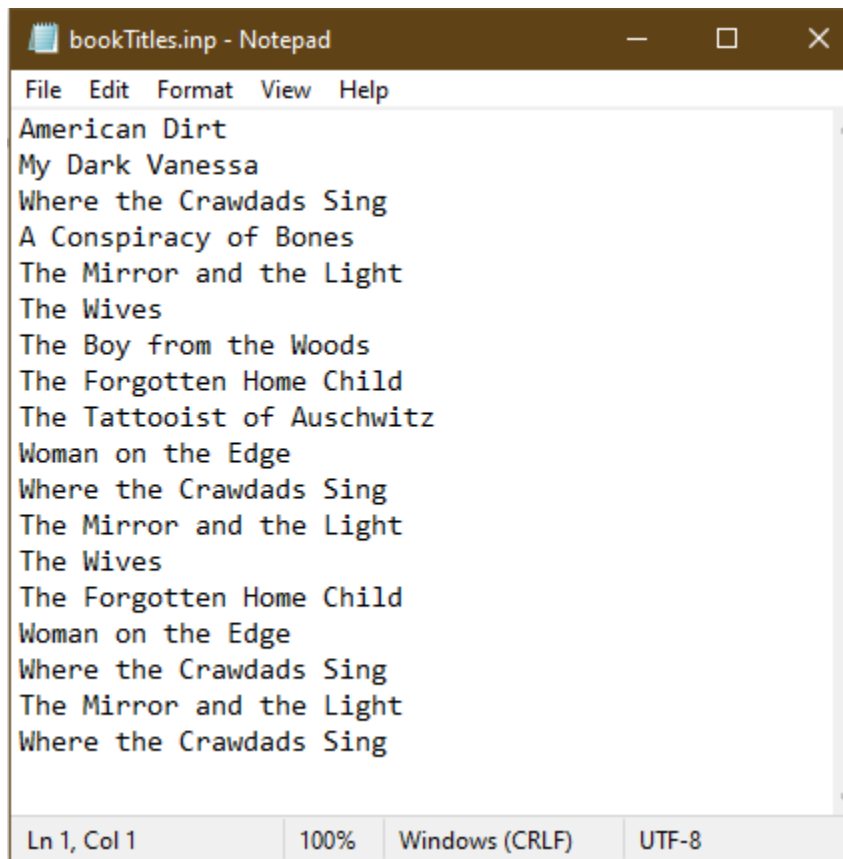


## Books.java Testing Behaviour

First, I will run it with my input file "bookTitles.inp", to see if the logic of the program works correctly:

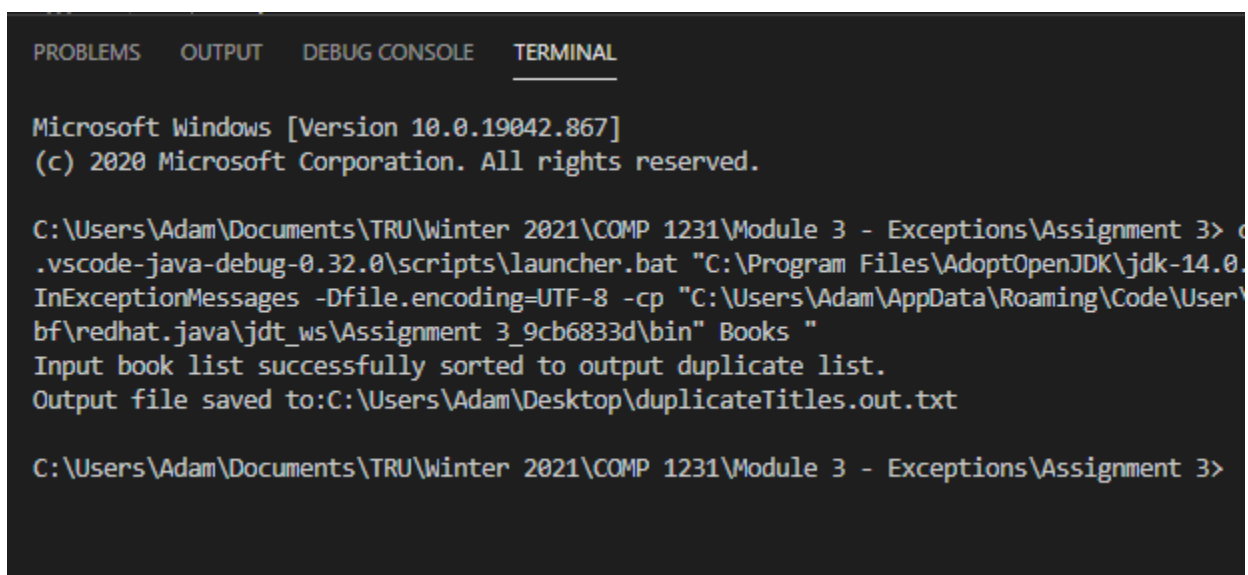


```
File Edit Format View Help
American Dirt
My Dark Vanessa
Where the Crawdads Sing
A Conspiracy of Bones
The Mirror and the Light
The Wives
The Boy from the Woods
The Forgotten Home Child
The Tattooist of Auschwitz
Woman on the Edge
Where the Crawdads Sing
The Mirror and the Light
The Wives
The Forgotten Home Child
Woman on the Edge
Where the Crawdads Sing
The Mirror and the Light
Where the Crawdads Sing
Ln 1, Col 1 100% Windows (CRLF) UTF-8
```

Input bookTitles.inp:

Contains multiple  
duplicate titles, some  
duplicates occurring  
more than twice

With this input list of books, I run the program:



```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
Microsoft Windows [Version 10.0.19042.867]
(c) 2020 Microsoft Corporation. All rights reserved.

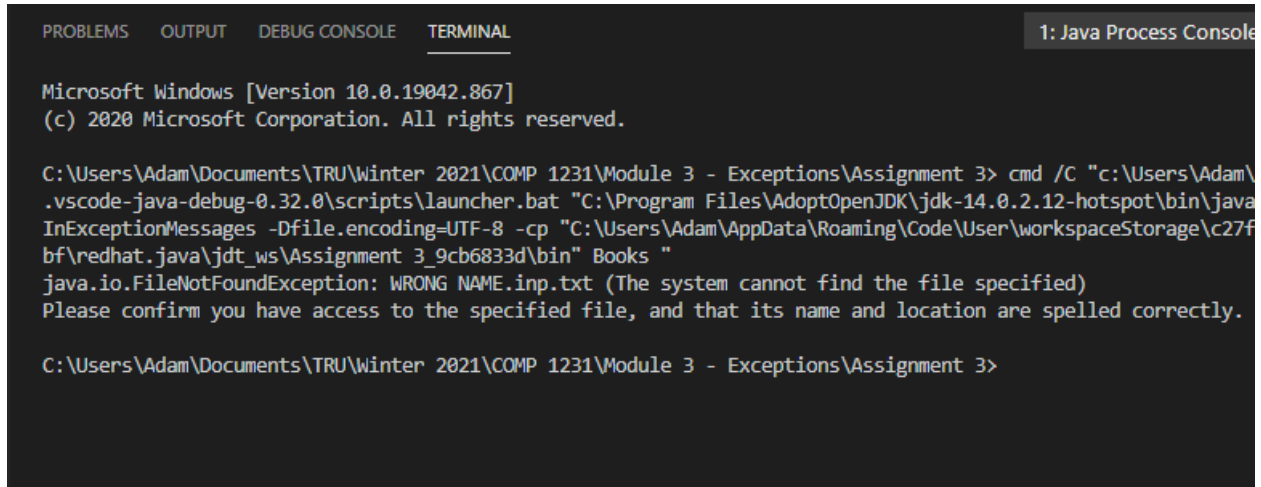
C:\Users\Adam\Documents\TRU\Winter 2021\COMP 1231\Module 3 - Exceptions\Assignment 3> c
.vscode-java-debug-0.32.0\scripts\launcher.bat "C:\Program Files\AdoptOpenJDK\jdk-14.0
InExceptionMessages -Dfile.encoding=UTF-8 -cp "C:\Users\Adam\AppData\Roaming\Code\User\
bf\redhat.java\jdt_ws\Assignment 3_9cb6833d\bin" Books "
Input book list successfully sorted to output duplicate list.
Output file saved to:C:\Users\Adam\Desktop\duplicateTitles.out.txt

C:\Users\Adam\Documents\TRU\Winter 2021\COMP 1231\Module 3 - Exceptions\Assignment 3>
```

