Jetty

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Web Server

A web server is a computer system that processes requests via HTTP, the basic network protocol used to distribute information on the World Wide Web.

The primary function of a web server is to store, process and deliver web pages to clients.

The communication between client and server takes place using the Hypertext Transfer Protocol (HTTP).

Pages delivered are most frequently HTML documents, which may include images, style sheets and scripts in addition to text content.

Eclipse Jetty is a Java HTTP (Web) server and Java Servlet container.

Jetty Architecture

Connector

A Connector is the component that accepts TCP connections. For each accepted TCP connection, the Connector asks a ConnectionFactory to create a Connection object that handles the network traffic on that TCP connection, parsing and generating bytes for a specific protocol.
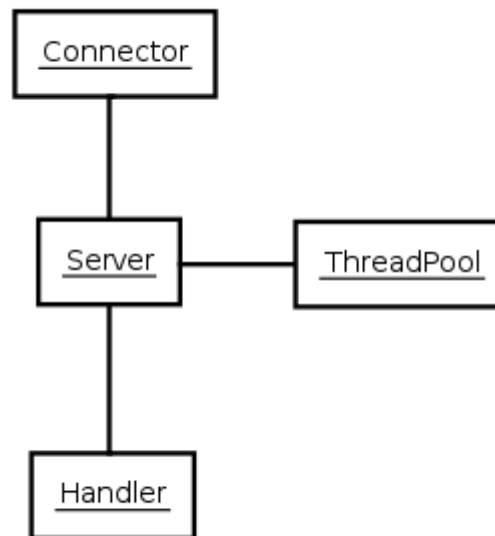
Handler

A Handler is the component that deals with HTTP requests and responses.

Thread pool

Thread pool maintains multiple threads waiting for tasks to be allocated for concurrent execution by the supervising program.

Jetty Architecture

Servlet

To process requests Handler uses Servlets.

A Java servlet is a component of Java program that extends the capabilities of a server.

Although servlets can respond to any types of requests, they are most commonly implemented on Web servers.
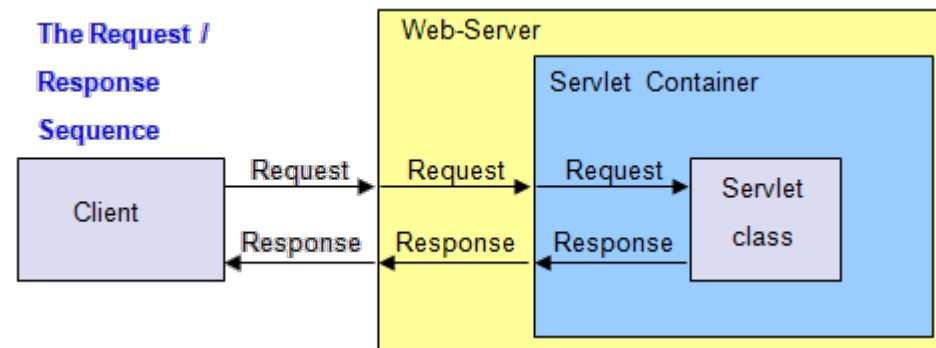
So, servlet is a request handler which extends capability of a web server.

Servlets work like small applications in threads from ThreadPool.

Servlet Container

Servlet container is the component of a web server that interacts with Java servlets.

A web container is responsible for managing the lifecycle of servlets, mapping a URL to a particular servlet and ensuring that the URL requester has the correct access-rights.

Request and Response

```
public abstract class HttpServlet extends GenericServlet{

...

    protected void doGet(HttpServletRequest req, HttpServletResponse resp)

        throws ServletException, IOException

    {...}


    protected void doPost(HttpServletRequest req, HttpServletResponse resp)

        throws ServletException, IOException

    {...}
}
```

Request

Contains data about user an parameters of user's requester

Response

Contains a text (a page) for a user

ResourceHandler

Jetty can work as web server with static pages: html documents, images, media files.

ResourceHandler serves static content.