

FLIP THAT APP!

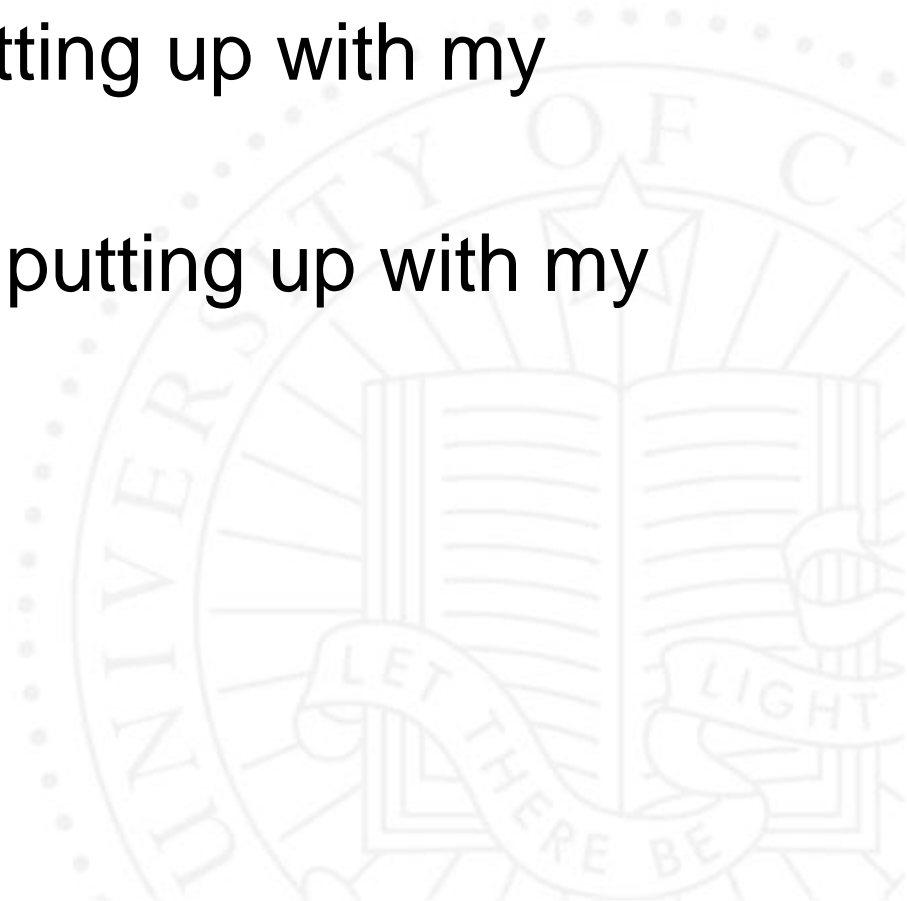
Converting JLinkUI apps to SiteMesh

Administrative
Computing &
Telecommunications



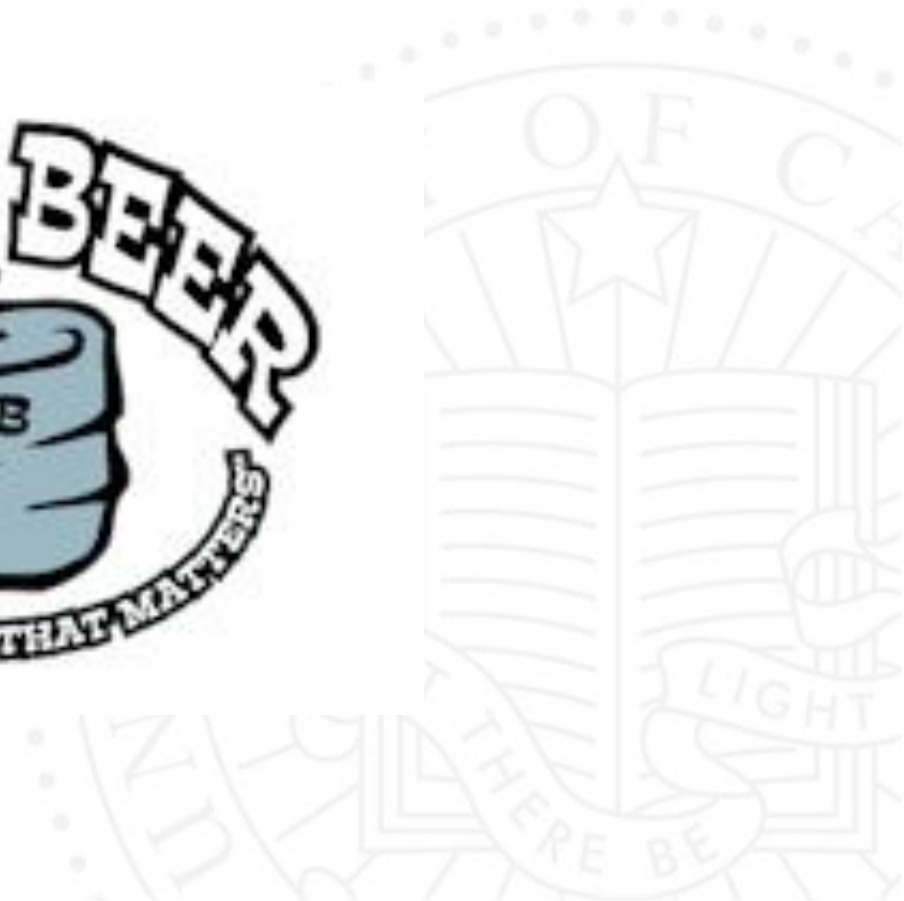
Acknowledgements

- › FinancialLink team, for contributing their techniques
- › Marina and Luis, for putting up with my experiments
- › Infrastructure team, for putting up with my questions



