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CS 150-02

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Lab 1 Report

Introduction

In this lab, we were asked to solve two problems. The first problem was to write a program that evaluate the inequalities of height – in order words, we are comparing the measurements of height and seeing if based on the operation, greater than/greater than and equal to or less than/less than or equal to, if it was true or false. The goal was to have a program that runs in terminal that evaluates the inequalities of height. Before starting the assignment, I assumed that the project would resemble a calculator but a calculator that determines whether an inequality or a sequence of inequalities is true or false.

Approach

When I was designing the program, I only created one class that ran the entire program called FeetInches. I used the try and catch method in order to make sure that whenever there was an error in the user input, it would throw an exception and notify me that there was an error. I also imported the scanner API in order to take user input for the part of the calculation. In the FeetInches class, I created a method called “run()” which runs the try and catch that I would use. The method “run()” is a void method so it won’t return anything but at the end it does print out whether the evaluation of the inequality was true or false. First thing I did was create a new Scanner object that would allow the program to take the user input and also create variable of integers and strings to hold certain values. Then, after asking the user for the inputs using for loops, I used if statements to get the results of the inequalities and print out either true or false or if an error occurred.

Methods

While writing the code, I ran each part of the method in order to make sure I was on the track and that it compiled correctly. This included using print statements to map where the computer had gone when run the program. This allowed me to keep track of the computer’s movements and whether there were any errors in the code. It also allowed me to debug because if it did not make it past a certain checkpoint, I was able to debug that particular part that did not make it to the checkpoint. After knowing the code was complete, I tested it multiple times with really big values such as 100 feet and 60 inches and 200 feet and 1 inch to realistic values such as 5 feet,3 inches and 6 feet, 4 inches. I also tried using a different string input for inequality and a string input for the values and they all came out as error which is right.

Data and Analysis

A close up of a logo

Description automatically generated

The code worked exactly as planned and it ran in terminal as well, so the code is correct.

Conclusion

Overall, this program was an inequalities calculator and taught me how to use try and catch while learning about how methods work.

References

Scanner API

Try and Catch: <http://docs.oracle.com/javase/tutorial/essential/exceptions/handling.html>