CS5103, Software Engineering

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# Test Report:

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| Test | Content | ourResult | correctResult | Status |
|---|---|---|---|---|
| EmptyFile.txt | null | {} | {} | PASSED |
| SeparatorOnly.txt | Just the space, newline and tab | {} | {} | PASSED |
| SimpleText.txt | SimpleText with simple space only | {the=1, with=1, Hello=1, words.=1, This=2, is=1, simple=1, text=1, just=3, repeated=2} | { Hello=1, This=2,is=1, just=3, the=1, simple=1, text=1, with=1,repeated=2, words.=1} | PASSED |
| CombinationSeparator.txt | Combination of space,tabs and newlines | {Shrestha=1, in=1, and=1, born=1, Nepal.=1, happy=1, raised=1, I=2, Samita=1, am=2, so=1} | {Shrestha=1, in=1, and=1, born=1, Nepal.=1, happy=1, raised=1, I=2, Samita=1, am=2, so=1} | PASSED |
| WordAndNumber.txt | Words and Number | {23=1, a=2, be=1, may=1, I=2, why=3, is=2, do=1, my=1, number=2, 123=1, not=2, and=1, know=2, favorite=1, donot=1, word=1} | {23=1, a=2, be=1, may=1, I=2, why=3, is=2, do=1, my=1, number=2, 123=1, not=2, and=1, know=2, favorite=1, donot=1, word=1} | PASSED |
| SimpleSeparator | Simple words with one separtor between each string | {will=1, one=1, have=1, words=1, This=1, why=1, is=1, it=1, so=1, separators=1, two=1, between=1} | {This=1 ,will=1, have=1, one=1,separators=1, between=1, two=1,words=1, why=1, is=1, it=1, so=1} | PASSED |

Test Case based on User Story:

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**Functional Requirement**

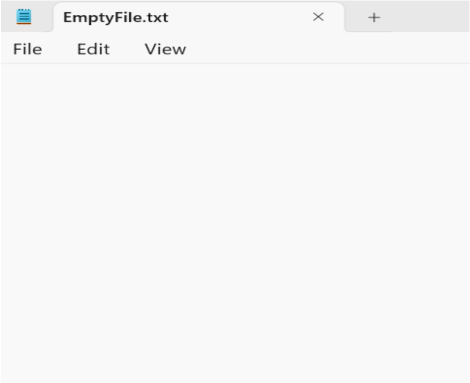
- Program shall allow the user to pass the input from the command line for which they want to count the words and its frequency.
- This program is case sensitive; For example, “Test” is not same as “test”.
- The program supports separators like space, tab, newline, and the combination of them.
- The input given should be in textual format.

**Non-Functional requirement**

- Error during the usage, such as file not found, etc. are handled correctly.
- Program is developed using Maven development environment, so, the machine used to run this program must have latest version of MAVEN and JDK installed.
- Works on both MACOS and Windows.

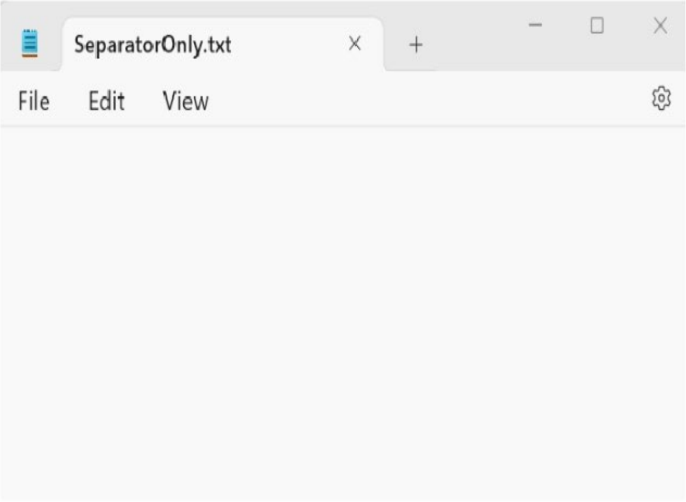
**Explanation of Testcase from Test report table above:**