It has successfully run, as it prints the “successfully sorted” message, along with where the output file was saved.

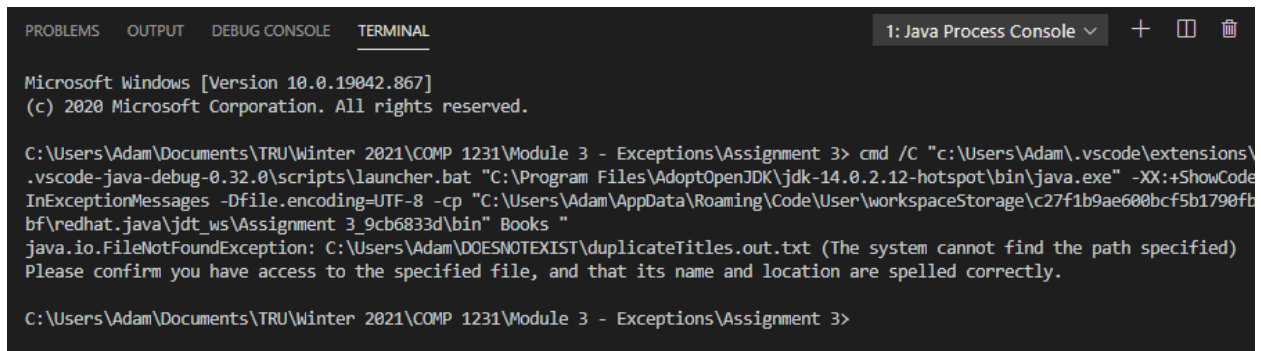
Now, I will test the IOException catch clause with the three most common errors:

Input file not found:

A screenshot of a terminal window titled "1: Java Process Console". The terminal shows the output of a command executed in a Windows command prompt. The command is: `cmd /C "c:\Users\Adam\.vscode-java-debug-0.32.0\scripts\launcher.bat "C:\Program Files\AdoptOpenJDK\jdk-14.0.2.12-hotspot\bin\java InExceptionMessages -Dfile.encoding=UTF-8 -cp "C:\Users\Adam\AppData\Roaming\Code\User\workspaceStorage\c27f1b9ae600bcf5b1790fbf\redhat.java\jdt_ws\Assignment 3_9cb6833d\bin" Books "`. The output shows a `java.io.FileNotFoundException: WRONG NAME.inp.txt (The system cannot find the file specified)` and a message asking to confirm access to the file.

