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TechDoc#3: Servlets

What are Servlets?

Servlets are Java codes that run on the server side to generate a dynamic web page in response to the incoming HTTP requests. They are called servlets because they extend that capability of a (web) server. Servlets are one of the many technologies that can be used to create dynamic web pages on the server side. A servlet is basically Java class with a specific structure. It must contain the three methods specified in the Servlet Specification by Java Community Process (https://en.wikipedia.org/wiki/Java_Community_Process). These methods are `init()`, `service()`, and `destroy()`. Together these three methods constitute the lifecycle of a servlet and help process the responses for the incoming HTTP requests.

You can find more information about Java servlets here:

- <http://www.javatpoint.com/servlet-tutorial>
- https://en.wikipedia.org/wiki/Java_servlet
- https://www.youtube.com/watch?v=BMRamj_eKFY (Video tutorial)

You can download the servlet specification at

- <https://jcp.org/aboutJava/communityprocess/final/jsr340/index.html>

What is a Servlet Container?

The basic idea behind a servlet container is to generate the web page dynamically on the server side by executing the business logic written in java servlets. The HTTP request from the client is handed to the container which in turn creates a request and response object and then passes them to an appropriate servlet. The container executes the “service” method of the servlet which writes a response object. The container then relays the response generated from the servlet back to the HTTP client. The container has the full control of the servlets and is responsible for managing their life cycle. A container also provides support for logging, multi-threading, security etc. Tomcat is an example of servlet container.

You can find more details about a servlet containers in the below URLs:

- <http://www.programcreek.com/2013/04/what-is-servlet-container/>
- <http://www.jitendrazaa.com/blog/java/servlet/how-container-handles-the-servlet-request/>