Debugging Exercise Report

For this debugging exercise, I was given code to a program that displays four different products, their prices, the discount amount, and the final price after the discount. The program is made up of three functions: one that calculates the discount amount, one that applies the discount amount to the original price, and one that stores the original prices, and discount rates and displays the output.

When I ran the program from the get-go, I received a TypeError from the console. “TypeError: can't multiply sequence by non-int of type 'float'.” After seeing this, I carefully looked through the code and noticed how one of the products’ prices that was being stored in a dictionary had quotation marks around it. (i.e. {"name": "Tablet", "price": **"500"**, "discount\_rate": 0.2},) This is what was causing the TypeError. The error stated that it could not do the calculation with a string rather than an integer. I then realized that once I remove the quotation marks around the ‘500,’ the program would run how it is intended to. In the program, the function “calculate\_discount” takes the original price of an item and multiplies it by the discount rate.

I was also able to use PyCharm’s debugging features to catch the issue as well. Instead of running the program normally, I clicked the debug button after placing a breakpoint on the line of code that had the price in quotation marks. Once the program got to the point of calculating the discount for the tablet, it gave me the TypeError and I was able to see that that line of code was what was causing the issue.

Before program runs the calculation:

A screenshot of a computer program

AI-generated content may be incorrect.

After program runs the calculation:

A screenshot of a computer program

AI-generated content may be incorrect.