

CSC 6110 : Software Engineering
Assignment 1
Fall 2023
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Based on concept location

Project Location: <https://github.com/JabRef/jabref/>

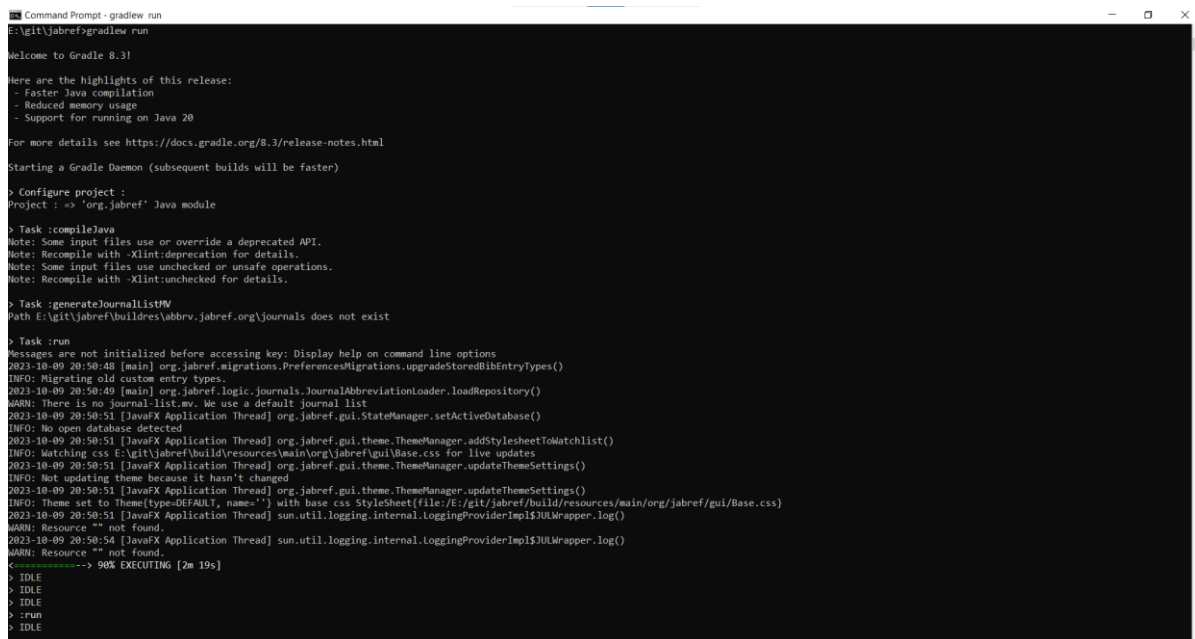
Bug location : <https://github.com/JabRef/jabref/issues/10121>

Issue Details: Suppose that you attach a file to an entry. Then, using a cleanup you want to move that file to the General File Directory of the library. If the attached file is open, the file is not moved but no warning message is shown. It would be nice to have such a message to let the user know what just happened.

Installed Eclipse and extracted project from git repository using import functionality.

Project Pre-requisite:

