CSCE 2004 – Programming Foundations I
Homework One Report

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Academic Integrity Statement: I pledge that I have neither given nor received unauthorized help on this programming assignment.

The goal of this programming assignment was to create a program that took input from the user about the dimensions of a box in inches and the dimensions of a truck in feet and return how many boxes could fit in the truck, how much space for air would be left in the truck, etc. No error handling was required.

I first initialized my height, length, and width for the box and truck. Then I got input from the user about the box and truck dimensions and followed that by converting the truck dimensions from feet to inches to match the dimensions of the box. Then I did more math to find the maximum number of boxes that could fit in each dimension, how much air would be left for each dimension, the total box count, and finally the total volume of the truck and boxes in cubic inches. Lastly, I outputted the results to the terminal.

Before I started my program I did the math on paper and then outlined my code with comments on all the equations I would have to use along with where I would want to take input, give output, etc. It took me about 2 hours to write my original program and then I had to change some things because the requirements of the project changed, also I forgot to save the last few edits I made originally so the program was outputting wrong answers for a bit. These edits added another thirty minutes.

```
Welcome to JG's trucking company

Enter box height in inches: 15
Enter box width in inches: 16
Enter box length in inches: 22
Enter truck height in feet: 8
Enter truck width in feet: 7
Enter truck length in feet: 20
Box Count = 300
Empty Space Height = 6 inches
Empty Space Width = 4 inches
Empty Space Length = 20 inches
Volume of Boxes = 5280 cubic inches
Truck Volume = 1935360 cubic inches


...Program finished with exit code 0
Press ENTER to exit console.
```

Here are the results with box dimensions of 15x16x22 and 8x7x20

```
Welcome to JG's trucking company

Enter box height in inches: 22
Enter box width in inches: 15
Enter box length in inches: 16
Enter truck height in feet: 8
Enter truck width in feet: 7
Enter truck length in feet: 20
Box Count = 300
Empty Space Height = 8 inches
Empty Space Width = 9 inches
Empty Space Length = 0 inches
Volume of Boxes = 5280 cubic inches
Truck Volume = 1935360 cubic inches


...Program finished with exit code 0
Press ENTER to exit console.
```

Here are the results with box dimensions of 22x15x16 and 8x7x20

```
Welcome to JG's trucking company

Enter box height in inches: x


...Program finished with exit code 0
Press ENTER to exit console.
```

This is what happened when I entered x as the input instead of the number

I enjoyed this programming assignment and the planning I had to do with it. My program works well, and I received all my desired outputs when testing it. Next time I would make sure to save the program. Although I didn't lose that much work it was tedious to go back and change things I had already done. Like I said earlier it took me about 2-2.5 hours to complete.