1. For Empty Files



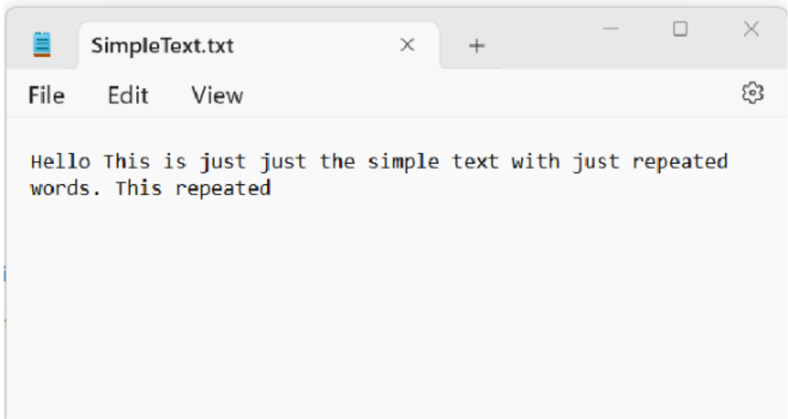
Emptyfile.txt is an empty file with no words or separators in it. Hence the test is passed when output is  empty.

2. <u>For input with separators only (no words or numbers)</u>



SeparatorsOnly.txt is a file that has number of separators such as space, newline, table and their combination but does not have any words. Hence, even though the file contains separator, there are no words and no word frequency making the HashMap empty.

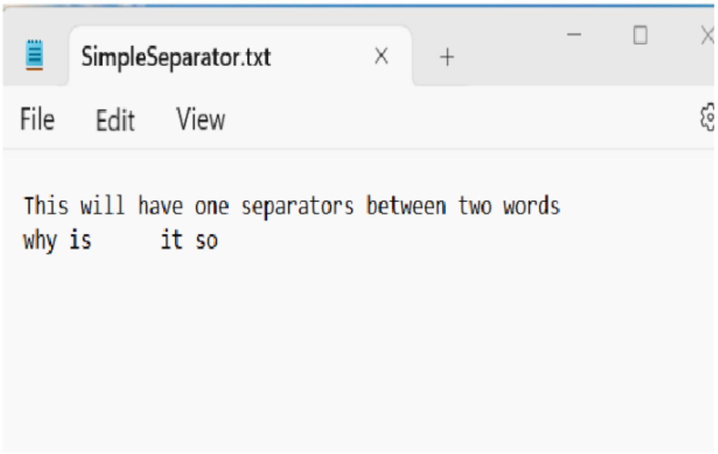
3. <u>For SimpleText with simple space only</u>



```
Hello This is just just the simple text with just repeated
words. This repeated
```

SimpleText.txt contains the simple text with single space only. It is small file with no numbers or multiple separators. This file has some repeated words. For example , This, just, repeated and others are singly present.

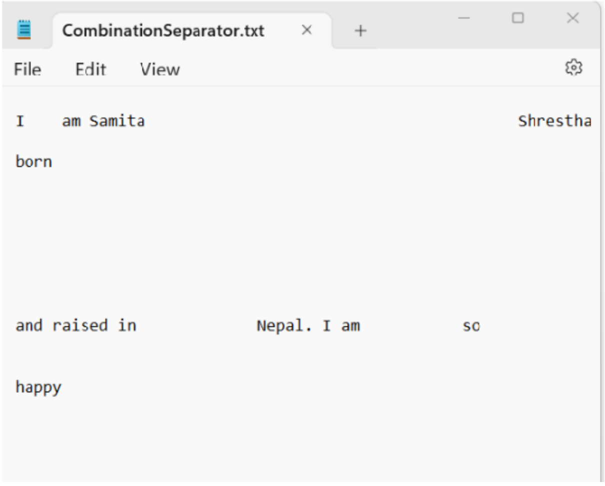
4. For the input with single space, tab, and newline between words



```
This will have one separators between two words
why is      it so
```

SimpleSeparator.txt is the file that has one separator in between the words but does not have numbers or multiple separators combined.

