

# software studio

**REST**

**Daniel Jackson**

# browser as editor

Screenshot of Tim Berners-Lee's [HyperMedia Browser/Editor](#) removed due to copyright restrictions.

# a web for shared document editing

## Tim Berners Lee's web

- › distributed document editing
- › like one big Wiki

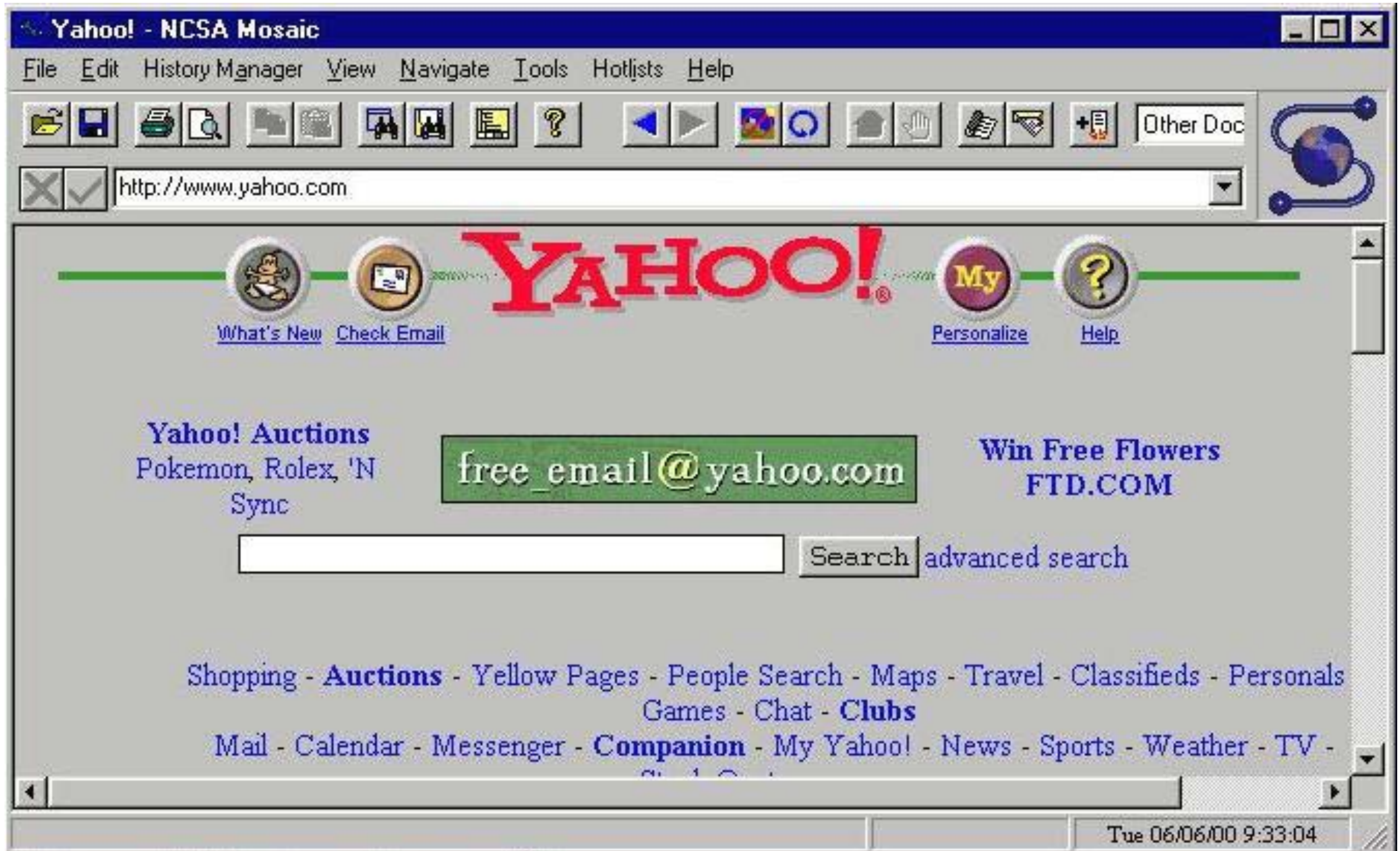
## HTTP methods

- › GET: get a document from a server
- › POST: send a document to a server
- › PUT: update a document at a server
- › DELETE: delete a document from a server

## request components

- › query string: for searching
- › body: for new version of page

# mosaic (1993)



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# what happened?