Other acknowledgements

- ▶ '80s S.F. punk band Free Beer, for inspiring the title of this presentation



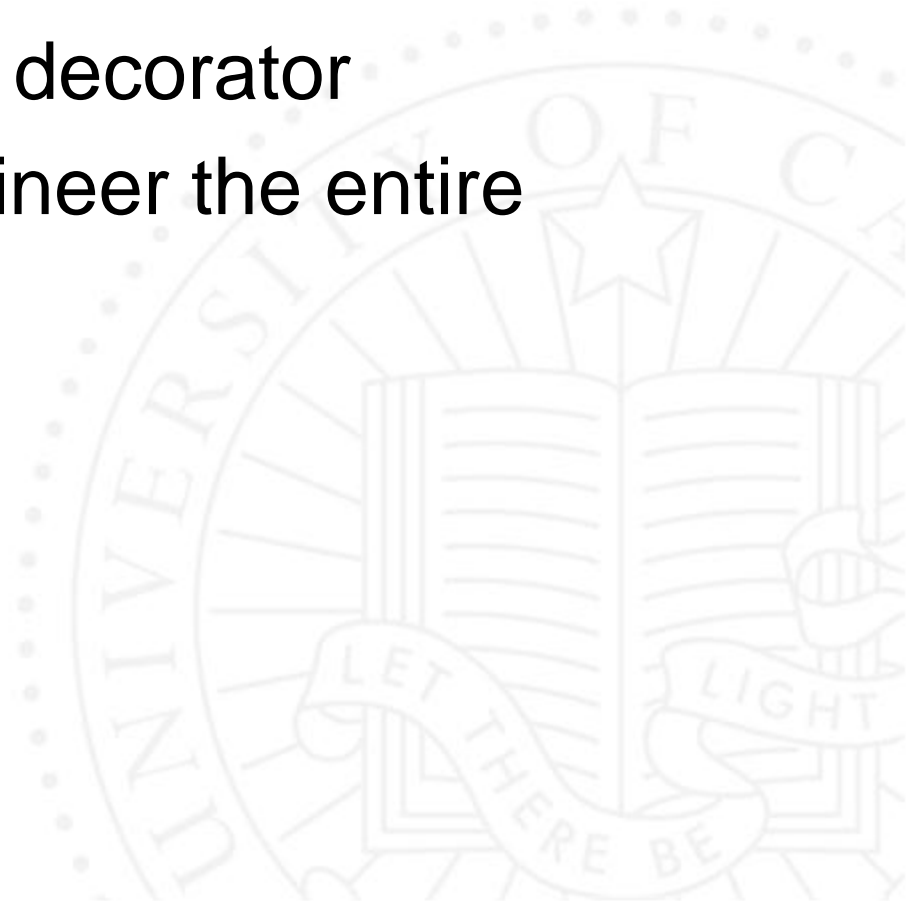
Objective

- › Present and demonstrate techniques for adapting JLink apps to SiteMesh



The problem ...

- › You have an existing JLink application
- › Everything still works
- › Using an existing JLink decorator
- › No resources to re-engineer the entire presentation layer



Your app when it launched ...



How users see your app today ...

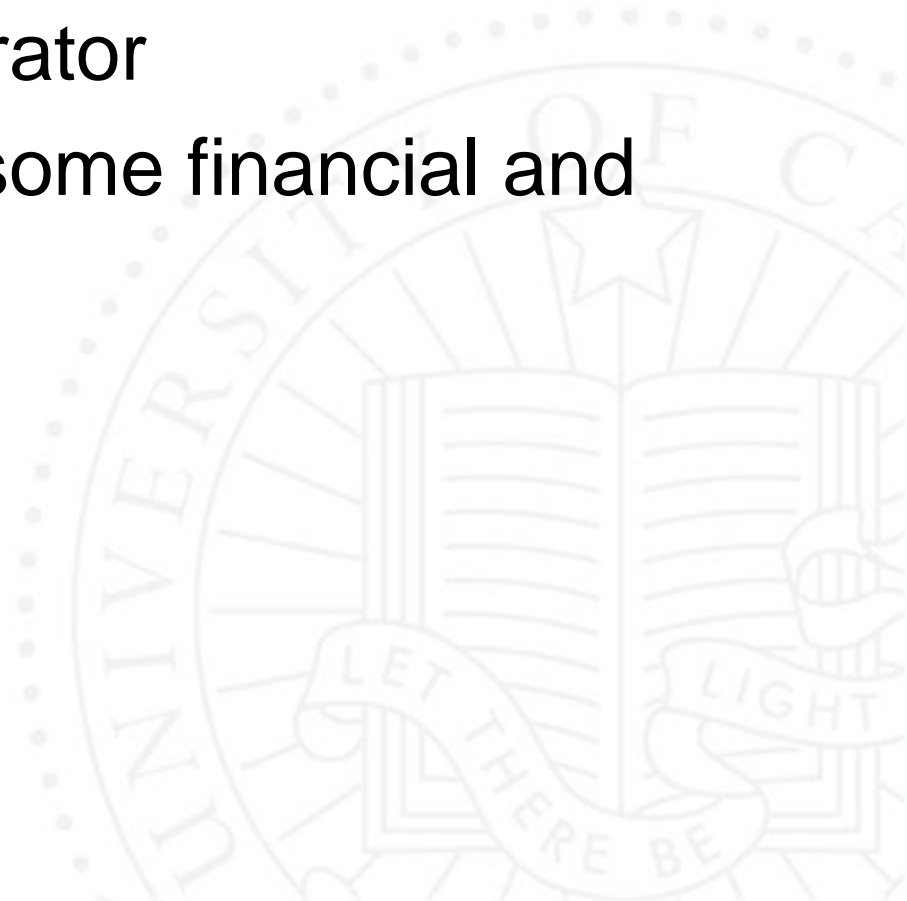


Solution:

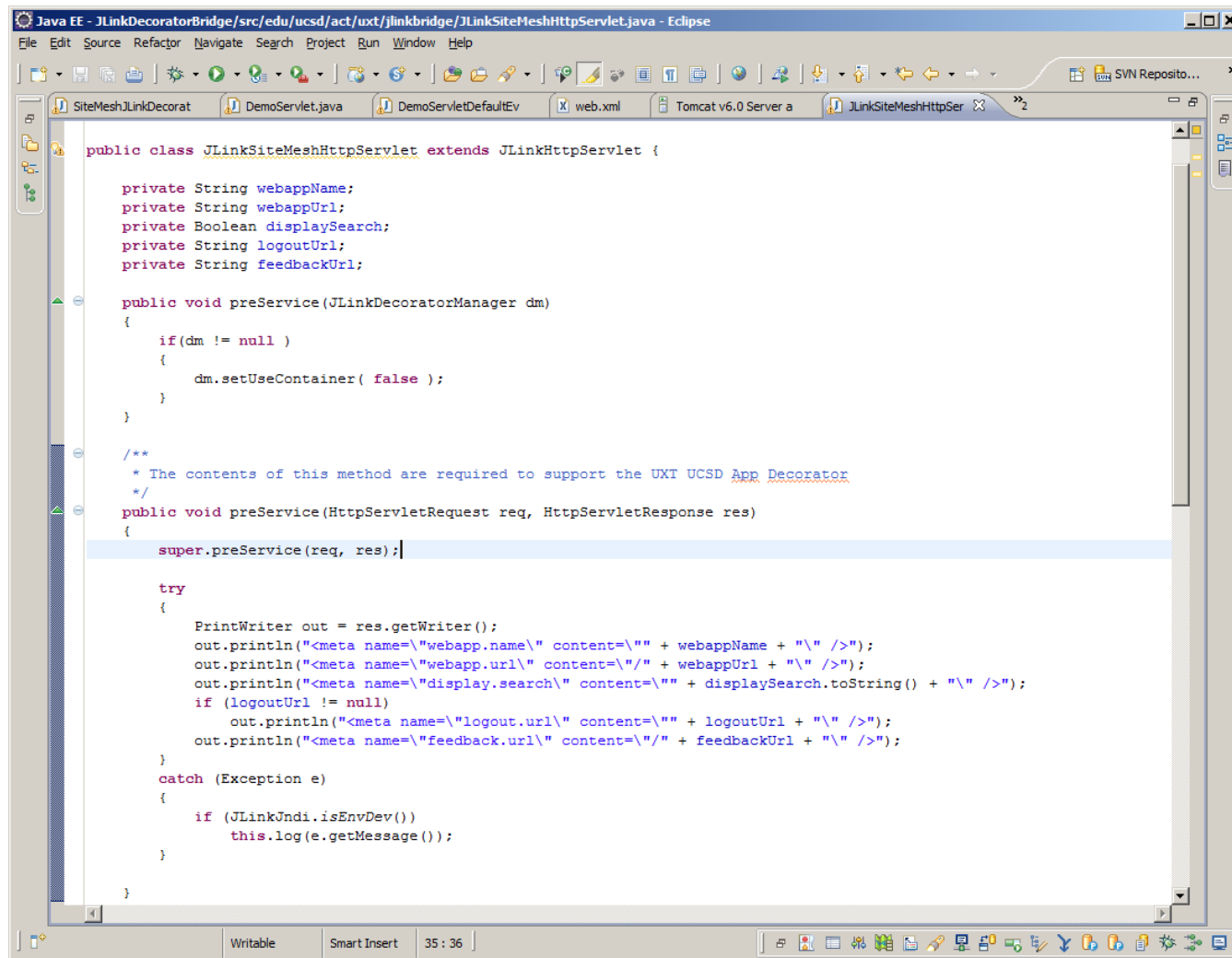
- ▶ Paint the trim, patch the drywall, throw down some cheap carpet, vacuum up the dead termites, and rip out a few load-bearing walls to open up the kitchen.
- ▶ Time: 30 minutes
- ▶ Projected profit: \$1,389,750

Approach #1: Hack the servlet

- › Override `JLinkHttpServlet.preService()` method to output META tags and other HTML
- › Don't use a JLink decorator
- › Used in production by some financial and telecom apps



Sample base servlet



```
Java EE - JLinkDecoratorBridge/src/edu/ucsd/act/uxi/jlinkbridge/JLinkSiteMeshHttpServlet.java - Eclipse
File Edit Source Refactor Navigate Search Project Run Window Help
SiteMeshJLinkDecorat DemoServlet.java DemoServletDefaultEv web.xml Tomcat v6.0 Server a JLinkSiteMeshHttpSer

public class JLinkSiteMeshHttpServlet extends JLinkHttpServlet {

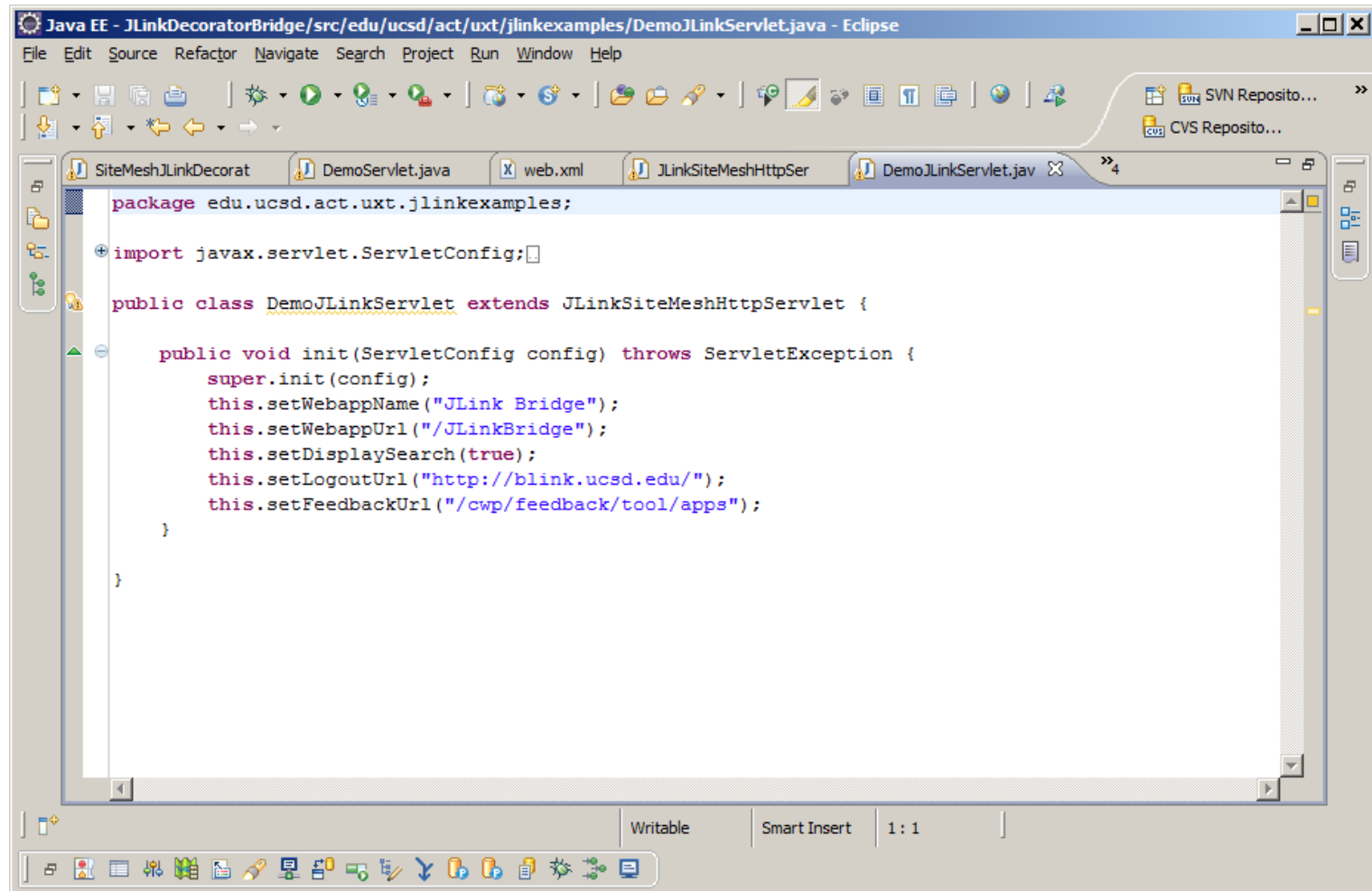
    private String webappName;
    private String webappUrl;
    private Boolean displaySearch;
    private String logoutUrl;
    private String feedbackUrl;

    public void preService(JLinkDecoratorManager dm)
    {
        if(dm != null )
        {
            dm.setUseContainer( false );
        }
    }

    /**
     * The contents of this method are required to support the UXT UCSD App Decorator
     */
    public void preService(HttpServletRequest req, HttpServletResponse res)
    {
        super.preService(req, res);

        try
        {
            PrintWriter out = res.getWriter();
            out.println("<meta name=\"webapp.name\" content=\"" + webappName + "\" />");
            out.println("<meta name=\"webapp.url\" content=\"" + webappUrl + "\" />");
            out.println("<meta name=\"display.search\" content=\"" + displaySearch.toString() + "\" />");
            if (logoutUrl != null)
                out.println("<meta name=\"logout.url\" content=\"" + logoutUrl + "\" />");
            out.println("<meta name=\"feedback.url\" content=\"" + feedbackUrl + "\" />");
        }
        catch (Exception e)
        {
            if (JLinkJndi.isEnvDev())
                this.log(e.getMessage());
        }
    }
}
```