1) Command : Gradlew run



```
Command Prompt - gradlew run
E:\git\jabref>gradlew run

Welcome to Gradle 8.3!

Here are the highlights of this release:
- Faster Java compilation
- Reduced memory usage
- Support for running on Java 20

For more details see https://docs.gradle.org/8.3/release-notes.html

Starting a Gradle Daemon (subsequent builds will be faster)

> Configure project :
Project : -> 'org.jabref' Java module

> Task :compileJava
Note: Some input files use or override a deprecated API.
Note: Recompile with -Xlint:deprecation for details.
Note: Some input files use unchecked or unsafe operations.
Note: Recompile with -Xlint:unchecked for details.

> Task :generateJournalListMV
Path E:\git\jabref\buildres\abbrv.jabref.org\journals does not exist

> Task :run
Messages are not initialized before accessing key: Display help on command line options
2023-10-09 20:50:48 [main] org.jabref.migrations.PreferencesMigrations.upgradeStoredBibEntryTypes()
INFO: Migrating old custom entry types.
2023-10-09 20:50:49 [main] org.jabref.logic.journals.JournalAbbreviationLoader.loadRepository()
WARN: There is no journal-list.mw. We use a default journal list
2023-10-09 20:50:51 [JavaFX Application Thread] org.jabref.gui.StateManager.setActiveDatabase()
INFO: No open database detected
2023-10-09 20:50:51 [JavaFX Application Thread] org.jabref.gui.theme.ThemeManager.addStyleSheetToWatchlist()
INFO: Matching css E:\git\jabref\build\resources\main\org\jabref\gui\Base.css for live updates
2023-10-09 20:50:51 [JavaFX Application Thread] org.jabref.gui.theme.ThemeManager.updateThemeSettings()
INFO: Not updating theme because it hasn't changed
2023-10-09 20:50:51 [JavaFX Application Thread] org.jabref.gui.theme.ThemeManager.updateThemeSettings()
INFO: Theme set to Theme(type=DEFAULT, name="") with base css StyleSheet(file:E:\git\jabref\build\resources\main\org\jabref\gui\Base.css)
2023-10-09 20:50:51 [JavaFX Application Thread] sun.util.logging.internal.LoggingProviderImpl$JULWrapper.log()
WARN: Resource "" not found.
2023-10-09 20:50:54 [JavaFX Application Thread] sun.util.logging.internal.LoggingProviderImpl$JULWrapper.log()
WARN: Resource "" not found.
<=====--> 90% EXECUTING [2m 19s]
> IDE
> IDE
> IDE
> run
> IDE
```