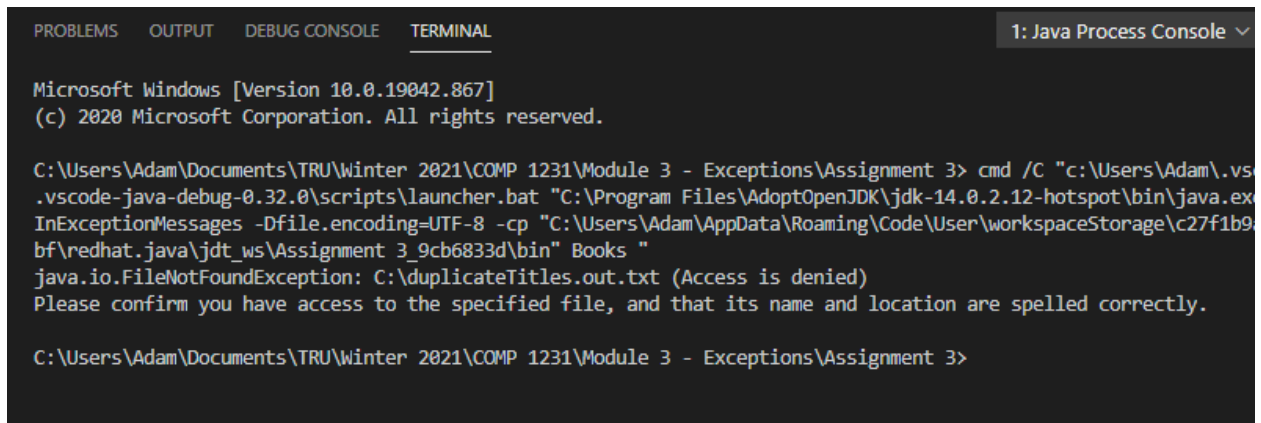
When the file “WRONG NAME.inp.txt” is set in the input file field, it throws the associated `FileNotFoundException`. It states specifically the nature of the exception, and a message confirming there are no spelling errors in the file name. Repeating the specific problem explicitly (the system cannot find the specified file, and the exact name of the file), should help a lot with troubleshooting

Output path spelled incorrectly:

A screenshot of a terminal window titled "1: Java Process Console". The terminal shows the output of a command executed in a Windows command prompt. The command is: `cmd /C "c:\Users\Adam\.vscode\extensions\.vscode-java-debug-0.32.0\scripts\launcher.bat "C:\Program Files\AdoptOpenJDK\jdk-14.0.2.12-hotspot\bin\java.exe" -XX:+ShowCode InExceptionMessages -Dfile.encoding=UTF-8 -cp "C:\Users\Adam\AppData\Roaming\Code\User\workspaceStorage\c27f1b9ae600bcf5b1790fbf\redhat.java\jdt_ws\Assignment 3_9cb6833d\bin" Books "`. The output shows a `java.io.FileNotFoundException: C:\Users\Adam\DOESNOTEXIST\duplicateTitles.out.txt (The system cannot find the path specified)` and a message asking to confirm access to the file.

Again, the `FileNotFoundException` is triggered, throwing back the associated error message. It also explicitly states which file is the problem (this time, the output file), and the exact issue (cannot find the path specified, as `DOESNOTEXIST` does not exist on my system).

User does not have access to output path:



```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL 1: Java Process Console v
Microsoft Windows [Version 10.0.19042.867]
(c) 2020 Microsoft Corporation. All rights reserved.

C:\Users\Adam\Documents\TRU\Winter 2021\COMP 1231\Module 3 - Exceptions\Assignment 3> cmd /C "c:\Users\Adam\.vscode-java-debug-0.32.0\scripts\launcher.bat "C:\Program Files\AdoptOpenJDK\jdk-14.0.2.12-hotspot\bin\java.exe" InExceptionMessages -Dfile.encoding=UTF-8 -cp "C:\Users\Adam\AppData\Roaming\Code\User\workspaceStorage\c27f1b9bf\redhat.java\jdt_ws\Assignment 3_9cb6833d\bin" Books "
java.io.FileNotFoundException: C:\duplicateTitles.out.txt (Access is denied)
Please confirm you have access to the specified file, and that its name and location are spelled correctly.

C:\Users\Adam\Documents\TRU\Winter 2021\COMP 1231\Module 3 - Exceptions\Assignment 3>
```

In this case, we tried to save the output file directly to my C drive. However, this is not allowed, so it throws the associated exception message (access is denied), forcing us to choose a different directory.