Project 2

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Test Cases

This section contains all of the test cases I performed on my program to ensure that everything was working as intended.

Test Checklist

The following Test Cases will test for the listed conditions:

   File Input

   Multiple Inputs (from a single file)

   Subtraction

   Multiplication

   Division

   Greater Than

   Less Than

   Equal To

   And Operator

   Or Operator

   Negation Operator

   Conditionals

Case #1

Due to our program allowing for multiple inputs, we will actually be able to test for everything on a single test case. Below is the input file that was used to ensure everything was working properly. I have included the expected answer for each line of input in red next to the corresponding equation.

Input File

```
(((x+5)*2)-(y/2)),x=5,y=10;          Value = 15
```

```
((y>x)&(x<z)),x=5,y=10,z=3;          Value = 0

((x=y)|(x=5)),x=5,y=10;              Value = 1

(((x:y?z)>y)!),x=5,y=10,z=1;         Value = 1
```

Screenshots

From the pictures below, you can see that it did in generate the correct values.

```
(((x+5)*2)-(y/2)),x=5,y=10; Value = 15
((y>x)&(x<z)),x=5,y=10,z=3; Value = 0
((x=y)|(x=5)),x=5,y=10; Value = 1
(((x:y?z)>y)!),x=5,y=10,z=1; Value = 1

Process finished with exit code 0
```

This test case crosses everything off of our list. Due to the File Input, and Multiple Inputs working correctly, we are able to test for everything in a single test case. The first equation tests for Subtraction, Multiplication, and Division. The second equation tests for Greater Than, Less Than, and the And Operator. The third equation tests for Equal To, and the Or Operator. Lastly, the fourth equation tests for Conditonals, and the Negation Operator.

Conclusion

In conclusion, I really enjoyed this project. It really challenged me and got me a lot more experienced with C++ than what I have ever attempted before. C++ is very explicit compared to Java, and this project really showed me that. I was having trouble initially implementing the file input, all to find out that I didn't "#include <sstream>" in the Operand class. So, that was a challenge at first, as someone coming from a mainly Java background. However, overall this was a great project, and I thoroughly enjoyed it!