2) Command : Gradlew Eclipse

```
Select Command Prompt

> Task :run
Messages are not initialized before accessing key: Display help on command line options
2023-10-09 20:50:48 [main] org.jabref.migrations.PreferencesMigrations.upgradeStoredBibEntryTypes()
INFO: Migrating old custom entry types.
2023-10-09 20:50:49 [main] org.jabref.logic.journals.JournalAbbreviationLoader.loadRepository()
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2023-10-09 20:50:51 [JavaFX Application Thread] org.jabref.gui.theme.ThemeManager.addStyleSheetToWatchlist()
INFO: Watching css E:\git\jabref\build\resources\main\org\jabref\gui\Base.css for live updates
2023-10-09 20:50:51 [JavaFX Application Thread] org.jabref.gui.theme.ThemeManager.updateThemeSettings()
INFO: Not updating theme because it hasn't changed
2023-10-09 20:50:51 [JavaFX Application Thread] org.jabref.gui.theme.ThemeManager.updateThemeSettings()
INFO: Theme set to Theme{type=DEFAULT, name=''} with base css StyleSheet{file:E:/git/jabref/build/resources/main/org/jabref/gui/Base.css}
2023-10-09 20:50:51 [JavaFX Application Thread] sun.util.logging.internal.LoggingProviderImpl$JULWrapper.log()
WARN: Resource "" not found.
2023-10-09 20:50:54 [JavaFX Application Thread] sun.util.logging.internal.LoggingProviderImpl$JULWrapper.log()
WARN: Resource "" not found.

Deprecated Gradle features were used in this build, making it incompatible with Gradle 9.0.

You can use '--warning-mode all' to show the individual deprecation warnings and determine if they come from your own scripts or plugins.

For more on this, please refer to https://docs.gradle.org/8.3/userguide/command_line_interface.html#sec:command_line_warnings in the Gradle documentation.

BUILD SUCCESSFUL in 4m 16s
10 actionable tasks: 10 executed
E:\git\jabref>gradlew eclipse

> Configure project :
Project : => 'org.jabref' Java module

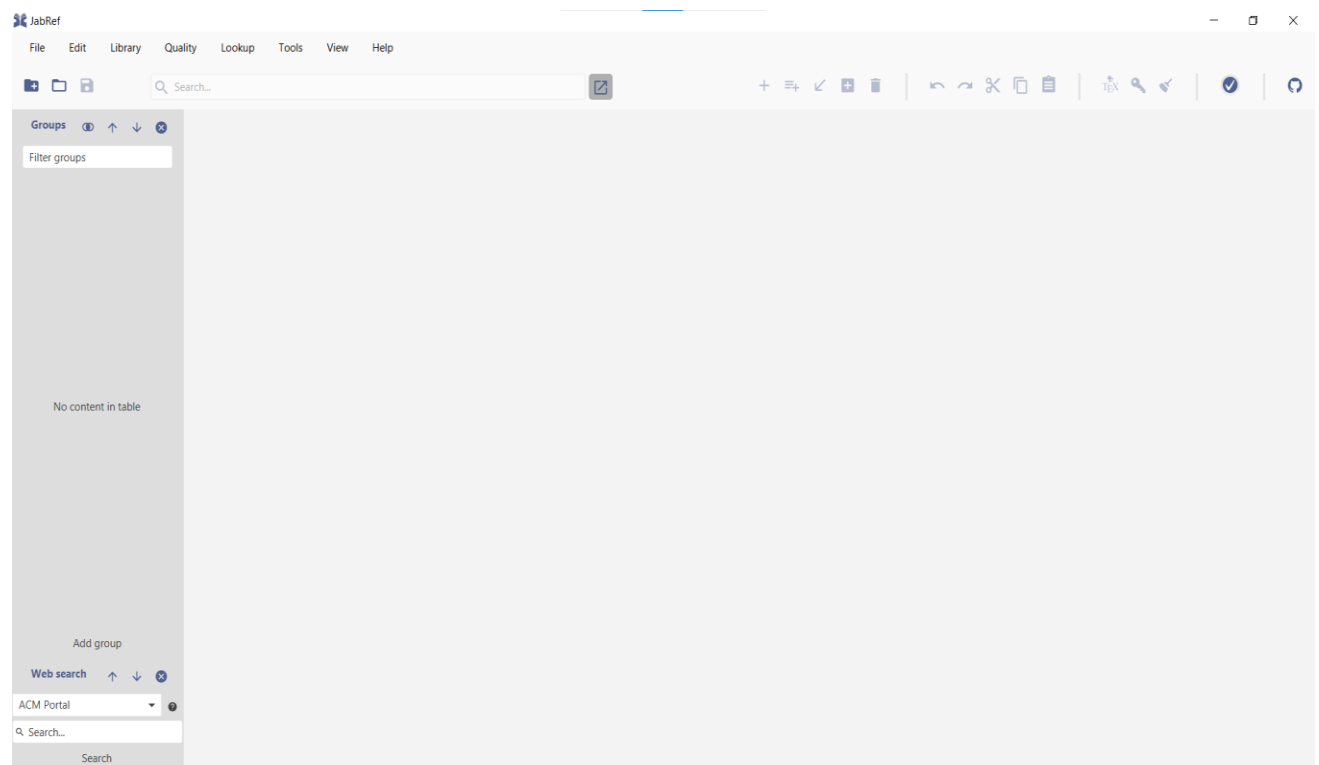
Deprecated Gradle features were used in this build, making it incompatible with Gradle 9.0.

You can use '--warning-mode all' to show the individual deprecation warnings and determine if they come from your own scripts or plugins.

For more on this, please refer to https://docs.gradle.org/8.3/userguide/command_line_interface.html#sec:command_line_warnings in the Gradle documentation.

BUILD SUCCESSFUL in 4s
13 actionable tasks: 8 executed, 5 up-to-date
E:\git\jabref>
```

