

Reflection Report:

Name: Carter Fitzgerald

ID: u3240494

Assignment: ST2 Assignment 2

Date: 11/05/2023

Problems:

Below are some of the issues I encountered when coding assignment 2.

Handling Syntax Errors & Error Handling: Many of the files provided such as this one below were designed to fail, because the syntax provided in the files lines was in an incorrect structure to how it should be. Therefore the program had to be able to handle these errors in syntax and provide an appropriate error which would inform the user of their mistake.

```
// task3Md - should handle squat (not diddly squat)
set fred to 16
set busby to 22
set r2 to 5
add 4 to squat
add busby to r2
add 100 to fred
subtract r2 from fred
set v2 to -999
print 'Final value1 is:'
println fred
print 'Final value2 is:'
println v2
```

Above: Task 3Md: This program should fail as squat has not been initialised as a variable.

So to handle the syntax errors in the provided programs, I had to use if statements in my operator methods to check their token number and if they were greater than 4 it was invalid syntax, but it also had to use the correct keyword in between the 2 variables. For the print statements it was even more difficult since they are allowed to have more than 4 tokens. First I checked that the program hadn't just written print with nothing behind it, then I used an elif statement to cover all cases after, if "cls" it clears the console, it uses a .starts with and .end with checking for " to check if value is a string literal, if it is it removes the first and last characters (") and prints to the screen, then for integers and variables, it tries to parse them as an integer, if it works then it is printed, otherwise prints empty variable error. The program also checks for things like division by 0 in the divide method.

Clear Screen: I had a minor problem when trying to recall the menu after the code had finished running, because whenever I was calling the runIt() method it was clearing the screen, so it would run the code and instantly clear the screen when it reached the line end in the file. Took a while to work out what the issue was but, eventually found a clear screen print statement at the top of the runIt() method which I removed.

Mandatory Testing Screenshots:

Mandatory Test File	
Task1Ma.txt	Mandatory
Task1Mb.txt	Mandatory
Task1Mc.txt	Mandatory
Task2Ma.txt	Only if you attempted task2
Task3Ma.txt	Only do if you implement the tested feature
Task3Mb.txt	Only do if you implement the tested feature
Task3Mc.txt	Only do if you implement the tested feature
Task3Md.txt	Only do if you implement the tested feature
Task4Ma.txt	Only if you attempted task4
Task4Mb.txt	Only if you attempted task4
Task5Ma.txt	Only if you attempted task5
Task5Mb.txt	Only if you attempted task5
NOTE:	Some are designed to test your error handling and deliberately fail

Task 1Ma Testing:

Option - E

```
Reading code file Task1Ma.txt
Number Of Lines Read in is:          7
Number Of Non Comment Lines Read in is:6
----- Running code -----
sum of 10 and 20 is 30
```

Task 1Mb Testing:

Option - E

```
Reading code file Task1Mb.txt
Number Of Lines Read in is:          10
Number Of Non Comment Lines Read in is:9
----- Running code -----
Final value is:28
```

Task 1Mc Testing:

Option - E

```
Reading code file Task1Mc.txt
Number Of Lines Read in is:      10
Number Of Non Comment Lines Read in is:9
----- Running code -----
```

Can only enter input while your program is running

java.lang.IllegalArgumentException: Invalid syntax for add command: add 3 from ss

Task 2Ma Testing:

Option - E

```
Reading code file Task2Ma.txt
Number Of Lines Read in is:      14
Number Of Non Comment Lines Read in is:11
----- Running code -----
Final value of r2      is:10
Final value of busby is:50
```

Task 3Ma Testing:

Option - E

```
Reading code file Task3Ma.txt
Number Of Lines Read in is:      9
Number Of Non Comment Lines Read in is:8
----- Running code -----
Final value1 is:84
Final value2 is:-999
```

Task 3Mb Testing:

Option - E

Reading code file Task3Mb.txt

Number Of Lines Read in is: 4

Number Of Non Comment Lines Read in is:3

----- Running code -----

Final value3 is:3

Task 3Mc Testing:

Final Text task3mc:

Task 3Md Testing:

Option - E

Reading code file Task3Md.txt

Number Of Lines Read in is: 14

Number Of Non Comment Lines Read in is:13

----- Running code -----

Can only enter input while your program is running

java.lang.IllegalArgumentException: Undefined Variable: squat