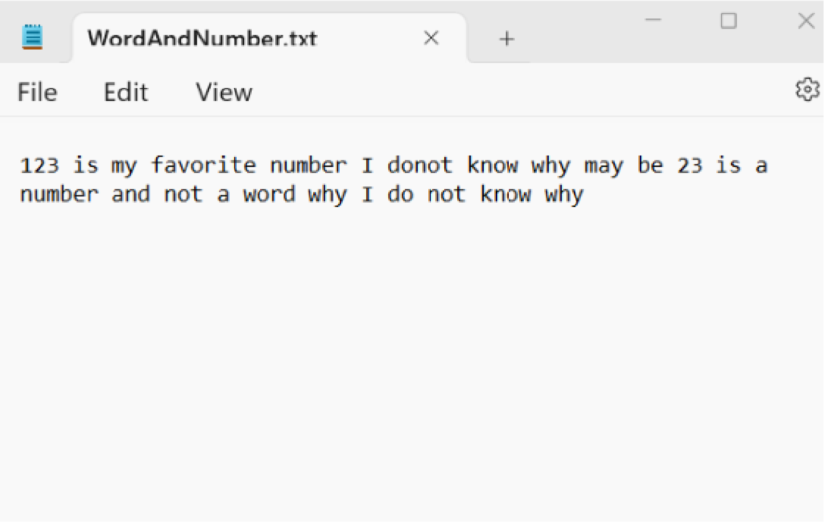
5. For the input with Combination of space, tabs, and newlines



```
I    am Samita                                        Shrestha

born







and raised in            Nepal. I am          so


happy
```

CombinationSeparator.txt contains the file having combination of space, newline, and tabs. For example, in this file there are 7 new lines between words “born” and “and” which is supported per the user requirement.

6. For the input with Words, Number and separators combined.



```
123 is my favorite number I donot know why may be 23 is a
number and not a word why I do not know why
```

WordAndNumber.txt contains words, numbers and separators. Each time the word or number is repeated, the frequency count increments. This file also has multiple separators combination which is correctly handled and supported.

Hence, all the testcases above are tested and are **PASSED**

**Test Results:**

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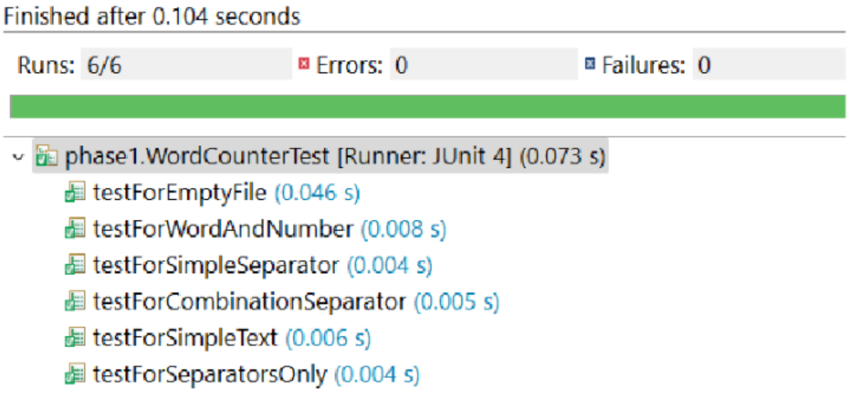

```
Finished after 0.104 seconds
Runs: 6/6        Errors: 0        Failures: 0

phase1.WordCounterTest [Runner: JUnit 4] (0.073 s)
    testForEmptyFile (0.046 s)
    testForWordAndNumber (0.008 s)
    testForSimpleSeparator (0.004 s)
    testForCombinationSeparator (0.005 s)
    testForSimpleText (0.006 s)
    testForSeparatorsOnly (0.004 s)
```

Testing in Command prompt:

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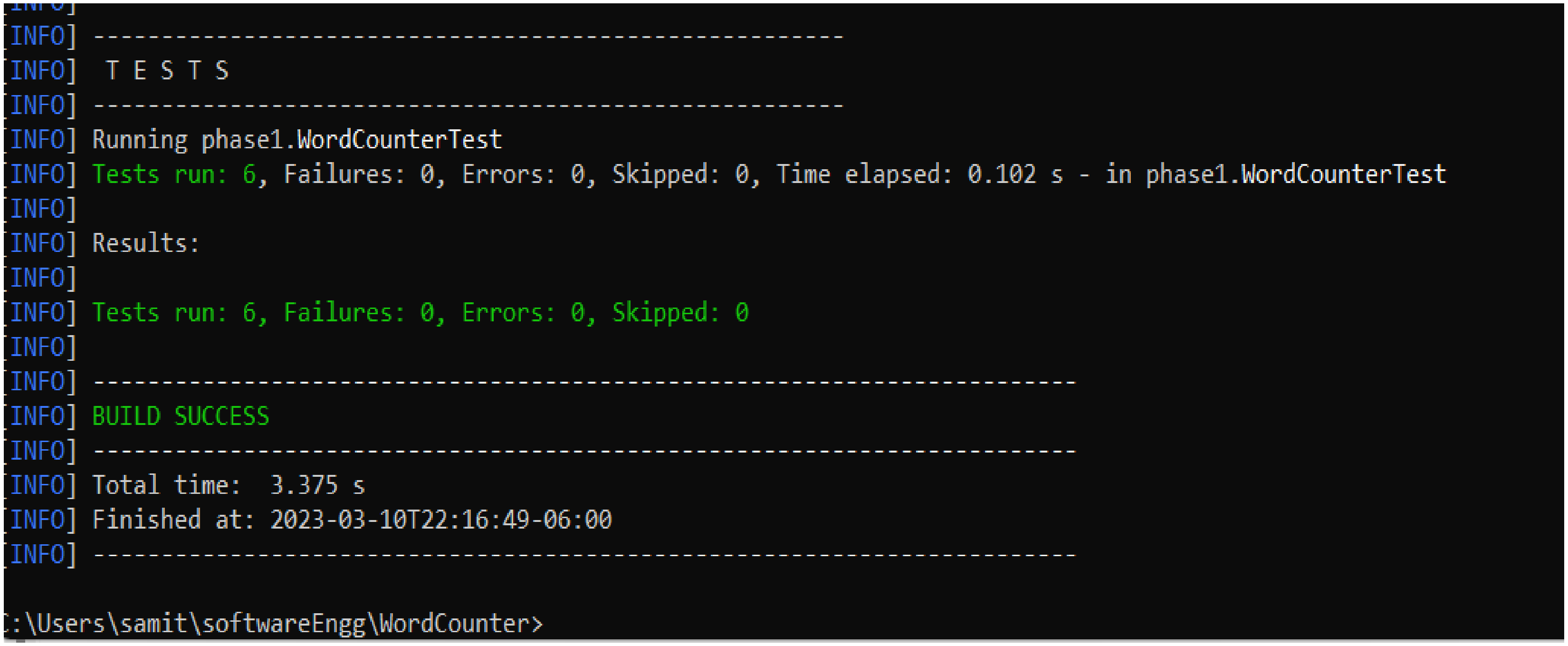
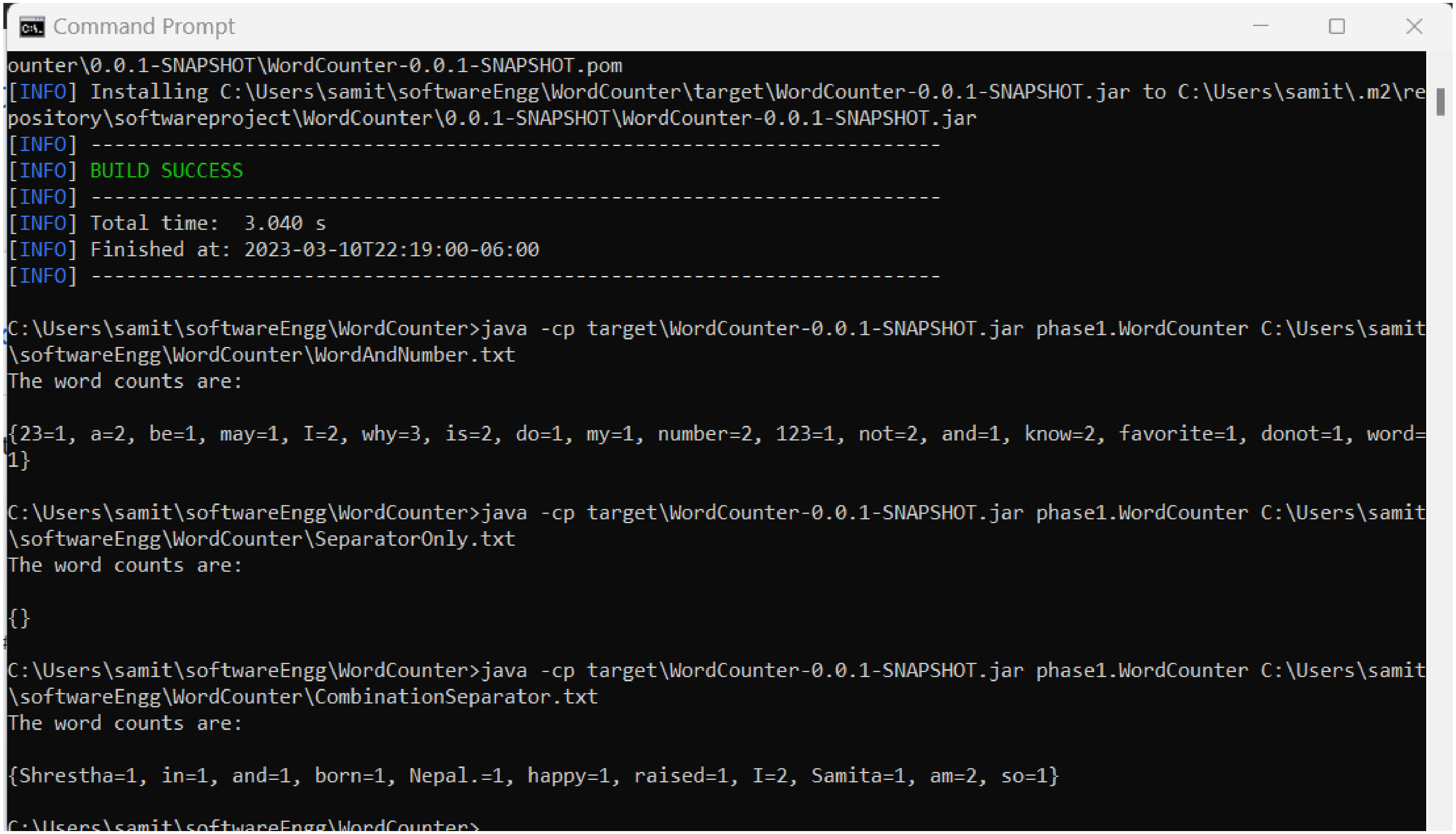


```
[INFO]
[INFO] -------------------------------------------------------
[INFO]  T E S T S
[INFO] -------------------------------------------------------
[INFO] Running phase1.WordCounterTest
[INFO] Tests run: 6, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 0.102 s - in phase1.WordCounterTest
[INFO]
[INFO] Results:
[INFO]
[INFO] Tests run: 6, Failures: 0, Errors: 0, Skipped: 0
[INFO]
[INFO] ------------------------------------------------------------------------
[INFO] BUILD SUCCESS
[INFO] ------------------------------------------------------------------------
[INFO] Total time:  3.375 s
[INFO] Finished at: 2023-03-10T22:16:49-06:00
[INFO] ------------------------------------------------------------------------

:\Users\samit\softwareEngg\WordCounter>
```

