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# Unit Testing Servlet filter with Mockito

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This assumes that you have gone through the basic [JUnit & Mockito tutorials](#). Here is test class to “Unit Testing Servlet Filter”. The “**HttpServletRequest**”, “**HttpServletResponse**”, “**FilterChain**”, etc are mocked with Mockito. The Spring also provides classes like “**MockHttpServletRequest**”, etc.

```

1 package com.mytutorial;
2
3 import java.io.BufferedReader;
4 import java.io.IOException;
5 import java.io.StringReader;
6
7 import javax.servlet.FilterChain;
8 import javax.servlet.FilterConfig;
9 import javax.servlet.ServletException;
10 import javax.servlet.http.HttpServletRequest;
11 import javax.servlet.http.HttpServletResponse;
12
13 import org.junit.Test;
14 import org.mockito.Mockito;
15 import org.springframework.mock.web.MockHttpServ
16 import org.springframework.mock.web.MockHttpServ
17
18 public class LoggingFilterTest {
19
20     @Test
21     public void testDoFilter() throws ServletExc

```

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```

22
23     LoggingFilter filter = new LoggingFilter
24
25     HttpServletRequest mockReq = Mockito.mock
26     HttpServletResponse mockResp = Mockito.mock
27     FilterChain mockFilterChain = Mockito.mock
28     FilterConfig mockFilterConfig = Mockito.mock
29     // mock the getRequestURI() response
30     Mockito.when(mockReq.getRequestURI()).thenReturn
31
32     BufferedReader br = new BufferedReader(new
33     // mock the getReader() call
34     Mockito.when(mockReq.getReader()).thenReturn
35
36     filter.init(mockFilterConfig);
37     filter.doFilter(mockReq, mockResp, mockFilterChain);
38     filter.destroy();
39 }
40
41 @Test(expected = Exception.class)
42 public void testDoFilterException() throws IOException {
43
44     LoggingFilter filter = new LoggingFilter
45
46     HttpServletRequest mockReq = new MockHttpServletRequest
47     HttpServletResponse mockResp = new MockHttpServletResponse
48     FilterChain mockFilterChain = Mockito.mock
49     FilterConfig mockFilterConfig = Mockito.mock
50
51     filter.init(mockFilterConfig);
52     filter.doFilter(mockReq, mockResp, mockFilterChain);
53     filter.destroy();
54 }
55 }

```

Here is the “LoggingFilter” that is being tested

```

1 package com.mytutorial;
2
3 import java.io.BufferedReader;
4 import java.io.ByteArrayInputStream;
5 import java.io.IOException;
6 import java.io.InputStream;
7 import java.io.InputStreamReader;
8
9 import javax.servlet.Filter;
10 import javax.servlet.FilterChain;
11 import javax.servlet.FilterConfig;
12 import javax.servlet.ServletException;
13 import javax.servlet.ServletInputStream;
14 import javax.servlet.ServletRequest;
15 import javax.servlet.ServletResponse;
16 import javax.servlet.http.HttpServletRequest;
17 import javax.servlet.http.HttpServletRequestWrapper;
18
19 import org.apache.commons.io.IOUtils;
20 import org.slf4j.Logger;
21 import org.slf4j.LoggerFactory;
22
23 public class LoggingFilter implements Filter {
24
25     private static final Logger LOG = LoggerFactory.getLogger(LoggingFilter.class);
26
27     @Override
28     public void init(FilterConfig filterConfig) throws ServletException {
29         // TODO Auto-generated method stub
30     }
31
32     @Override
33     public void doFilter(ServletRequest request, ServletResponse response, FilterChain chain) throws IOException, ServletException {
34         // TODO Auto-generated method stub
35     }
36
37     @Override
38     public void destroy() {
39         // TODO Auto-generated method stub
40     }
41 }

```

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```

27 public void destroy() {
28     // Nothing to do
29 }
30
31 public void doFilter(ServletRequest request,
32     ServletException {
33     ResettableStreamHttpServletRequest wrappe
34     String body = IOUtils.toString(wrappedRe
35     LOG.info("Payload Received = " + body);
36     wrappedRequest.resetInputStream();
37     chain.doFilter(wrappedRequest, response)
38 }
39
40
41 public void init(FilterConfig arg0) throws S
42     // Nothing to do
43 }
44
45 private static class ResettableStreamHttpSer
46
47     private byte[] rawData;
48     private HttpServletRequest request;
49     private ResettableServletInputStream ser
50
51     public ResettableStreamHttpServletRequest
52         super(request);
53         this.request = request;
54         this.servletStream = new ResettableS
55     }
56
57
58     public void resetInputStream() {
59         servletStream.stream = new ByteArray
60     }
61
62     @Override
63     public ServletInputStream getInputStream
64         if (rawData == null) {
65             rawData = IOUtils.toByteArray(th
66             servletStream.stream = new ByteA
67         }
68         return servletStream;
69     }
70
71     @Override
72     public BufferedReader getReader() throws
73         if (rawData == null) {
74             rawData = IOUtils.toByteArray(th
75             servletStream.stream = new ByteA
76         }
77         return new BufferedReader(new InputS
78     }
79
80     private class ResettableServletInputStre
81
82         private InputStream stream;
83
84         @Override
85         public int read() throws IOException
86             return stream.read();
87         }
88     }
89 }
90 }

```

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