

## Homework 2 – Implementation of a simple maintenance task in an unfamiliar Open Source Software

**Software system and version:** muCommander V0.9.2

### Change Request:

Add my full name to the middle-top of the initial splash window of the application, and make sure the splash window is visible for at least 5 seconds.

### Environment Description:

I used Command line and Eclipse 4.7.2 on Window 10.

### Compiling or Running Issues:

```
[ahramkim@onyxnode75 mucommander-master]$ ./gradlew run
Starting a Gradle Daemon (subsequent builds will be faster)

FAILURE: Build failed with an exception.

* Where:
Build file '/home/AhramKim/workspace/CS471/mucommander-master/build.gradle' line: 9

* What went wrong:
An exception occurred applying plugin request [id: 'org.ajoberstar.grgit', version: '1.3.2']
> Failed to apply plugin [id 'org.ajoberstar.grgit']
   > One of setGitDir or setWorkTree must be called.

* Try:
Run with --stacktrace option to get the stack trace. Run with --info or --debug option to get more log output.

BUILD FAILED

Total time: 10.838 secs
[ahramkim@onyxnode75 mucommander-master]$
```

I downloaded the mucommander zip file and tried to do it in my local computer. When I try to compiled and ran it, I got the error 'FAILURE: Build failed with an exception'. So, I typed 'git clone <http://github.com/mucommander/mucommander>' in my local git bash and I got an another error about the path for java. For this error, I went to the 'edit environment variable' in control panel and made new path for 'JAVA\_HOME' with the value 'C:\Program Files\Java\jdk1.8.0\_151\'. I solved the problem! It took 40.007 seconds at first and took shorter seconds than the first time to compile and run.

### Identifying the Relevant Code Location:

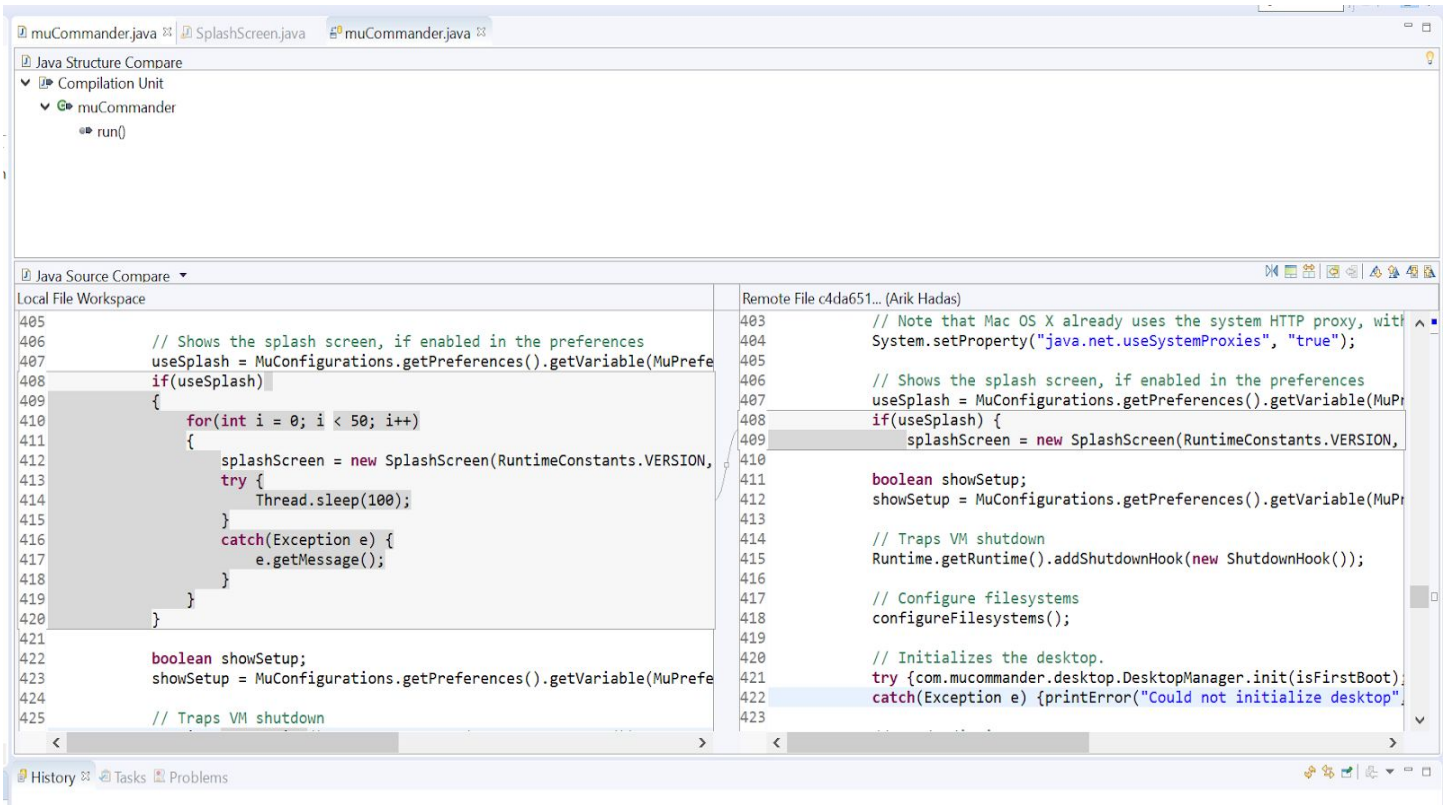
I used Eclipse. I looked through the code 'mucommander.java' and searched the word 'splashscreen' first. Then, I tried to check the role of each code using 'system.out.println("checking");' and found the location which I need to modify for hw2.

