By submitting this assignment, I agree to the following:

“Aggies do not lie, cheat, or steal, or tolerate those who do”

“I have not given or received any unauthorized aid on this assignment”

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Section: 462

Assignment: Lab6b_Act1.py

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For the linear elastic portion, the value of Young’s Modulus is (44/0.01)

(O to A) y=(44/0.01)*x, Endpoint: (0.01, 44)

(A to C) y=44, (0.06, 44)

(C to D) y=((60-44)/(0.18-0.06))*(x-0.06)+44, (0.18, 60)

(D to E) y=((50-60)/(0.26-0.18))*(x-0.18)+60, (0.26, 50)

Variables

- stress
- strain

Steps

1. Get user input for strain
2. Compare user strain to strain endpoints to see what equation to use (using a series of conditional statements)
3. Compute stress from user strain using the correctly identified equation
4. Output calculated stress

Test Cases

1. Input Strain: 0, Output Stress: 0; edge
2. Input Strain: 0.03, Output Stress: 44; typical
3. Input Strain: -1, Output Stress: undefined; edge
4. Input Strain: 99, Output Stress: undefined; edge
5. Input Strain: 0.07, Output Stress: 45.333; typical