Artiom Arutiunov

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Professor Stahl

1/16/16

Project 2 Report

2.

A) There were several distinct obstacles I had to overcome while working on this project. The first obstacle was writing the code. Specifically, I had trouble creating multiple “if” statements through which the data correctly ran through. I initially had difficulty discerning between “else if” and “else”, but that played a critical role for rendering the correct output for the final line. Another obstacle I faced was adjusting to the tiered payment system. Initially, my “if” statements were incorrectly formed, as very kilowatt was valued at the same amount before I fixed the code. This took a bit of arithmetic manipulation. Lastly, the final problem I encountered was ensuring that final output price yielded an additional 0, such as in $15.70, while simultaneously dropping any additional 0’s when the user entered the amount of kilowatts used (such as 5.4).

B) List of test data

Residential standard, testing first tier (Artiom Arutiunov; 8.7 kWh; Residential)

🡪 Program yielded correct result ($54.1), but did not include additional 0 following 1.

Residential standard, testing second tier (Artiom Arutiunov; 12.3; Residential)

🡪 Program yielded result of $125.65, which is incorrect.

Residential standard, testing third tier (Artiom Arutiunov; 24.1; Residential)

🡪 Program yielded result of $211. 45, which is correct.

Business standard, testing first tier (Artiom Arutiunov; 6.7; Business)

🡪 Program yielded resulted of $70.20, which is correct.

Business standard, testing second tier (Artiom Arutiunov, 15.75; Business)

🡪 Program yielded result of $181.20, which is correct.

Business standard, testing third tier (Artiom Arutiunov, 28.34; Business)

🡪 Program yielded result of $411.75, which is correct.

Residential error, testing various invalid responses (Artiom Arutiunov; -25; Residential)

🡪 Program yielded correct result string of “The energy usage reading must be nonnegative.”

Residential error, testing various invalid responses (Artiom Arutiunov; 14.6; residential)

🡪 Program yielded correct result of string “The customer type is not valid.”

Residential error, testing multiple invalid responses (Artiom Arutiunov; -20; resdentital)

🡪 Program yielded correct result of string “The energy usage reading must be nonnegative.”

Business error, testing various invalid responses (Artiom Arutiunov; -25; Business)

🡪 Program yielded correct result string of “The energy usage reading must be nonnegative.”

Business error, testing various invalid responses (Artiom Arutiunov; 14.6; business)

🡪 Program yielded correct result of string “The customer type is not valid.”

Business error, testing multiple invalid responses (Artiom Arutiunov; -20; busines)

🡪 Program yielded correct result of string “The energy usage reading must be nonnegative.”

Residential standard, testing kilowatts used input of 0

🡪 Program yielded correct result of $14.95.

Business standard, testing kilowatts used input of 0

🡪 Program yielded correct result of $19.50.

Residential error, testing various invalid responses (Artiom Arutiunov; 20.4; Business)

🡪 Program yielded correct result string of “The customer type is not valid.”

Business error, testing various invalid responses (Artiom Arutiunov; 12.5; Residential )

🡪 Program yielded correct result string of “The customer type is not valid.”