## Successful Implementation Video:

<https://youtu.be/0MYxfsMVQU8>

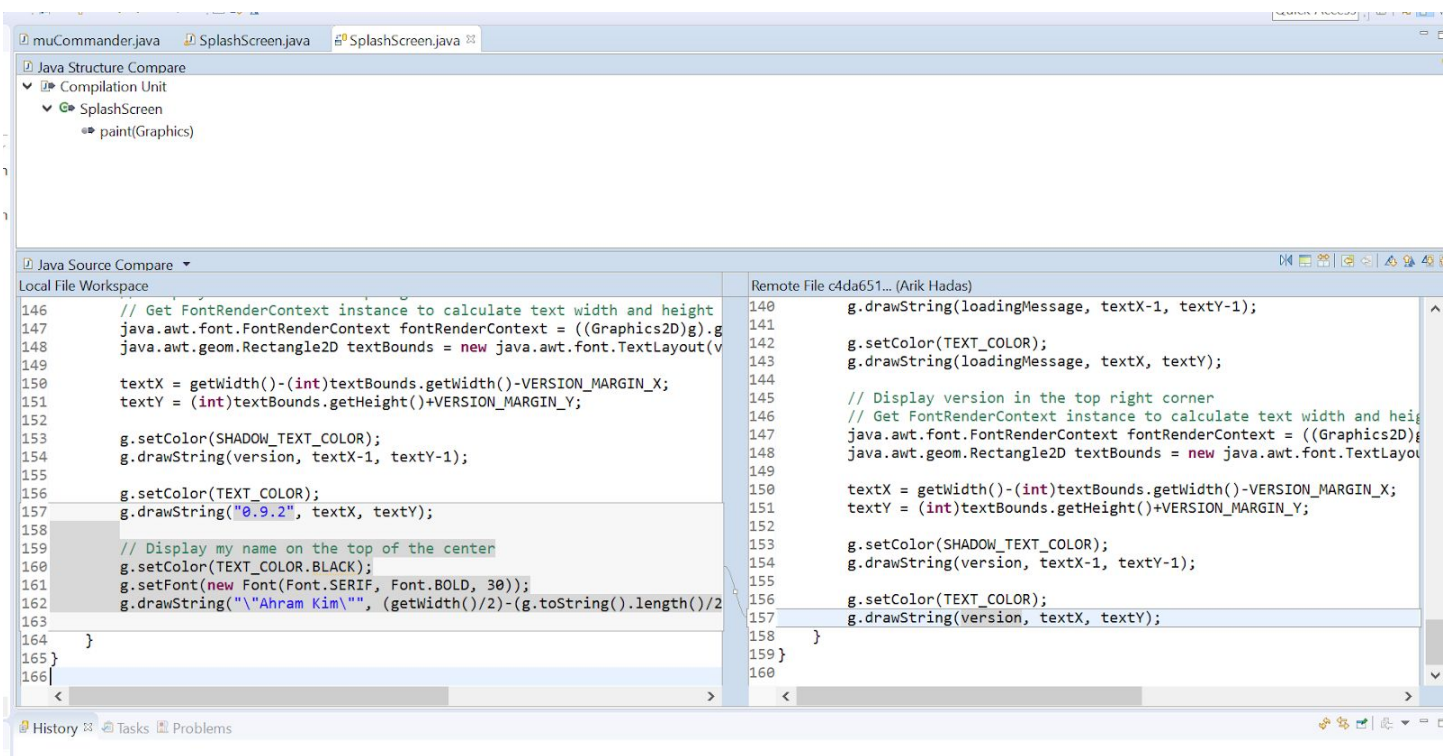
<https://www.youtube.com/watch?v=0MYxfsMVQU8&feature=youtu.be>