Sample Output (Running on Command Prompt)



```
ounter\0.0.1-SNAPSHOT\WordCounter-0.0.1-SNAPSHOT.pom
[INFO] Installing C:\Users\samit\softwareEngg\WordCounter\target\WordCounter-0.0.1-SNAPSHOT.jar to C:\Users\samit\.m2\re
pository\softwareproject\WordCounter\0.0.1-SNAPSHOT\WordCounter-0.0.1-SNAPSHOT.jar
[INFO] ------------------------------------------------------------------------
[INFO] BUILD SUCCESS
[INFO] ------------------------------------------------------------------------
[INFO] Total time:  3.040 s
[INFO] Finished at: 2023-03-10T22:19:00-06:00
[INFO] ------------------------------------------------------------------------

C:\Users\samit\softwareEngg\WordCounter>java -cp target\WordCounter-0.0.1-SNAPSHOT.jar phase1.WordCounter C:\Users\samit
\softwareEngg\WordCounter\WordAndNumber.txt
The word counts are:

{23=1, a=2, be=1, may=1, I=2, why=3, is=2, do=1, my=1, number=2, 123=1, not=2, and=1, know=2, favorite=1, donot=1, word=
1}

C:\Users\samit\softwareEngg\WordCounter>java -cp target\WordCounter-0.0.1-SNAPSHOT.jar phase1.WordCounter C:\Users\samit
\softwareEngg\WordCounter\SeparatorOnly.txt
The word counts are:

{}

C:\Users\samit\softwareEngg\WordCounter>java -cp target\WordCounter-0.0.1-SNAPSHOT.jar phase1.WordCounter C:\Users\samit
\softwareEngg\WordCounter\CombinationSeparator.txt
The word counts are:

{Shrestha=1, in=1, and=1, born=1, Nepal.=1, happy=1, raised=1, I=2, Samita=1, am=2, so=1}

C:\Users\samit\softwareEngg\WordCounter>
```

