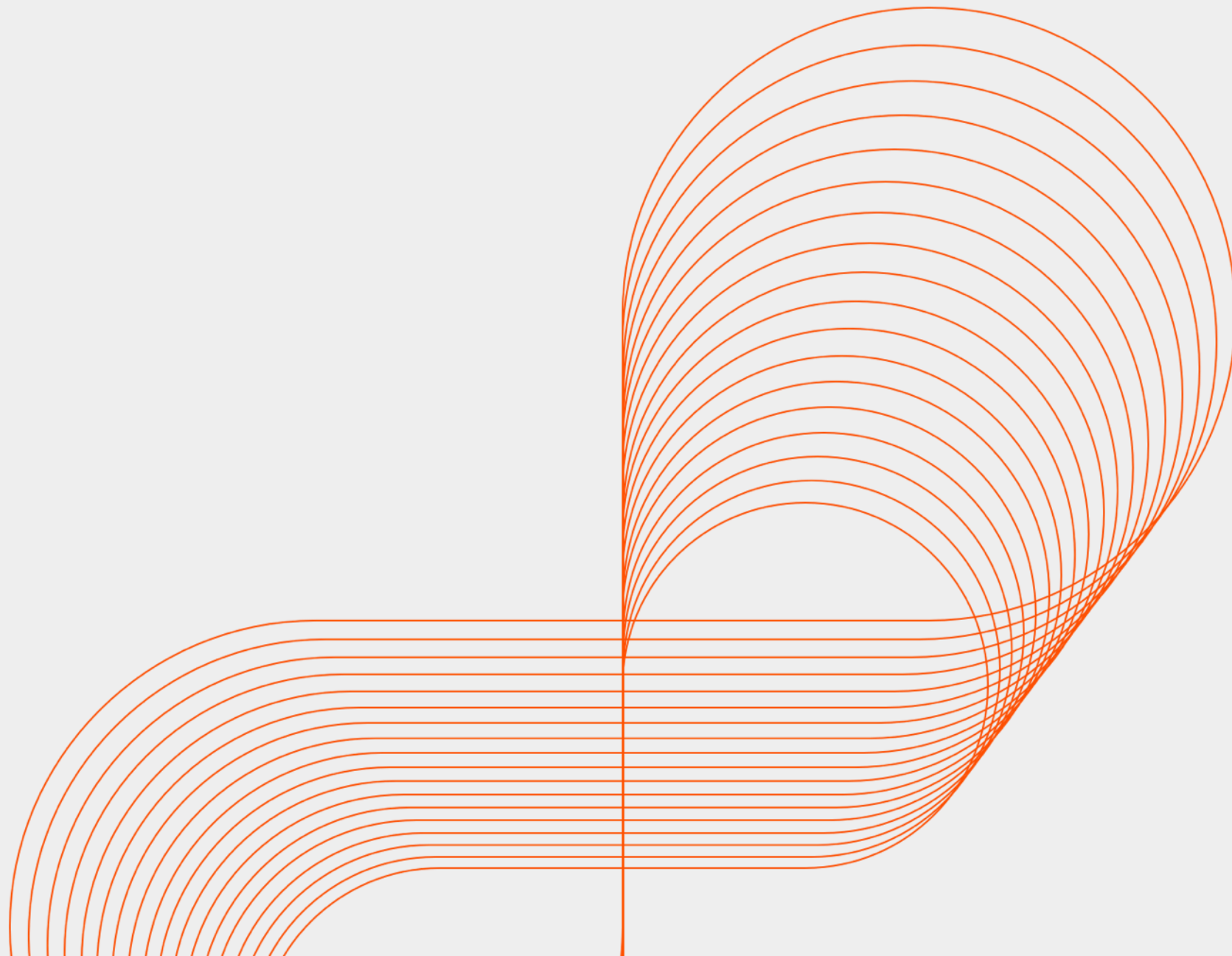# Listeners

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Agenda

- Listeners

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Understanding listeners

- A web application, its servlets and its various objects (request, session etc) have a well defined lifecycle.

- A programmer can choose to monitor the lifecycle of these elements through the various listener interfaces available in the API.

- Listeners are objects which are notified when a specific event occurs in the lifecycle of these elements.

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Servlet context listener

- javax.servlet.ServletContextListener interface can be used to monitor the initialization and destruction of the servlet context object.

- There is only one servlet context object per web application per jvm.

- Methods
  - contextInitialized(ServletContextEvent)
  - contextDestroyed(ServletContextEvent)

Servlet context attribute listener

- javax.servlet.ServletContextAttributeListener is used to monitor the addition, removal and replacing of servlet context attributes

- Methods
  - attributeAdded(ServletContextAttributeEvent)
  - attributeRemoved(ServletContextAttributeEvent)
  - attributeReplaced(ServletContextAttributeEvent)

Http session listener

- javax.servlet.http.HttpSessionListener is used to monitor the creation and destruction (invalidation) of a client's http session.

- Methods
    - sessionCreated(HttpSessionEvent)
    - sessionDestroyed(HttpSessionEvent)

Http session attribute listener

- javax.servlet.http.HttpSessionAttributeListener is used to monitor addition, removal and replacing of attributes in a http session object.

- Methods
    - attributeAdded(HttpSessionBindingEvent)
    - attributeRemoved(HttpSessionBindingEvent)
    - attributeReplaced(HttpSessionBindingEvent)

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Http session binding listener

- javax.servlet.http.HttpSessionBindingListener can be implemented by an object which needs a notification whenever it is bound (added) and unbound (removed) from a http session object

- Methods
    - valueBound(HttpSessionBindingEvent)
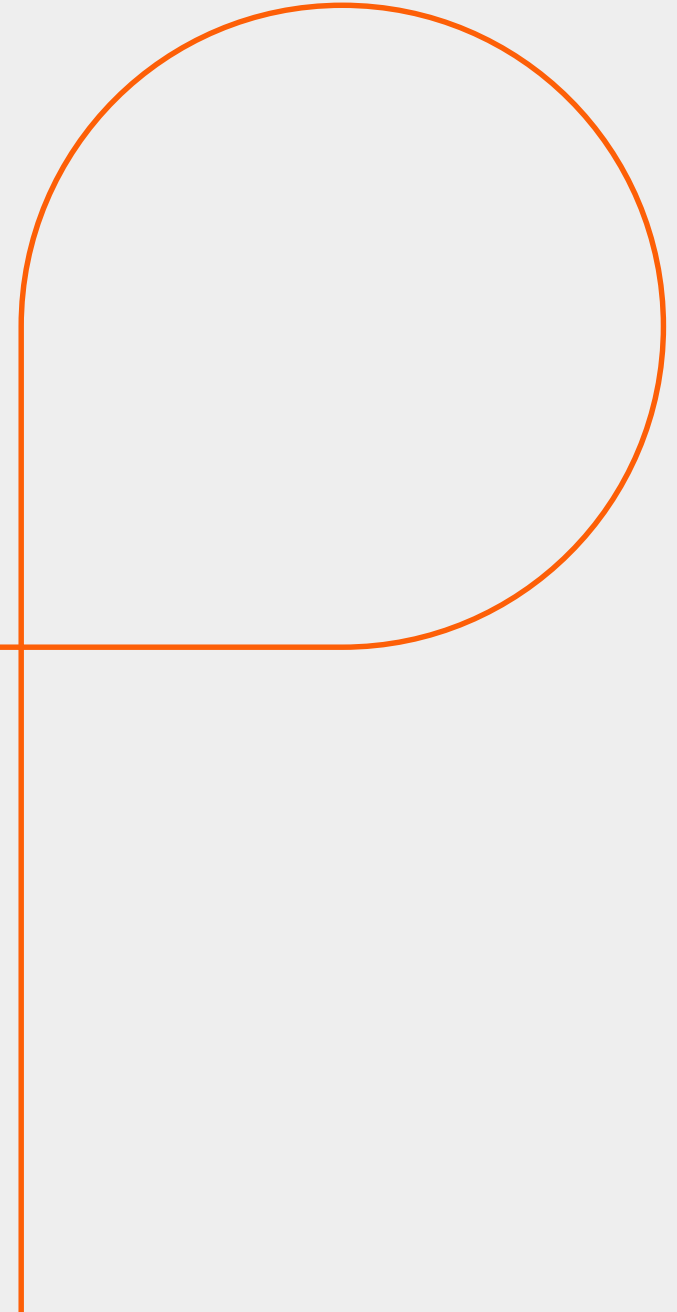   - valueUnbound(HttpSessionBindingEvent)

Request listener

- javax.servlet.ServletRequestLisener is used to monitor all requests received by a web application

- Methods
    - requestInitialized(ServletRequestEvent)
    - requestDestroyed(ServletRequestEvent)

Summary:

- With this we have come to an end of our session, where we discussed :
  - Various listeners
    - Servlet context listeners
    - Session listeners
    - Request listeners etc.

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Appendix

Thank You

Thank you!

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