3) JabRef Project UI

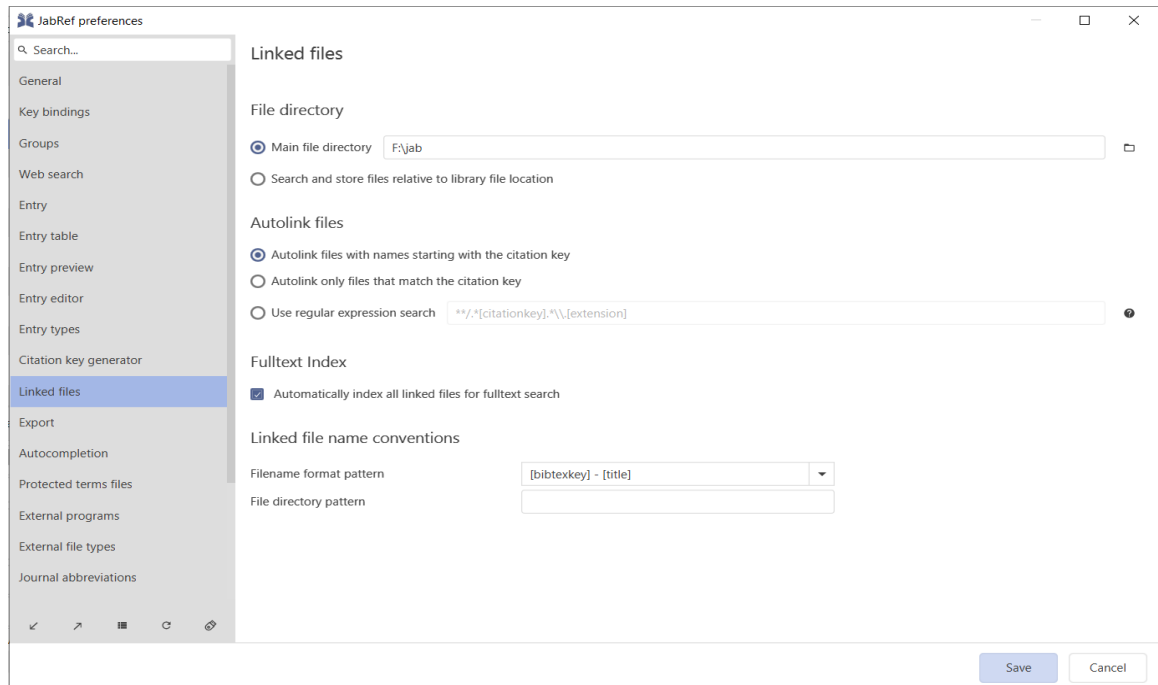


BUG REPRODUCING STEPS

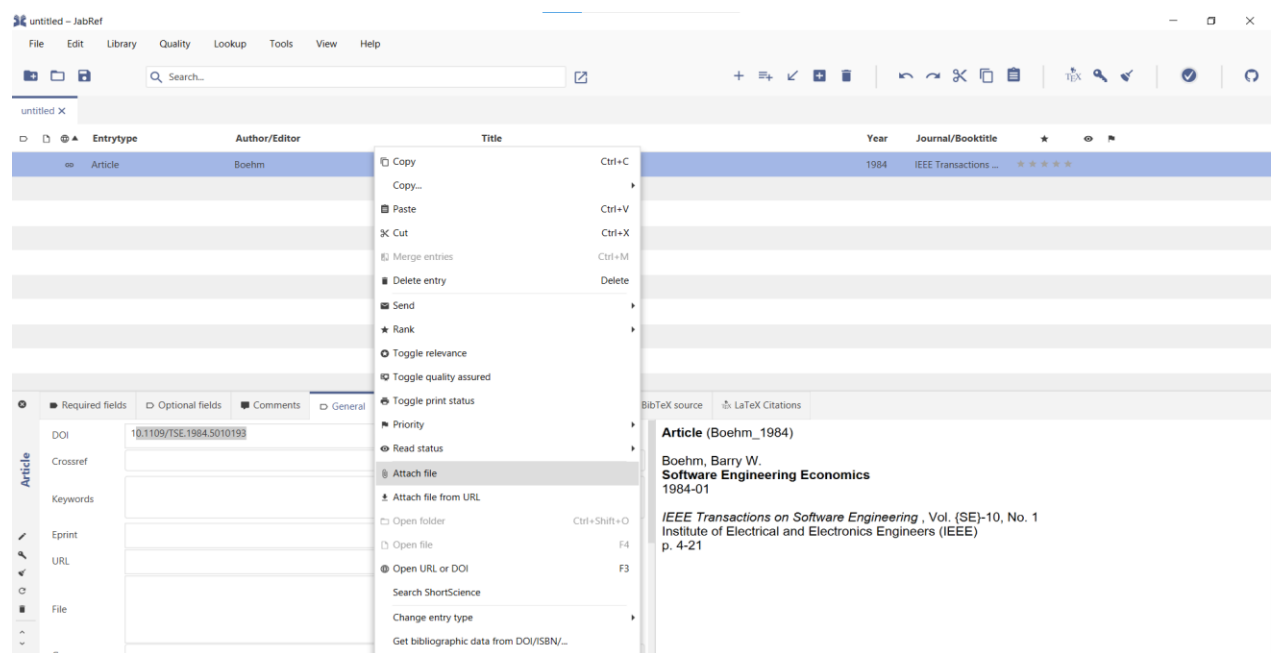
3) Files> Preferences > Linked Files .

