Group Exercise 04: Practice Writing Code with Numeric and String Operations
CPSC 301 - 2016W2

Consider the following code that calculates the cost of painting a room’s walls. Modify the code to include the following two features:

- Painting should include the room’s ceiling
- Cost must also include 7% PST on supplies (but not labour) and 5% GST on everything (except the PST).

You can modify or write your answer anywhere on the page, as long as you indicate (eg: using arrows) where your lines of code should be inserted into the existing program.

See paintcost_no_tax.py on course website for the original code shown below on this worksheet. See paintcost_with_tax.py on course website for an example solution.

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A program that computes the cost of painting a room with four walls.
#
# Input:
#   The dimensions of the room.
#   The price of paint per gallon.
#   The cost of labour per hour.
#
# Output: the cost to paint the walls of the room broken down in paint and labour costs.
#
# The painting company has determined that for every 50 square feet of wall they need 1 gallon of paint and 5 hours of labour.
#
# Room dimensions (in feet).
room_length = 10
room_width = 15
room_height = 12

# Paint price per gallon
paint_price = 100

# Labour cost per hour
labour_price = 20
# Calculate the area of the two types of walls the room has
wall_1 = room_length * room_height
wall_2 = room_width * room_height

# Total area for painting
total_area = 2 * wall_1 + 2 * wall_2

print("Total area is ":, total_area)

# Calculate the cost of paint needed
gallons = total_area / 50
paint_cost = gallons * paint_price

print("Paint cost is":, paint_cost)

# