



Any actions which is done on the webpage is called "Event".
eg: clicking on buttons, typing inside textbox,...

Enter FirstNumber

10

Enter SecondNumber

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```
class TestApp implements ActionListener
{
    public void actionPerformed(ActionEvent ae)
    {
        write a logic to perform action
    }
}
```

In case of webapplications there would be a chance of occurring several events like

- a. Request Object creation
- b. Request Object destruction
- c. Session object creation
- d. Session object destruction
- e. Context object creation
- f. Context Object destruction
- g. Attribute added in request scope

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Whenever these events occur and if we want perform some specific operations then we need to go for "Listeners".

Listeners will listen to the Event and will perform action/operation automatically.

In Servlet Api Listeners are classified into 3 types

- a. RequestListener(related to request object)
 1. ServletRequestListener
 2. ServletRequestAttributeListener
- b. SessionListener(related to session object)
 1. HttpSessionListener
 2. HttpSessionAttributeListener
 3. HttpSessionBindingListener
 4. HttpSessionActivationListener
- c. ContextListener(related to context)
 1. ServletContextListener
 2. ServletContextAttributeListener

ServletRequestListener

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```
public interface ServletRequestListener extends EventListener {
    public void requestDestroyed(ServletRequestEvent reqEvent); //it gets called
    at the time of request object destruction
    public void requestInitialized(ServletRequestEvent reqEvent); //it gets called
    at the time of request object creation
}

refer: ServletRequestListenerApp
```

Note: listeners information is configured in web.xml file using

```
<listener>
    <listener-class>in.ineuron.listener.RequestDemoListener</listener-class>
</listener>
```

ServletRequestAttributeListener

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```
public interface ServletRequestAttributeListener extends EventListener {
    public void attributeAdded(ServletRequestAttributeEvent event); //adding the
    attribute to request object.s
    public void attributeRemoved(ServletRequestAttributeEvent event); //removing the
    attributes from request object.
    public void attributeReplaced(ServletRequestAttributeEvent event); //updating the
    attributes in the request object.
}

refer: ServletRequestAttributeListenerApp
```

Note: using annotation if we want to represent a Listener we use "@WebListener".