## early browsers

- › just displayed pages
- › only needed GET

## Mosaic

- › added forms

## to pass form data

- › GET: in query string
- › POST: in body





# UPTON TEA IMPORTS

Vol.22 No.1    Holliston, Massachusetts    Winter, 2012

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## SEARCH

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[Organic Teas](#)

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Black Teas **Green Teas** Misc. Teas Oolong Teas Pu-Erh Teas White Teas Accessories

Bestsellers | New Arrivals | Suggestions | Gifts | Log In/Out

### Browsing Green Teas

Quick-Search:

## CONTACT US

Email: [Cust. Service](#)

Phone: [\(800\) 234-8327](#)

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## Teas>Green

Select the area below that you wish to browse:

- [Email me about new items added to this area.](#)
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## Browse Green Teas:

Green teas, the earliest form of tea, are processed without oxidation. The resulting leaves infuse to create a light and refreshing drink that should never be diluted with milk or sweetened with sugar or honey. Prized for centuries for their health benefits, green teas are an



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# URLs in the late 1990s

`http://uptontea.com/shopcart/toc.asp?parent=Teas&child=Green`

script

arguments

# URLs in the late 1990s

`http://uptontea.com/shopcart/toc.asp?parent=Teas&child=Green`

script

arguments

so now rather than

- › DELETE pages/3

we see

- › POST /deletePage

- › GET /deletePage?id=3

or

- › GET /foo.asp?action=delete&page=3



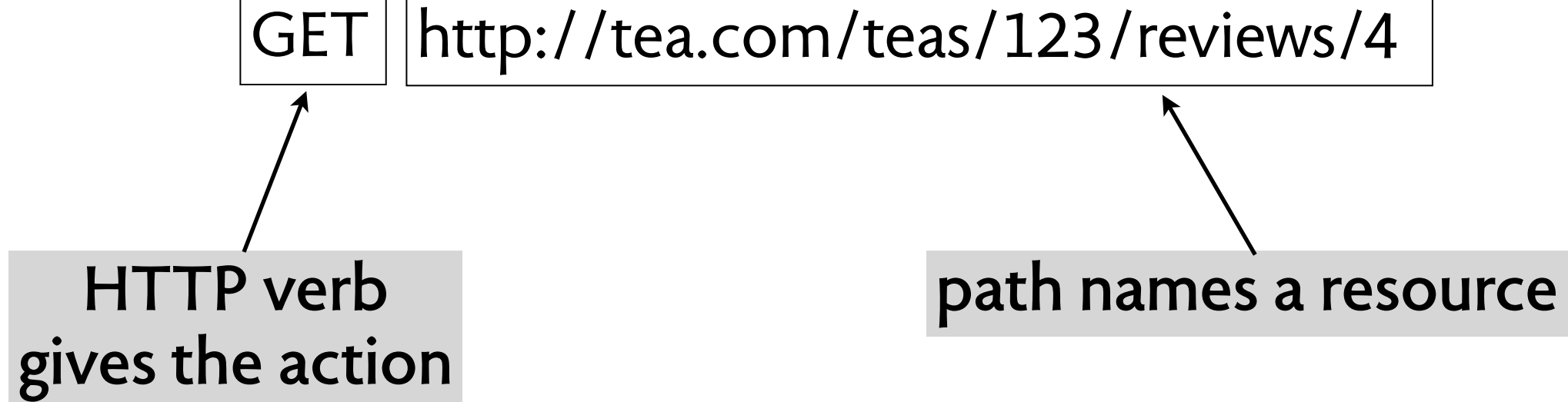
# 4 functions of persistent storage

<i>CRUD</i>	<i>SQL</i>	<i>HTTP</i>
create	insert	POST
read	select	GET
update	update	PUT
delete	delete	DELETE

# RESTful calls

GET http://tea.com/teas/123/reviews/4

HTTP verb  
gives the action



The diagram illustrates the components of a RESTful call. At the top, a box contains the text 'GET http://tea.com/teas/123/reviews/4'. Below this, two grey boxes provide explanations. The left box, 'HTTP verb gives the action', has an arrow pointing to the 'GET' part of the call. The right box, 'path names a resource', has an arrow pointing to the 'http://tea.com/teas/123/reviews/4' part of the call.