Here we can see Main file directory path which can be set .

F:\jab



4) Here I added one entry by using DOI and all information is fetched. right clicking > Attach file



5) Attached Excel file .

The screenshot shows the JabRef application window with a table of references. The selected entry is by Boehm, Barry W., titled "Software Engineering Economics", published in 1984 in "IEEE Transactions on Software Engineering". An "Edit file link" dialog box is open, showing the following fields:

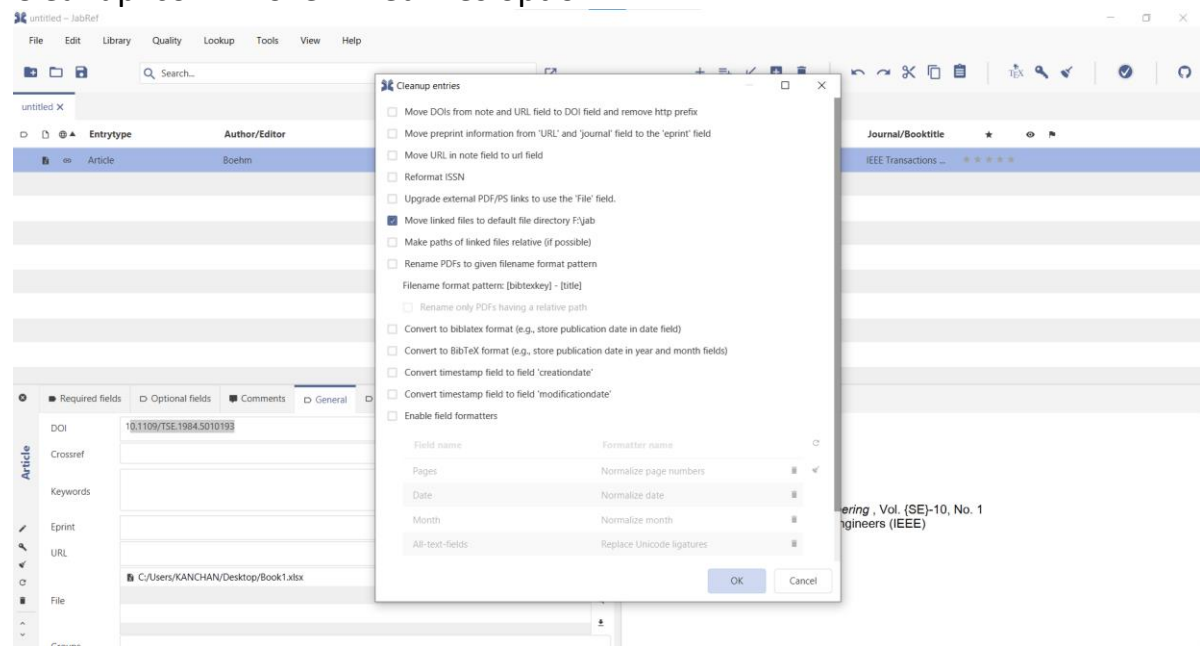
- Link: C:\Users\KANCHAN\Desktop\Book1.xlsx
- Description: Excel book
- Filetype: Excel

The dialog box has "Cancel" and "Apply" buttons. In the background, the reference details for the selected entry are visible, including the DOI 10.1109/TSE.1984.5010193 and the full citation text.