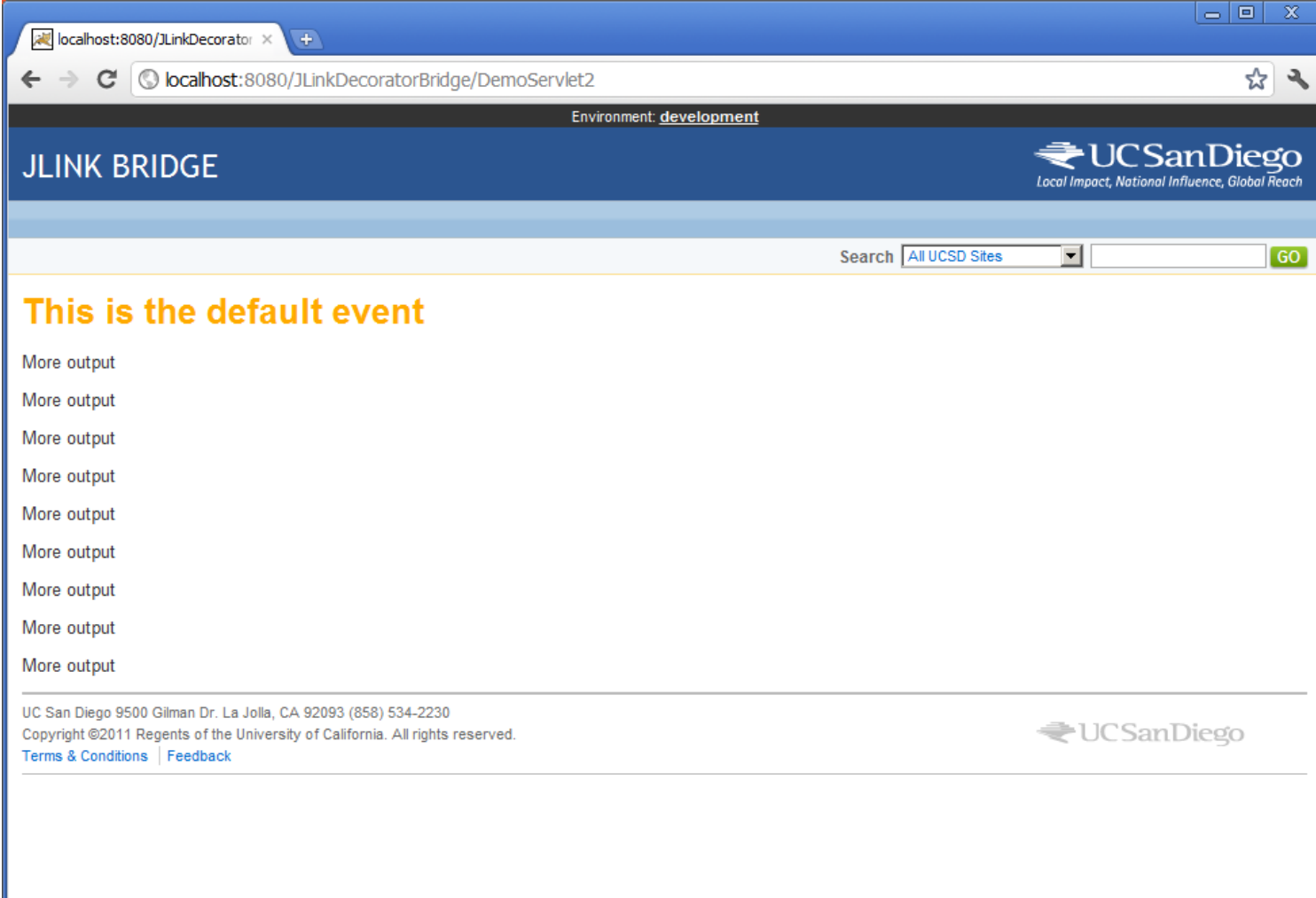
Sample implementation



```
Java EE - JLinkDecoratorBridge/src/edu/ucsd/act/uxt/jlinkexamples/DemoJLinkServlet.java - Eclipse
File Edit Source Refactor Navigate Search Project Run Window Help
[Icons] SVN Reposito...
[Icons] CVS Reposito...
SiteMeshJLinkDecorat DemoServlet.java web.xml JLinkSiteMeshHttpSer DemoJLinkServlet.jav >>4
package edu.ucsd.act.uxt.jlinkexamples;
import javax.servlet.ServletConfig;
public class DemoJLinkServlet extends JLinkSiteMeshHttpServlet {
    public void init(ServletConfig config) throws ServletException {
        super.init(config);
        this.setWebappName("JLink Bridge");
        this.setWebappUrl("/JLinkBridge");
        this.setDisplaySearch(true);
        this.setLogoutUrl("http://blink.ucsd.edu/");
        this.setFeedbackUrl("/cwp/feedback/tool/apps");
    }
}
```