path names a resource

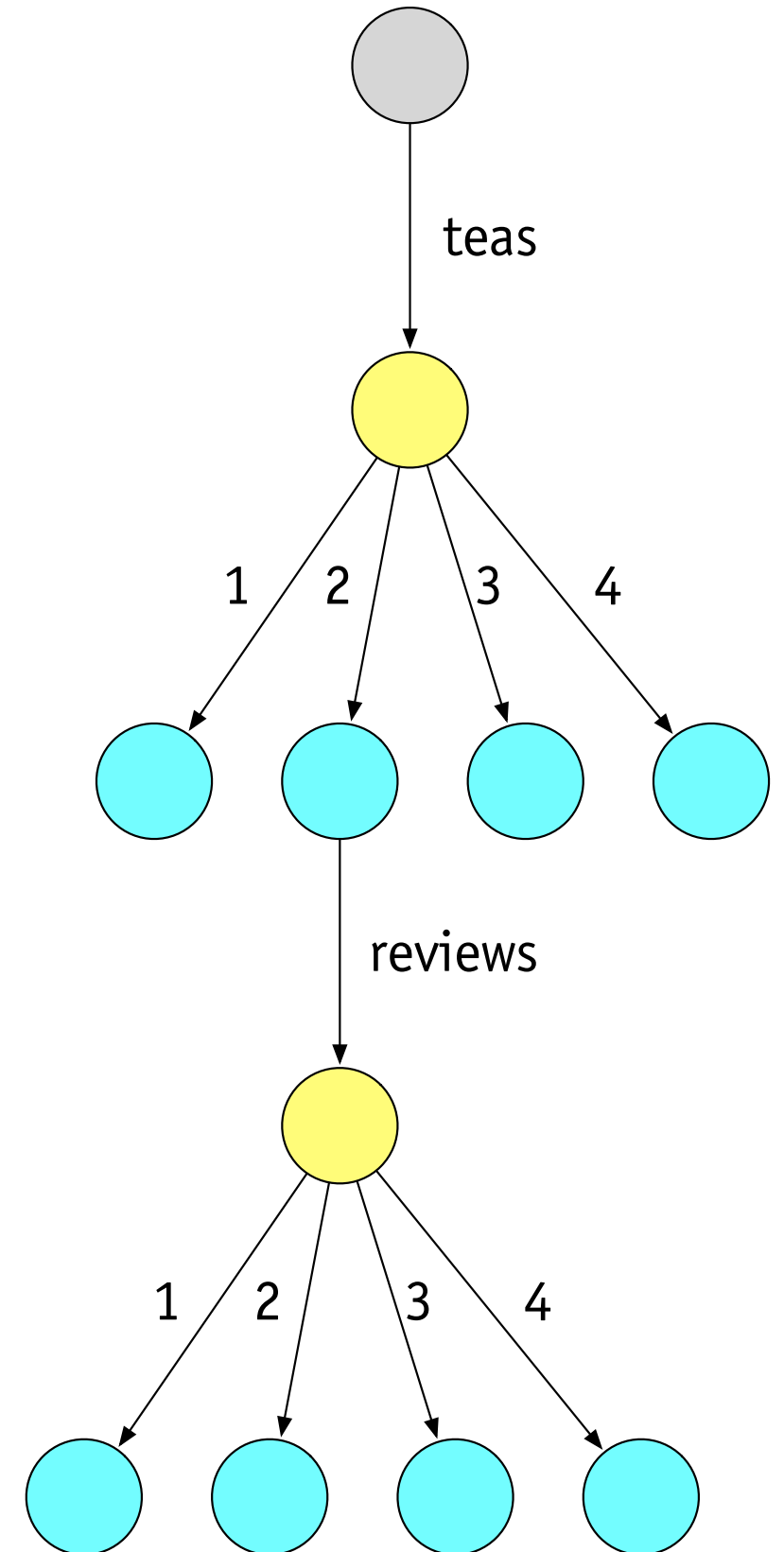
# kinds of path

## collection paths

- › `http://tea.com/teas`
- › `http://tea.com/teas/123/reviews`
- › `http://tea.com/teas/green`

## instance paths

- › `http://tea.com/teas/123`
- › `http://tea.com/teas/123/reviews/4`



# actions

## show reviews of tea #123

- › GET <http://tea.com/teas/123/reviews>

## create a review of tea #123

- › POST <http://tea.com/teas/123/reviews>

## update review #4 of tea #123

- › PUT <http://tea.com/teas/123/reviews/4>

## delete review #4 of tea #123

- › DELETE <http://tea.com/teas/123/reviews/4>

# generating forms

## creating a review

- › step 1: display form to user
- › step 2: user submits form

## how this is done

- › GET <http://tea.com/teas/123/reviews/new>
- › POST <http://tea.com/teas/123/reviews>

## and for update

- › GET <http://tea.com/teas/123/reviews/4/edit>
- › PUT <http://tea.com/teas/123/reviews/4>



# non-CRUD actions

## general strategy

- › instead of calling an action, create a resource
- › instead of “login”, create a “session”
- › instead of “closing account”, create a “closing”

## how to rate a review?

- › POST <http://tea.com/teas/123/reviews/4/ratings>

# logging in and out

<i>option A</i>	<i>option B</i>	<i>option C</i>
/login	POST /sessions	POST /session
/logout	DELETE /sessions/12	DELETE /session

## what I'd do

- › whatever your login/authentication plugin does
- › more important to have session in model than to reflect in URIs

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