

Assignment Submission –Instructions

- Submission Date: 9 February (no extensions will be granted).
- The assignment must be handwritten using pen and paper. Printed or typed work will not be accepted.
- The corresponding .java source file must be uploaded to GitHub.
- Students must bring their laptop on the submission day.
- The code will be compiled and executed on your laptop. If the program does not run correctly, the assignment will be considered incomplete.
- Failure to follow any of the above instructions will result in rejection of the assignment.

Insurance Premium Calculator

You have been employed to write a program named Insurance Premium Calculator that calculates the insurance premium for buildings.

There are two types of buildings:

1. Domestic / Private House
2. Commercial Premise

The insurance premium depends on:

- *Type of building*
- *Amount insured*
- *Number of previous claims*

Each building type has different premium rates, discounts, and a fixed processing charge.

Domestic / Private House

- Charged 0.3% of the insured amount if the amount is less than \$100,000
- Charged 0.25% of the insured amount if the amount is \$100,000 or more
- Customers with 0 previous claims receive a 10% no-claim bonus
- Fixed processing charge: \$50

Commercial Premise

- Charged 0.5% of the insured amount if the amount is less than \$250,000
- Charged 0.75% of the insured amount if the amount is \$250,000 or more
- Customers with 0 previous claims receive a 15% no-claim bonus
- Fixed processing charge: \$80

Your task is to calculate and print the final insurance premium.

Input Format

- The first line contains a string B, the type of building (Domestic or Commercial)
- The second line contains a floating-point number A, the amount insured
- The third line contains an integer C, the number of previous claims

Output Format

- Print a single floating-point number representing the final insurance premium
- The output should be rounded to 2 decimal places

Example 1: Domestic House

Amount < 100,000 and 0 Claims (No-claim bonus applies)

Input

Domestic

80000

0

Calculation

- Premium rate = 0.3% of 80,000 = 240
- Processing charge = 50
- Total before discount = 290
- No-claim bonus (10%) = 29
- Final premium = 290 – 29 = 261.00

Output

261.00

Example 2: Domestic House

Amount < 100,000 and Claims > 0 (No bonus)

Input

Domestic

90000

2

Calculation

- Premium rate = 0.3% of 90,000 = 270
- Processing charge = 50
- No discount applied
- Final premium = 320.00

Output

320.00

Example 3: Domestic House

Amount \geq 100,000 and 0 Claims (No-claim bonus applies)

Input

Domestic

150000

0

Calculation

- Premium rate = 0.25% of 150,000 = 375
- Processing charge = 50
- Total before discount = 425
- No-claim bonus (10%) = 42.50
- Final premium = 382.50

Output

382.50

Example 4: Domestic House

Amount \geq 100,000 and Claims > 0

Input

Domestic

120000

1

Calculation

- Premium rate = 0.25% of 120,000 = 300
- Processing charge = 50
- No discount applied
- Final premium = 350.00

Output

350.00

Example 5: Commercial Premise

Amount < 250,000 and 0 Claims (No-claim bonus applies)

Input

Commercial

200000

0

Calculation

- Premium rate = 0.5% of 200,000 = 1000
- Processing charge = 80
- Total before discount = 1080
- No-claim bonus (15%) = 162
- Final premium = 918.00

Output
918.00

Example 6: Commercial Premise

Amount < 250,000 and Claims > 0

Input
Commercial
180000

- 3
- Calculation
- Premium rate = 0.5% of 180,000 = 900
 - Processing charge = 80
 - No discount applied
 - Final premium = 980.00

Output
980.00

Example 7: Commercial Premise

Amount \geq 250,000 and 0 Claims (No-claim bonus applies)

Input
Commercial
300000

- 0
- Calculation
- Premium rate = 0.75% of 300,000 = 2250
 - Processing charge = 80
 - Total before discount = 2330
 - No-claim bonus (15%) = 349.50
 - Final premium = 1980.50

Output
1980.50

Example 8: Commercial Premise

Amount \geq 250,000 and Claims > 0

Input
Commercial
400000

- 2
- Calculation
- Premium rate = 0.75% of 400,000 = 3000
 - Processing charge = 80
 - No discount applied
 - Final premium = 3080.00
 - Output
3080.00