Writable Smart Insert 1: 1

Result



localhost:8080/JLinkDecoratorBridge/DemoServlet2

Environment: development

JLINK BRIDGE

UC San Diego
Local Impact, National Influence, Global Reach

Search

This is the default event

More output

More output

More output

More output

More output

More output

More output

More output

More output

More output

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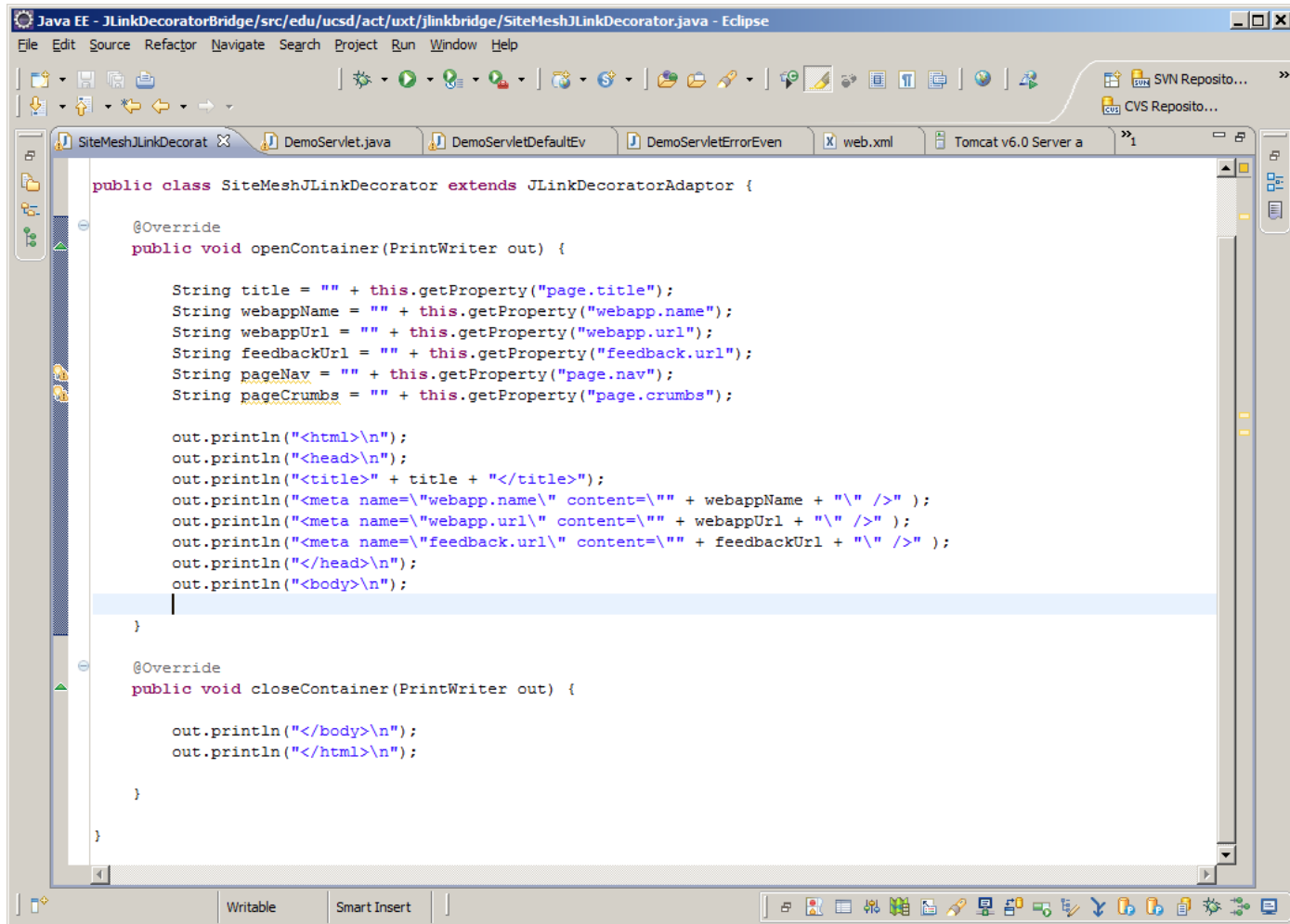
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Approach #2: Hack the decorator

- › Create a custom JLinkDecoratorAdaptor that outputs required META tags
- › Pass META tag values as JLink decorator properties



