

Reflection Report and Testing

Reflection Report

How I chose to store the program

- I chose to store the variables in a HashMap because it allowed efficient access and manipulation of variables. For the lines of code, I used an ArrayList because it provides efficient random access, which is important when interpreting each line of code. It also simplifies the process of storing multiple lines of code.

Learnings

- I learned how to implement a simple language interpreter in Java.
- I learned how to handle file I/O operations in Java.
- I learned how to parse and execute commands according to the syntax of the language.

Difficulties

- Handling the flow control statements, such as the "if" block, was challenging.

What I Would Do Differently

- I would improve the way I handled the if-else logic for better readability and maintainability.
- I would add more robust error handling and reporting to give users a better understanding of any mistakes they may have made in their scripts.

Testing

Task 1 Files: Task1Ma.txt, Task1Mb.txt, Task1Mc.txt

Input	Expected Output	Output	Notes
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Input letter r into menu then input the task1 file name (not including the .txt)	For task 1Ma and Task 1Mb should output whatever the sum or subtraction is. Task1Mc should handle the error	<p>ST2 Assignment Two by Ahmed Saeed</p> <p>Select an option:</p> <p>Option E - Exit program</p> <p>Option R - Read file(Task 1)</p> <p>r</p> <p>Interpreting file...</p> <p>Enter the name of the file: Task1Ma</p> <p>The code file being read is: Task1Ma.txt</p> <p>Total lines read: 7</p> <p>Non-comment lines read: 6</p> <p>sum of 10 and 20 is 30</p> <p>ST2 Assignment Two by Ahmed Saeed</p> <p>Select an option:</p> <p>Option E - Exit program</p> <p>Option R - Read file(Task 1)</p> <p>r</p> <p>Interpreting file...</p> <p>Enter the name of the file: Task1Mb</p> <p>The code file being read is: Task1Mb.txt</p> <p>Total lines read: 10</p> <p>Non-comment lines read: 9</p> <p>Final value is:28</p> <p>java.lang.IllegalArgumentException: Undefined variable: ss (task1Mc)</p>	Received expected output
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Task 2 Files: Task2Ma.txt

Input	Expected Output	Output	Notes
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Input letter r into menu then input the task2 file name (not including the .txt)	For task 2Ma should output whatever the division and multiplication is.	ST2 Assignment Two by Ahmed Saeed Select an option: Option E - Exit program Option R - Read file(Task 1) r Interpreting file... Enter the name of the file: Task2Ma The code file being read is: Task2Ma.txt Total lines read: 14 Non-comment lines read: 11 Final value of r2 is:10 Final value of busby is:50	Received expected output
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Task 3 Files: Task3Ma.txt, Task3Mb.txt, Task3Mc.txt, Task3Md.txt

Input	Expected Output	Output	Notes
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Input letter r into menu then input the task3 file name (not including the .txt)	Print correct output and handle undefined variable errors	<p>ST2 Assignment Two by Ahmed Saeed</p> <p>Select an option:</p> <p>Option E - Exit program</p> <p>Option R - Read file(Task 1)</p> <p>r</p> <p>Interpreting file...</p> <p>Enter the name of the file: Task3Ma</p> <p>The code file being read is: Task3Ma.txt</p> <p>Total lines read: 9</p> <p>Non-comment lines read: 8</p> <p>Final value1 is:84</p> <p>Final value2 is:-999</p> <p>ST2 Assignment Two by Ahmed Saeed</p> <p>Select an option:</p> <p>Option E - Exit program</p> <p>Option R - Read file(Task 1)</p> <p>r</p> <p>Interpreting file...</p> <p>Enter the name of the file: Task3Mb</p> <p>The code file being read is: Task3Mb.txt</p> <p>Total lines read: 4</p> <p>Non-comment lines read: 3</p> <p>Final value3 is:3</p> <p>Final Text task3mc:</p> <div style="border: 1px solid black; height: 40px; width: 100%;"></div> <div style="background-color: #f0f0f0; padding: 5px; margin-top: 10px;"> <p>java.lang.IllegalArgumentException: Undefined variable: squat</p> </div> <p style="text-align: right;">(Task3Md)</p>	Received expected output
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Task 4 Files: Task4Ma.txt, Task4Mb.txt

Input	Expected Output	Output	Notes
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Input letter r into menu then input the task4 file name (not including the .txt)	Print correct output from txt file	Enter the name of the file: Task4Ma The code file being read is: Task4Ma.txt Total lines read: 7 Non-comment lines read: 6 yes print this ending Task4Ma Final value1 is:60 Final value2 is:-999 Final value3 is:3 (Task4Mb)	Received expected output
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