Q66 - Asynchronous Processing in Servlets [11]

Assume the AsyncListener is defined as follows:

com.nullhaus.MyListener

```
package com.nullhaus;

import javax.servlet.*;
import javax.servlet.http.*;
import javax.servlet.annotation.*;

@WebListener
public class MyListener implements AsyncListener {
    public void onComplete(AsyncEvent event) {
        System.out.println("#Async listener [onComplete]");
    }

    public void onError(AsyncEvent event) {
        System.out.println("#Async listener [onError]");
    }

    public void onStartAsync(AsyncEvent event) {
        System.out.println("#Async listener [onStartAsync]");
    }

    public void onTimeout(AsyncEvent event)  {
        System.out.println("#Async listener [onTimeout]");
    }
}
```

What will be the result of the **first** GET request to the following servlet:

```
package com.nullhaus;

import javax.servlet.*;
import javax.servlet.http.*;
import javax.servlet.annotation.*;

@WebServlet(urlPatterns = "/foo/*", name="NullServlet", asyncSupported=true)
public class NullServlet extends HttpServlet {
    public void doGet(HttpServletRequest req, HttpServletResponse resp) throws ServletException {

        final AsyncContext ac = req.startAsync();

        try {
            Class lClass = Class.forName("com.nullhaus.MyListener");
            AsyncListener al = ac.createListener(lClass);

            ac.addListener(al);
        } catch (ClassNotFoundException e) {
            e.printStackTrace();
        }

        ac.start(new Thread() {
            public void run() {
                ac.complete();
```

```
            }
        });
    }
}
```

a. This code compiles

b. The "#Async listener [onTimeout]" message will be to the console/log file

c. The "#Async listener [onStartAsync]" message will be to the console/log file

d. The "#Async listener [onError]" message will be to the console/log file

e. The "#Async listener [onComplete]" message will be to the console/log file

f. A runtime exception will be thrown when accessing this servlet

g. This code doesn't compile

Hide answer

a, e

Reference: pages 17 - 18, 2.3.3.3 "Asynchronous processing"

Explanation: The listener will be notified after the asynchronous processing will be completed. The timeout, error and onStartAsync (it's the **first** invocation of startAsync()) will not occur in this case.