Example decorator



```
Java EE - JLinkDecoratorBridge/src/edu/ucsd/act/ux/jlinkbridge/SiteMeshJLinkDecorator.java - Eclipse
File Edit Source Refactor Navigate Search Project Run Window Help

SiteMeshJLinkDecorat x DemoServlet.java DemoServletDefaultEv DemoServletErrorEven web.xml Tomcat v6.0 Server a

public class SiteMeshJLinkDecorator extends JLinkDecoratorAdaptor {

    @Override
    public void openContainer(PrintWriter out) {

        String title = "" + this.getProperty("page.title");
        String webappName = "" + this.getProperty("webapp.name");
        String webappUrl = "" + this.getProperty("webapp.url");
        String feedbackUrl = "" + this.getProperty("feedback.url");
        String pageNav = "" + this.getProperty("page.nav");
        String pageCrumbs = "" + this.getProperty("page.crumbs");

        out.println("<html>\n");
        out.println("<head>\n");
        out.println("<title>" + title + "</title>");
        out.println("<meta name=\"webapp.name\" content=\"" + webappName + "\" />");
        out.println("<meta name=\"webapp.url\" content=\"" + webappUrl + "\" />");
        out.println("<meta name=\"feedback.url\" content=\"" + feedbackUrl + "\" />");
        out.println("</head>\n");
        out.println("<body>\n");

    }

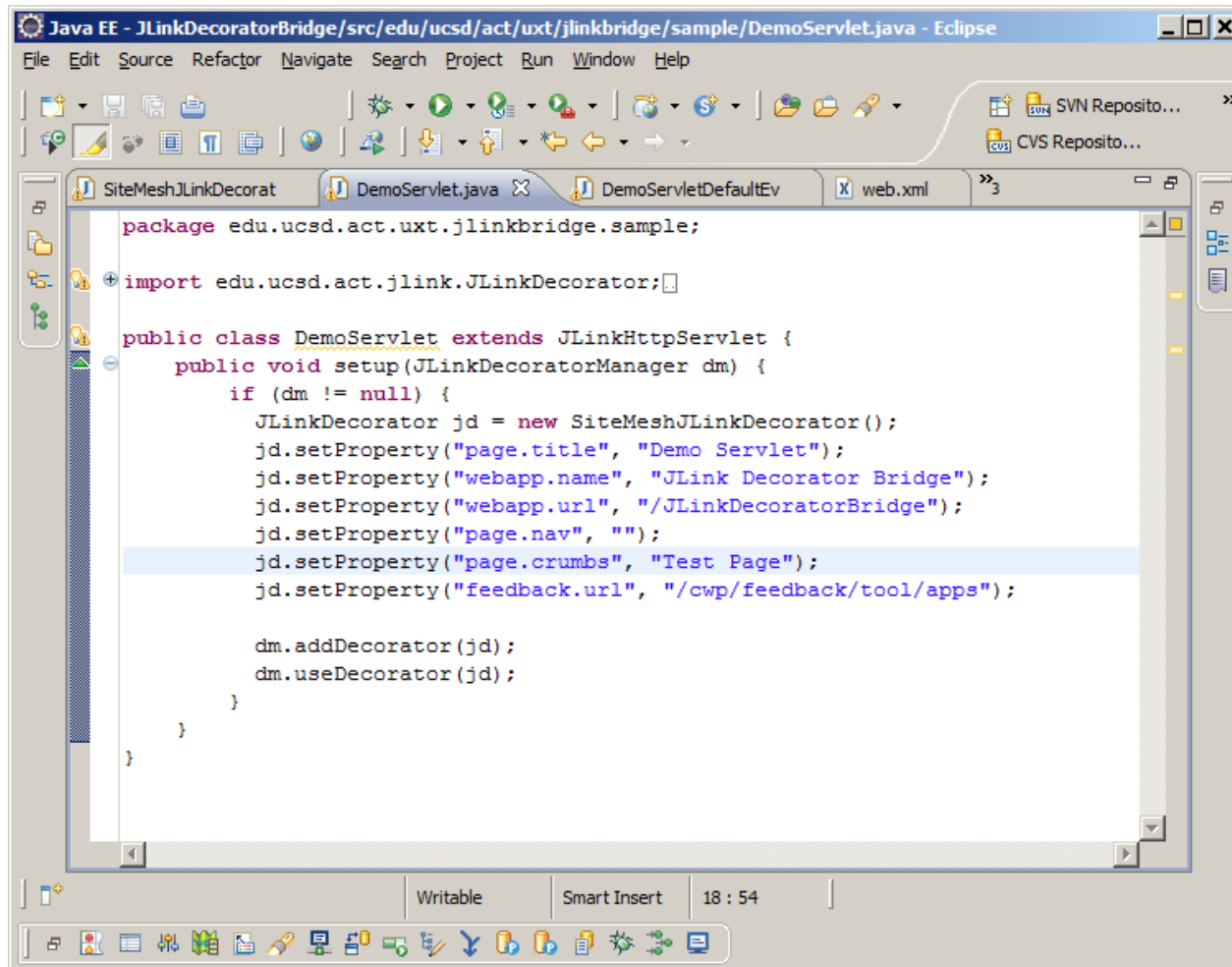
    @Override
    public void closeContainer(PrintWriter out) {

        out.println("</body>\n");
        out.println("</html>\n");

    }

}
```