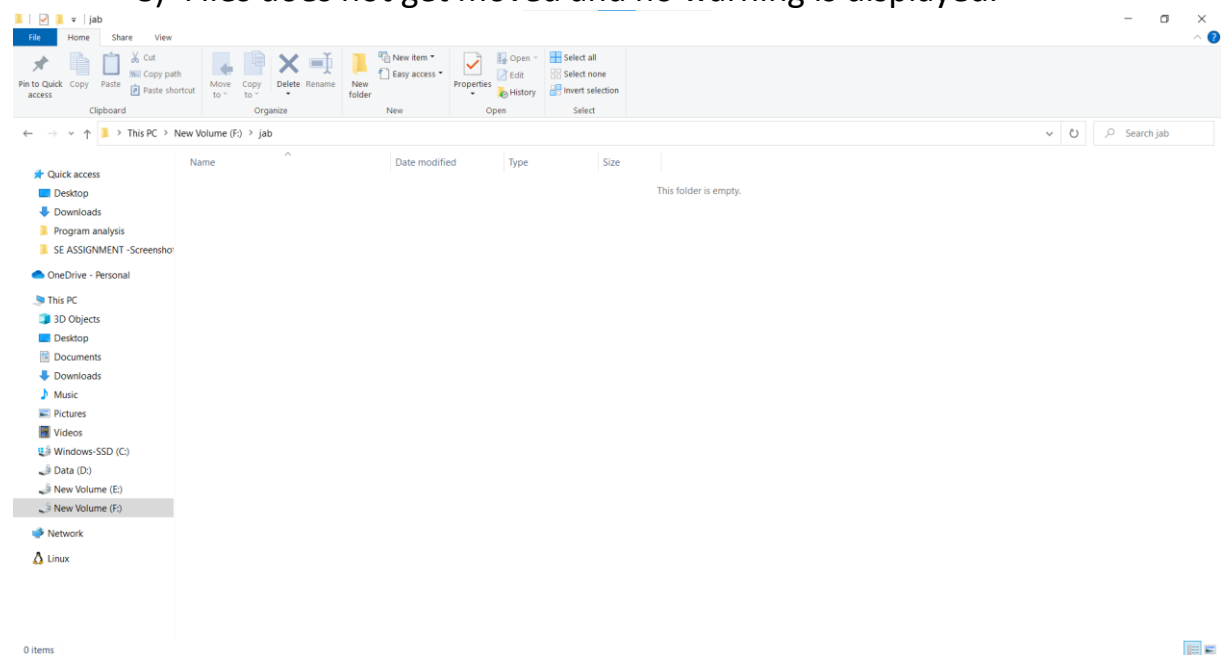
6) Keeping Excel sheet open.

The screenshot shows the JabRef application window with the same reference table. The "Edit file link" dialog box is no longer present. Instead, an Excel spreadsheet titled "Book1 - Excel" is open in the background. The spreadsheet has a single cell A1 containing the text "Demo excel file". The JabRef window shows the same reference details as in the previous screenshot, but the "File" field in the details pane now shows the path C:\Users\KANCHAN\OneDrive\Documents\Book1.xlsx.

7) Cleanup icon > move linked files option



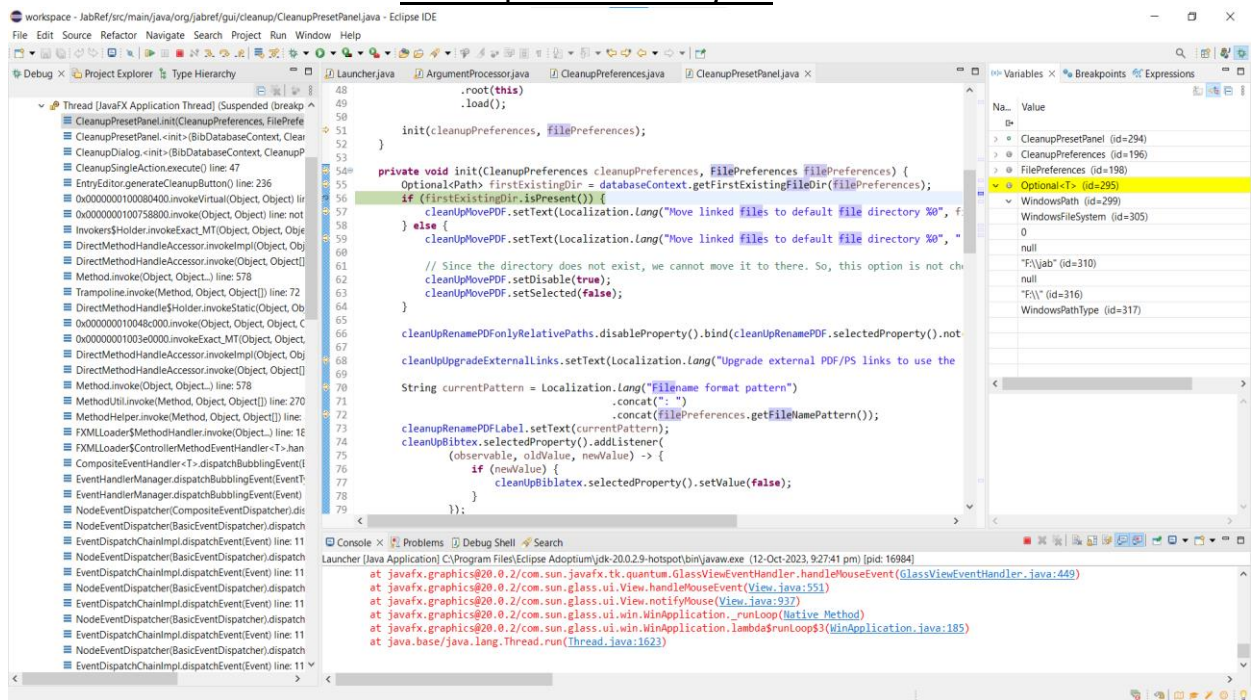
8) Files does not get moved and no warning is displayed.