**Bug Detection:**

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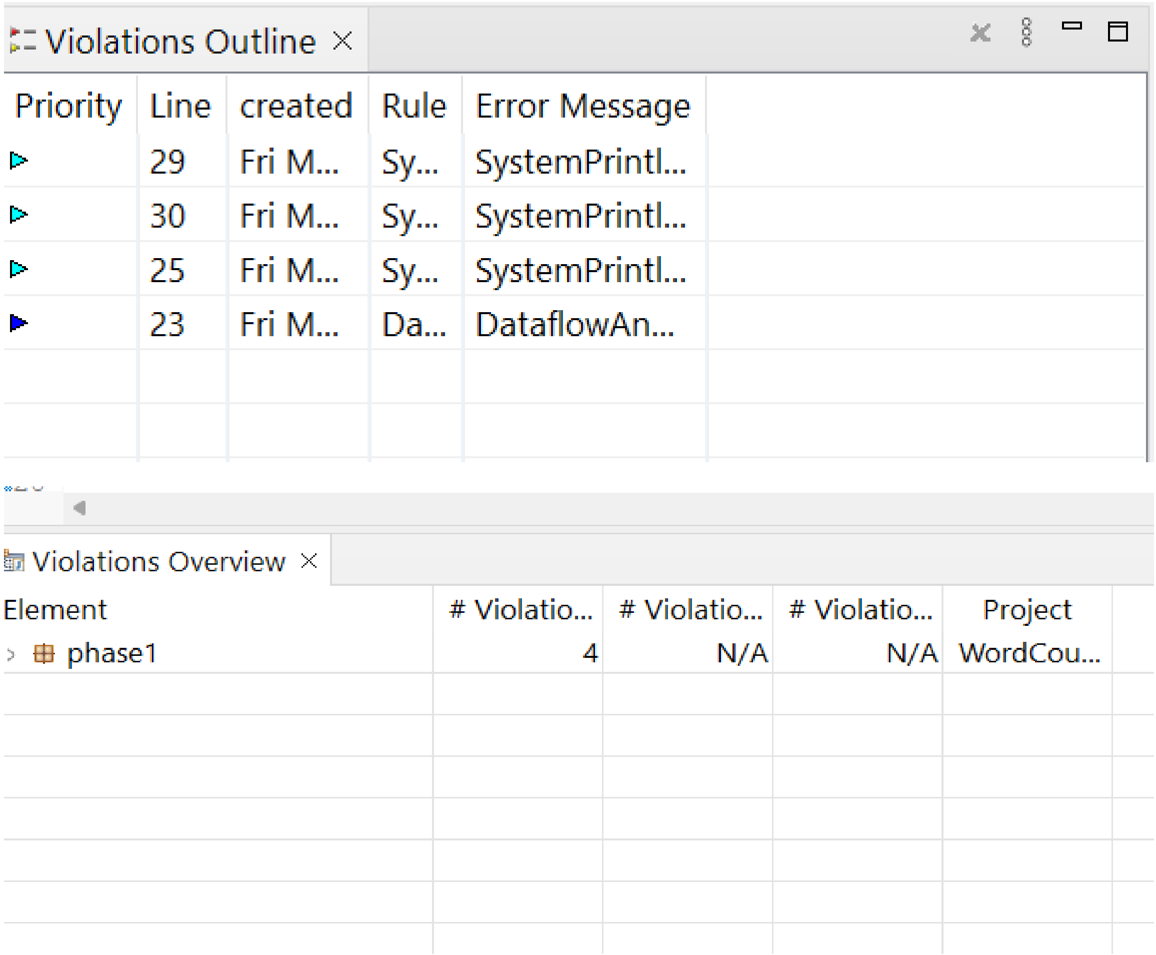
For Bug Detection, PMD plugin from Eclipse Marketplace was used.



Violations Outline

| Priority | Line | created | Rule | Error Message |
|---|---|---|---|---|
| ▷ | 29 | Fri M... | Sy... | SystemPrintl... |
| ▷ | 30 | Fri M... | Sy... | SystemPrintl... |
| ▷ | 25 | Fri M... | Sy... | SystemPrintl... |
| ▶ | 23 | Fri M... | Da... | DataflowAn... |

Violations Overview

| Element | # Violatio... | # Violatio... | # Violatio... | Project |
|---|---|---|---|---|
| phase1 | 4 | N/A | N/A | WordCou... |