My web server
A easy to deploy, well tested, open source, web server that support multiple platforms.

Requirements

Supplementary Specification
Req 1. The web server should be responsive under high load.
Req 2. The web server must follow minimum requirements for HTTP 1.1
Req 3. The web server must work on Linux, Mac, Windows*.
Req 4. The source code should be released under GPL-2.0.
Req 5. The access log should be viewable from a text editor.

* XP, Vista, 7, 8, 10, Server 2008

Actors
Administrator. Installs, Starts, stops the Web server, inspects usage.
Browser: Accesses shared resources.

Use Cases:

UC1 Start Server

Primary Actor
Administrator

Postcondition:
- A web server has been started
- A note in the access log was written, that the server was started

Main scenario
1. Starts when an administrator wants to start the server.
2. System asks for socket port number and shared resource container
3. The administrator provides a socket port number and a shared resource container
4. System starts a web server on the given port and presents that the server was started and writes a note in the access log.

Alternate Scenarios
- 4a. The web server could not be started due to socket was taken
    1. System presents an error message: “Socket XX was taken” (XX is the socket number, Example “80”)
    2. Exit Use Case

- 4b. The web server could not be started due restriction on the shared resource container
    1. System presents an error message: “No access to folder XX” (XX is the shared resource container provided, Example “\var\www”)
    2. Exit Use Case
- 4c. The access log could not be written to
    1. System presents an error message. “Cannot write to server log file log.txt”
    2. Exit Use Case

UC2 Stop Server

Primary Actor
Administrator

Precondition:
- A web server has been started

Postcondition:
- A note in the access log was written, that the server was stopped

Main scenario
1. Starts when a user wants to stop the server.
2. System stops the web server and presents that the webserver has been stopped

UC3 Request shared resource

Primary Actor
Browser

Precondition:
- A web server has been started

Postcondition:
- A note in the access log was written, that access happened with request information and the result of the request.

Technical note
- Browser and System communicates using HTTP 1.1.
- Error messages are part of HTTP 1.1 protocol
    - 200 OK
    - 400 Bad request
    - 403 Forbidden
    - 404 Not Found

Main scenario
1. Starts when a Browser wants to access a shared resource

2. System delivers the shared resource to the browser and a success message is written to the access log.

Alternate Scenarios

- 2a: The shared resource cannot be found
    a. System presents that the resource cannot be found
    b. Exit Use Case
- 2b: The shared resource is outside the shared resource container
    a. System presents that the resource is forbidden
    b. Exit Use Case
- 2c: The resource request is invalid or malformed
    a. System presents that the request cannot be handled
    b. Exit Use Case
- 2d: The server encounters an error when trying to process the request
    a. System presents that it has an internal error
    b. Exit Use Case