Sample usage



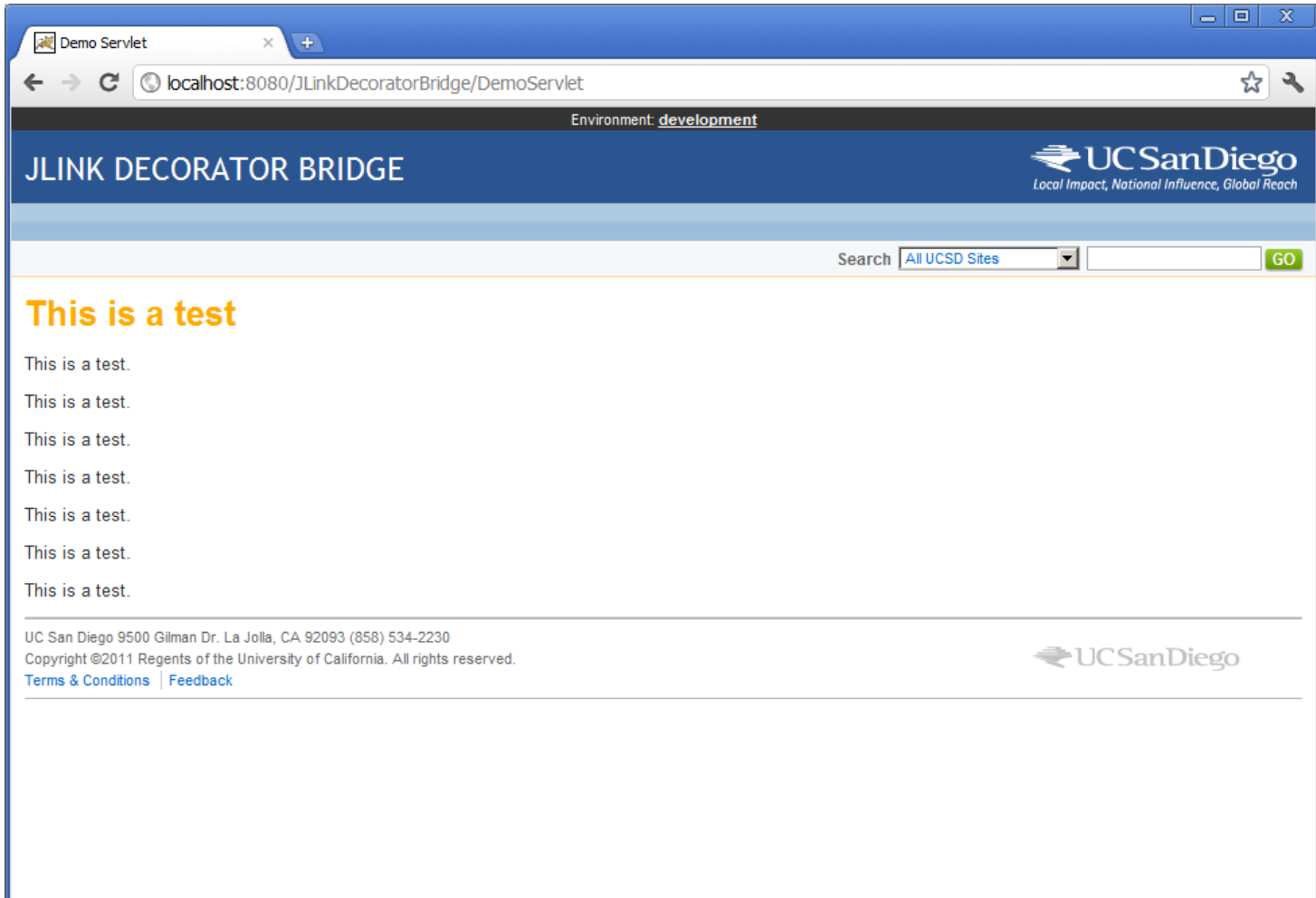
```
Java EE - JLinkDecoratorBridge/src/edu/ucsd/act/ux/jlinkbridge/sample/DemoServlet.java - Eclipse
File Edit Source Refactor Navigate Search Project Run Window Help
[Icons] SVN Reposito...
[Icons] CVS Reposito...
SiteMeshJLinkDecorat DemoServlet.java DemoServletDefaultEv web.xml
package edu.ucsd.act.ux.jlinkbridge.sample;
import edu.ucsd.act.jlink.JLinkDecorator;

public class DemoServlet extends JLinkHttpServlet {
    public void setup(JLinkDecoratorManager dm) {
        if (dm != null) {
            JLinkDecorator jd = new SiteMeshJLinkDecorator();
            jd.setProperty("page.title", "Demo Servlet");
            jd.setProperty("webapp.name", "JLink Decorator Bridge");
            jd.setProperty("webapp.url", "/JLinkDecoratorBridge");
            jd.setProperty("page.nav", "");
            jd.setProperty("page.crumbs", "Test Page");
            jd.setProperty("feedback.url", "/cwp/feedback/tool/apps");

            dm.addDecorator(jd);
            dm.useDecorator(jd);
        }
    }
}
```

Writable Smart Insert 18 : 54

Result



The screenshot shows a web browser window with the following content:

- Browser tab: Demo Servlet
- Address bar: localhost:8080/JLinkDecoratorBridge/DemoServlet
- Environment: `development`
- Page Title: JLINK DECORATOR BRIDGE
- UC San Diego logo and tagline: *Local Impact, National Influence, Global Reach*
- Search bar: Search
- Main content: **This is a test**
This is a test.
This is a test.
This is a test.
This is a test.
This is a test.
This is a test.
This is a test.
- Footer: UC San Diego 9500 Gilman Dr. La Jolla, CA 92093 (858) 534-2230
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Questions!