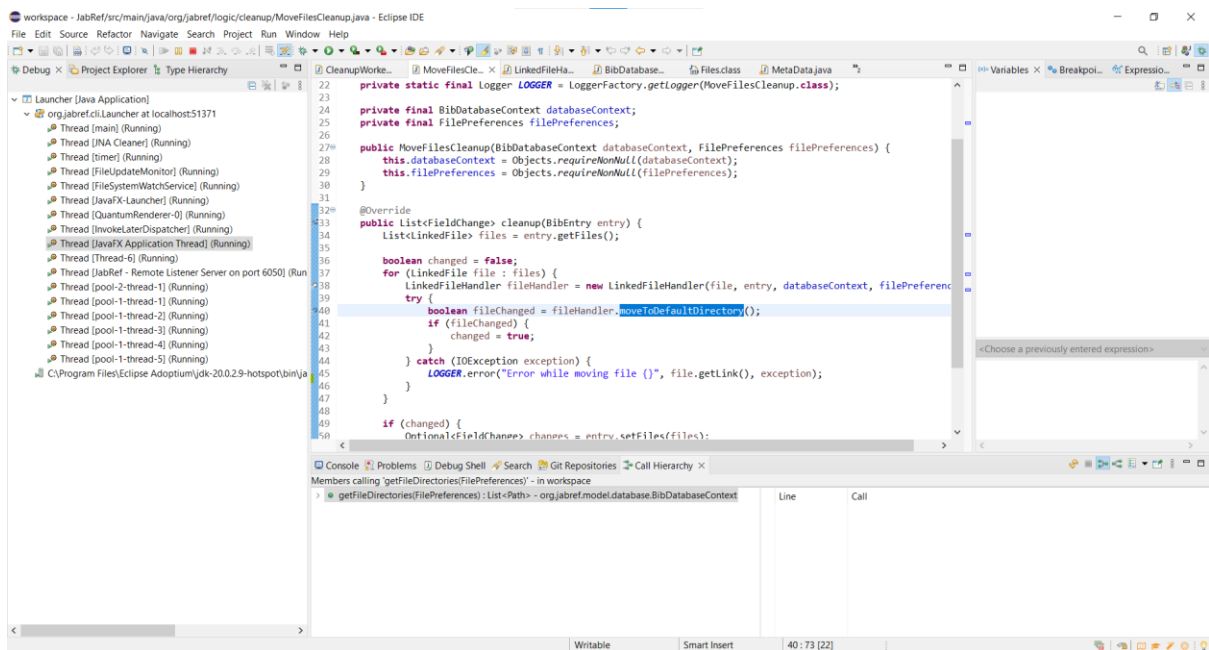
Search Strategies used:

Search using words, Cleanup , Preferences. Found Page:

