html`** instead.
- That's a directory; I'll give some html about it.
- 404 - file not found
- 401 - Unauthorized
- 200 - OK
- That's a php program; I'll run it and serve whatever that program prints.