Servlet Filters

Presented by : Asfiya Khan
(Sr. Technical Trainer)

Agenda

- **Filters in Servlets**

- **Filter LifeCycle**

- **Filters configuration**

Filters

- Filter : A new component introduced in Java Servlet spec 2.3

- Filters provide ability to encapsulate recurring tasks in reusable units.

- Filters increase modularity & extensibility.

Filters

- A filter dynamically intercepts requests and responses

- Filters transform or use the information contained in the requests or responses.

- Filters typically provide universal functions that can be "attached" to any type of servlet or JSP page

- Used for preprocessing of requests & post processing of response

Filter Lifecycle & methods of Filter Interface

- void init(FilterConfig filterConfig)

- void doFilter(ServletRequest request, ServletResponse response, FilterChain chain)

- destroy()
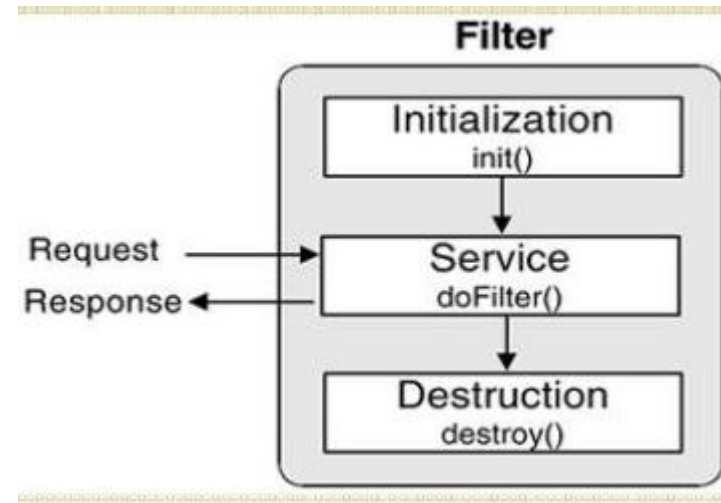
Filter Chaining
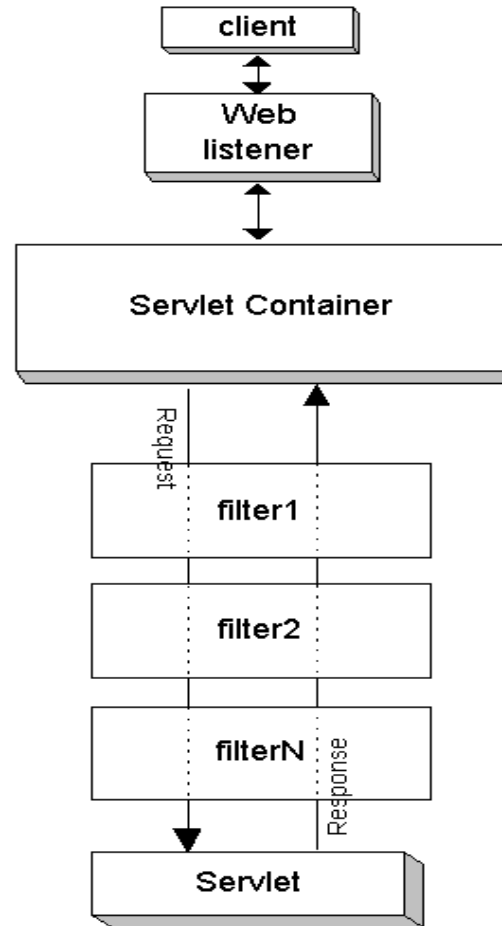
Filter Chaining

The FilterChain interface also specifies a **doFilter(ServletRequest request, ServletResponse response, FilterChain chain)** method, which takes a request and response pair as input and is used by each filter to invoke the next entity in the chain.

Filter Annotation
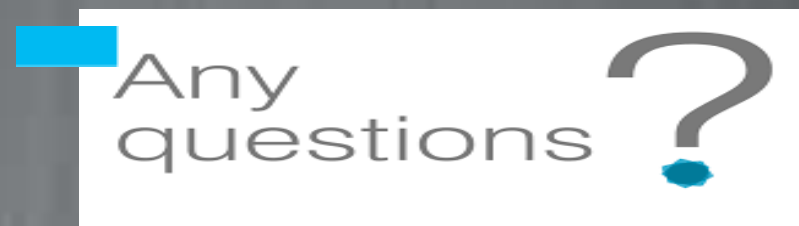
- The @WebFilter annotation is used to declare a filter in a web application.

- The annotated class must extend the javax.servlet.Filter interface.

- Syntax

  ```
  @WebFilter( attribute1=value1, attribute2=value2, ...)
  public class TheFilter implements javax.servlet.Filter {
  // implements Filter's
  }
  ```

Filter Annotation

Attributes

Name	Type	Required	Description
filterName	*String*	Optional	Name of the filter.
value or urlPatterns	*String[]*	**Required**	Specify one or more URL patterns to which the filter applies. Either of attribute can be used, but not both.
dispatcherTypes	*DispatcherType[]*	Optional	Specify types of dispatcher to which the filter applies. Default is `javax.servlet.DispatcherType.REQUEST`
servletNames	*String[]*	Optional	Specify names of servlets to which the filter applies.
displayName	*String*	Optional	Display name of the filter.
description	*String*	Optional	Description of the filter.
asyncSupported	*boolean*	Optional	Specify whether the filter supports asynchronous operation mode. Default is false.
initParams	*WebInitParam[]*	Optional	Specify one or more initialization parameters of the filter. Each parameter is specified by `@WebInitParam` annotation type.
smallIcon	*String*	Optional	Specify name of the small icon of the filter.
largeIcon	*String*	Optional	Specify name of the large icon of the filter.

Thank You!

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