## Highlighted Source Code of the Implementation:



```
Local File Workspace
405
406 // Shows the splash screen, if enabled in the preferences
407 useSplash = MuConfigurations.getPreferences().getVariable(MuPrefe
408 if(useSplash)
409 {
410     for(int i = 0; i < 50; i++)
411     {
412         splashScreen = new SplashScreen(RuntimeConstants.VERSION,
413         try {
414             Thread.sleep(100);
415         }
416         catch(Exception e) {
417             e.getMessage();
418         }
419     }
420 }
421
422 boolean showSetup;
423 showSetup = MuConfigurations.getPreferences().getVariable(MuPrefe
424
425 // Traps VM shutdown

Remote File c4da651... (Arik Hadas)
403 // Note that Mac OS X already uses the system HTTP proxy, with
404 System.setProperty("java.net.useSystemProxies", "true");
405
406 // Shows the splash screen, if enabled in the preferences
407 useSplash = MuConfigurations.getPreferences().getVariable(MuPr
408 if(useSplash) {
409     splashScreen = new SplashScreen(RuntimeConstants.VERSION,
410
411     boolean showSetup;
412     showSetup = MuConfigurations.getPreferences().getVariable(MuPr
413
414     // Traps VM shutdown
415     Runtime.getRuntime().addShutdownHook(new ShutdownHook());
416
417     // Configure filesystems
418     configureFilesystems();
419
420     // Initializes the desktop.
421     try {com.mucommander.desktop.DesktopManager.init(isFirstBoot);
422     catch(Exception e) {printError("Could not initialize desktop"
423
```



```
Local File Workspace
146 // Get FontRenderContext instance to calculate text width and height
147 java.awt.font.FontRenderContext fontRenderContext = ((Graphics2D)g).g
148 java.awt.geom.Rectangle2D textBounds = new java.awt.font.TextLayout(v
149
150 textX = getWidth()-(int)textBounds.getWidth()-VERSION_MARGIN_X;
151 textY = (int)textBounds.getHeight()+VERSION_MARGIN_Y;
152
153 g.setColor(SHADOW_TEXT_COLOR);
154 g.drawString(version, textX-1, textY-1);
155
156 g.setColor(TEXT_COLOR);
157 g.drawString("0.9.2", textX, textY);
158
159 // Display my name on the top of the center
160 g.setColor(TEXT_COLOR.BLACK);
161 g.setFont(new Font(Font.SERIF, Font.BOLD, 30));
162 g.drawString("\nAhram Kim\n", (getWidth())/2-(g.toString().length())/2
163
164 }
165 }
166

Remote File c4da651... (Arik Hadas)
140 g.drawString(loadingMessage, textX-1, textY-1);
141
142 g.setColor(TEXT_COLOR);
143 g.drawString(loadingMessage, textX, textY);
144
145 // Display version in the top right corner
146 // Get FontRenderContext instance to calculate text width and height
147 java.awt.font.FontRenderContext fontRenderContext = ((Graphics2D)g).g
148 java.awt.geom.Rectangle2D textBounds = new java.awt.font.TextLayout
149
150 textX = getWidth()-(int)textBounds.getWidth()-VERSION_MARGIN_X;
151 textY = (int)textBounds.getHeight()+VERSION_MARGIN_Y;
152
153 g.setColor(SHADOW_TEXT_COLOR);
154 g.drawString(version, textX-1, textY-1);
155
156 g.setColor(TEXT_COLOR);
157 g.drawString(version, textX, textY);
158
159 }
160
```

**Time required for completing this assignment:**

Activity	Time Required (in minutes)
Compiling and running the software	<i>40.007 secs</i>
Implementing the change request	<i>1 min 0.255 secs</i>