CSCD 210
Ifs Lab

SPECIFICATIONS

1. The program will compute and display information for a utility company which supplies water to its customers. For a specified customer, the program will compute and display the amount of money which the customer will be billed for water usage during the current billing period.

2. The program will prompt the user to enter three values (in the following order):
   a. The customer's beginning meter reading (a positive integer value)
   b. The customer's ending meter reading (a positive integer value)
   c. The customer's code (a character)

   It will then process that customer information and display the results.

3. The program will compute the gallons of water used by the customer during the current billing period.

   The meter is read by a representative of the utility company at the start and at the end of the billing period, and the readings are taken from a meter which has nine digits and records tenths of a gallon.

4. Using an if statement, the program will compute the amount of money that the customer will be billed, based on the customer's code and water usage, using the following information. NOTE: you must handle both lower and uppercase letters for the code.

   Code 'r' (residential):
   - $25.00 base fee plus $0.0003 per gallon used

   Code 'b' (business):
   - $1500.00 base fee plus $0.00002 for each gallon used from 0 to 999.9 gallons otherwise
   - The first bullet point plus $0.00001 from 1000 to end of usage

   Example 1:
   The business customer uses 900 gallons
   $1500.00 + $0.00002 * 900

   Example 2:
   The business customer uses 1100 gallons
   $1500.00 + $0.00002 * 999.9 + $0.00001 * 100

5. For each customer, the program will display a summary with the following information:
   a. The customer's code
   b. The customer's beginning meter reading
   c. The customer's ending meter reading
   d. The gallons of water used by the customer
   e. The amount of money billed to the customer

   All output will be appropriately labeled and formatted.

NOTES

1. As stated above, the meter's dial has nine digits and records tenths of a gallon. For example, assuming that the beginning reading was 444400003 and the ending reading was 444400135, then the customer used 13.2 gallons of water during the billing period.

2. Since the meter's dial only has nine digits, the reading at the end of the billing period may be less than the reading at the beginning of the billing period. For example, assuming that the beginning reading was 999999997 and the ending reading was 000000005, then the customer used 0.8 gallons of water during the billing period.

3. The amount of money billed to a customer should be displayed as a monetary value. That is, it should be displayed with a dollar sign and two fractional digits (for example, $125.00 or $43.87). You must use Decimal Format for this.

4. Provide at least 6 runs of your program – ensure you are testing all cases including edge cases

5. You must use constants named RES_BASE and BUS_BASE for the base fees

TO TURN IN:

A zip file that contains IfsLab, containing:

- src folder
  - java file called CSCD210IfsLab
- An output file named cscd210ifslabout.txt, with all of your sample runs

Name the zip file your last name first letter of your first name ifslab.zip (Example: johnsonsifslab.zip)