

httpd0 API Documentation

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1 httpd0

HTTP/1.0 GET/HEAD server. Server responses are generated by functions implementing the *responder function* interface:

— Function: **<responder>** *resource if-modified-since*

Arguments and Values:

resource—a *pathname*.

if-modified-since—the value of the *If-Modified-Since* header represented as a *universal time*.

Description:

A *responder function* must produce a response to the request to *resource* using the helper functions provided by the `httpd0.responses` package.

See Also:

- *If-Modified-Since* (<http://www.w3.org/Protocols/HTTP/1.0/spec.html#If-Modified-Since>)
- `httpd0.responses`

1.1 *request-size* (Variable)**Initial Value:**

512

Description:

Maximum request size in characters. Requests exceeding `*request-size*` are dropped by closing the connection.

1.2 *request-timeout* (Variable)**Initial Value:**

64

Description:

I/O timeout in seconds. Requests that are stalled by an I/O operation with the client for more than the specified duration are dropped by closing the connection.

1.3 destroy-httpd (Function)**Syntax:**

— Function: **destroy-httpd** *httpd*

Arguments and Values:

httpd—an `httpd0` instance as returned by `make-httpd`.

Description:

`destory-httpd` stops *httpd* and frees its resources.

1.4 `make-httpd` (Function)

Syntax:

— Function: **`make-httpd`** *responder* &key *host* *port* *n-threads* *socket-backlog*

Arguments and Values:

responder—a *responder function*.

host—the *host address* to listen on as a *string*. The default is the wildcard address.

port—a local port number. The default is 8080.

n-threads—a positive *integer* specifying the number of threads to keep in the thread pool. Must be at least two. The default is 16.

socket-backlog—a positive *integer* specifying the socket *backlog*. The default is 32.

Description:

`make-httpd` creates a `httpd0` server instance with *responder* that listens on the specified *host* and *port*.

1.5 `make-resource-responder` (Function)

Syntax:

— Function: **`make-resource-responder`** *root*

Arguments and Values:

root—a *directory pathname*.

Description:

`make-resource-responder` returns a *responder function* that serves the files under *root*.

2 httpd0.responses

Toolkit for writing *responder functions*. Includes common responses and generic response templates.

2.1 `*protocol-version*` (Variable)

Initial Value:

NIL

Description:

`*protocol-version*` is bound to a *symbol* indicating the protocol version is use when calling a *responder function*. `*protocol-version*` can be either `:0.9` or `:1.0` to indicate HTTP/0.9 or HTTP/1.0 respectively.

2.2 `*request-method*` (Variable)

Initial Value:

NIL

Description:

`*request-method*` is bound to a *symbol* indicating the request method served when calling a *responder function*. `*request-method*` can be either `:get` or `:head` indicating a GET or HEAD request respectively.

2.3 `*text-mime*` (Variable)

Initial Value:

`("text" "plain; charset=utf-8")`

Description:

`*text-mime*` is bound to a *list* of two *strings* that designates a MIME type, to which responses for the text/plain MIME type will be upgraded to.

2.4 **respond-moved-permanently** (Function)

Syntax:

— Function: **respond-moved-permanently** *location*

Arguments and Values:

location—a *string* denoting a URI.

Description:

`respond-moved-permanently` responds with HTTP status `:moved-permanently` to *location*.

2.5 **respond-not-found** (Function)

Syntax:

— Function: **respond-not-found** *<no arguments>*

Arguments and Values:

None.

Description:

`respond-not-found` responds with HTTP status `:not-found`.

2.6 **respond-not-implemented** (Function)

Syntax:

— Function: **respond-not-implemented** *<no arguments>*

Arguments and Values:

None.

Description:

`respond-not-implemented` responds with HTTP status `:not-implemented`.

2.7 **respond-not-modified** (Function)

Syntax:

— Function: **respond-not-modified** *<no arguments>*

Arguments and Values:

None.

Description:

`respond-not-modified` responds with HTTP status `:not-modified`.

2.8 **respond-ok** (Macro)

Syntax:

— Macro: **respond-ok** (*length type write-date*) &body *body*

Arguments and Values:

length—a non-negative *integer*.

type—a list of two *strings* designating a MIME type.

write-date—a *universal time*.

body—*forms* that print *length* bytes to `*standard-output*`.

Description:

`respond-ok` responds with HTTP status `:ok` for an entity of *length* bytes with MIME *type* and *write-date*. The *body* forms must write the contents of the HTTP entity to `*standard-output*`.

2.9 **uri-encode** (Function)

Syntax:

— Function: **uri-encode** *string*

Arguments and Values:

string—a *string*.

Description:

uri-encode returns an URI safe copy of *string*. Note that uri-encode will **not** encode reserved characters.

See Also:

- *percent-encoding* (<http://tools.ietf.org/html/rfc3986#section-2.1>)