CleanupPresetPanel.java



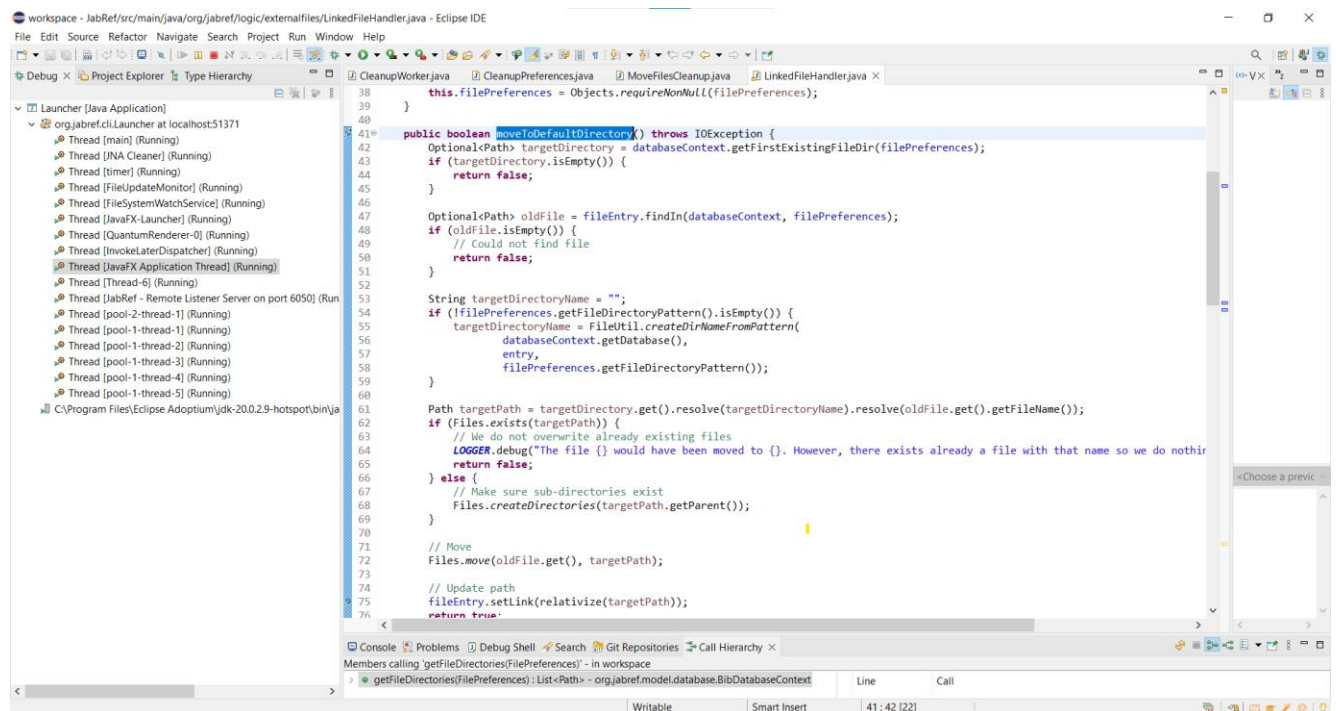
Here found cleanup method which calls `movetoDefaultDirectory()` method.



Found the location which performs move operation.

Declaration of `movetoDefaultDirectory()` method.

This method performs move operation to default directory.



Experience with process:

For accessing project and importing it into eclipse IDE and running it I used developer documentation at [Advanced: Eclipse as IDE | Developer Documentation \(jabref.org\)](https://jabref.org/advanced-eclipse-as-ide-developer-documentation).

After running project I explored the project UI and got the idea of bug by checking details mentioned at <https://github.com/JabRef/jabref/issues/10121>.

I was able to reproduce bug by uploading attached file in excel format and then keeping it open. After which I used cleanup icon to move this already opened file to preferred location.

Preferred location can also be set by going to files> preferences>Linked files. (Attached screenshots).

After which I used keywords such as cleanup, move files to search in code and found few files which were performing this move operation.

I also went through method calls in method leading me to the method which exactly moves files to preferred location.

In this way concept location was found using matching keywords and relating concepts from operation.

