

```
package fi.paatti.research.paattiapplication;

import com.vaadin.Application;
import com.vaadin.terminal.gwt.server.HttpServletRequestListener;
import com.vaadin.ui.Window;
import fi.paatti.paattidatabaseutils.dbobjects.User;
import fi.paatti.paattidatabaseutils.dbService.PaattiDBService;
import fi.paatti.paattidatabaseutils.dbService.PaattiResearchDBService;
import fi.paatti.paattiloginutils.CookieInfo;
import fi.paatti.paattiloginutils.LoginHelper;
import fi.paatti.research.paattiapplication.views.ApplicationTabSheet;
import java.io.Serializable;
import java.text.MessageFormat;
import java.util.logging.*;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;

/**
 * The application's "main" class opens the application tab sheet or login
 * window, based on the user's cookie information.
 */
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 */
public class PaattiResearchApplication extends Application implements HttpServletRequestListener, Serializable {
    private static final long serialVersionUID = 1L;
    private Window mainWindow;
    private LoginWindow loginWindow;

    private ApplicationTabSheet applicationTabSheet;
    private final PaattiResearchDBService db = new PaattiDBService("mysql4.cc.jyu.fi", "paatti", "paatti",
        "pzHWHJPepE8Vauts");
    // private final PaattiResearchDBService db = new PaattiDBService("130.234.167.39", "paattitesti", "ptesti");

    private LoginHelper loginHelper = null;
    private HttpServletRequest request;
    private HttpServletResponse response;

    public static final Logger logger = Logger.getLogger("fi.paatti.research.paattiapplication");

    /**
     * Initializes the view.
     */
}
```

```
@Override
public void init() {
    initLogger(Level.ALL);
    loginHelper = new LoginHelper((PaattiDBService) db, request, response);
    buildMainLayout();
}

/**
 * Initializes the application's default logger using the log level given
 * as a parameter. The log file is written to the application's root path,
 * named as "PaattiResearchLog.log".
 */
private void initLogger(Level logLevel) {
    try {
        FileHandler fileHandler = new FileHandler("PaattiResearchLog.log", 1000000, 1);

        fileHandler.setFormatter(
            new Formatter() {

                @Override
                public String format(LogRecord record) {
                    StringBuilder sb = new StringBuilder();

                    sb.append("[").append(record.getLevel()).append(", ").append(record.getSourceMethodName()).append("] ");
                    sb.append(MessageFormat.format(record.getMessage(), record.getParameters())).append(
                        "\n");

                    return sb.toString();
                }
            });
        logger.addHandler(fileHandler);
        logger.setLevel(logLevel);
    } catch (Exception ex) {
        logger.log(Level.SEVERE, "init", ex);
    }
}

/**
 * Creates the main layout of the application view.
 */
private void buildMainLayout() {
    mainWindow = new Window("Paatti Research");
    setTheme("research");
    setMainWindow(mainWindow);

    mainWindow.setSizeFull();
}
```

```
mainWindow.setImmediate(true);

applicationTabSheet = new ApplicationTabSheet(this);

User user = loginHelper.TryLoginWithCookies(CookieInfo.COOKIE_RESEARCH_USERNAME, CookieInfo.COOKIE_RESEARCH_PASSWORD);

if (user != null) {
    setUser(user);
    mainWindow.setContent(applicationTabSheet);
} else {
    loginWindow = new LoginWindow(this, applicationTabSheet);
    mainWindow.setContent(loginWindow);
}

}

/**
 * This method is called before Terminal applies the request to
 * application (see Vaadin's HttpServletRequestListener interface).
 *
 * @param request the servlet request.
 * @param response the servlet response.
 */
public void onRequestStart(HttpServletRequest request, HttpServletResponse response) {
    this.request = request;
    this.response = response;
    if (loginHelper != null) {
        loginHelper.setRequest(request);
        loginHelper.setResponse(response);
    }
}

/**
 * This method is called at the end of each request (see Vaadin's
 * HttpServletRequestListener interface).
 *
 * @param request the servlet request.
 * @param response the servlet response.
 */
public void onRequestEnd(HttpServletRequest request, HttpServletResponse response) {}

/**
 * Returns the LoginHelper.
 *
 * @return The LoginHelper.
 */
```

```
public LoginHelper getLoginHelper() {  
    return loginHelper;  
}  
  
/**  
 * Returns the database service.  
 *  
 * @return The database service.  
 */  
public PaattiResearchDBService getDBConnection() {  
    return db;  
}  
}
```