David Li

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1. Some issues I had while writing this code included ridding of a “debug error!” popup message. To solve the problem, I put a “return 0;” in the if statement for each error message when the user types in an incorrect name, water amount, or customer type.

I also forgot to type “cin.ignore(10000, '\n');” before prompting for the Customer type, which caused C++ to read the \n inputted after the water value and stop reading for the customer type.

1. 1) Empty string for name (“”, Program stops N/A, N/A)

* Program stops after inputting empty string and prints correct statement for empty string name

2) Name, negative value (“David Li”, -1, Program stops N/A)

* Program stops after inputting negative value and prints correct statement for negative water value

3) Large water value (“David Li”, 10000000000, “Residential”)

- Code prints bill statement without error for large value  
4) Very small decimal value (“David Li”, .0000000001, “Residential”)

- Code prints $5.95 as bill value

5) Large decimal value (“David Li”, 1.23456789123456789, “Residential”)

- Code prints bill value with 2 decimals.  
6) Very small decimal value (“David Li”, .0000000001, “Residential”)

- Code prints $5.95 as bill value

7) invalid type (“David”, 4, “bizzness”)

* Program prints correct statement for invalid customer type

8) Lower case type (“David”, 2.50, “residential”)

* Prints correct statement and correct bill value (accounted for lowercase and uppercase in my code)

9) 0 water, Business (“David Li”, 0, “Business”)

* Correctly prints $5.95 as bill

10) 1st tier, Business (“David Li”, 4, “Business”)  
11) 2nd tier, Business (“David Li”, 9, “Business”)

12) 3rd tier, Business (“David Li”, 20, “Business”)

13) 4th tier, Business (“David Li”, 35, “Business”)

* Print correct statements and bill values

14) 0 water, Residential (“David Li”, 0, “Residential”)

* Correctly prints $5.95 as bill

15) 1st tier, Residential (“David Li”, 4, “Residential”)  
16) 2nd tier, Residential (“David Li”, 9, “Residential”)

17) 3rd tier, Residential (“David Li”, 20, “Residential”)

18) 4th tier, Residential (“David Li”, 35, “Residential”)

* Print correct statements and bill values