

Click the Exhibit button. Given the web application deployment descriptor elements:

```
11. <filter>
12. <filter-name>ParamAdder</filter-name>
13. <filter-class>com.example.ParamAdder</filter-class>
14. </filter>
...
31.<filter-mapping>
32.<filter-name>ParamAdder</filter-name>
33.<servlet-name>Destination</servlet-name>
34.</filter-mapping>
...
55.<servlet-mapping>
56.<servlet-name>Destination</servlet-name>
57.<url-pattern>/dest/Destination</url-pattern>
58.</servlet-mapping>
```

What is the result of a client request of the Source servlet with no query string?

```
//Source Servlet:Source.java
public class Source extends HttpServlet{
    public void service(HttpServletRequest request,HttpServletResponse
response)
    throws ServletException,IOException{
        RequestDispatcher
rd=request.getRequestDispatcher("/dest/Destination");
        rd.forward(request,response);
    }
}
```

```
//Filter:ParamAdder.java
public class ParamAdder implements Filter{
    //...
    public void doFilter(ServletRequest request,ServletResponse
response,FilterChain chain)
    throws ServletException,IOException{
        request.setAttribute("filterAdded","addedByFilter");
        chain.doFilter(request,response);
    }
}
```

```
}  
//...  
}
```

```
//Destination Servlet Destination.java  
public class Destination extends HttpServlet{  
    public void service(HttpServletRequest request,HttpServletResponse  
response)  
    throws ServletException,IOException{  
        String filterParam=(String)request.getAttribute("filterAdded");  
        response.getWriter().println("filterAdded="+filterParam);  
    }  
}
```

A-The output "filterAdded = null" is written to the response stream.

B-The output "filterAdded = addedByFilter" is written to the response stream.

3-An exception is thrown at runtime within the service method of the Source servlet.

4-An exception is thrown at runtime within the service method of the Destination servlet.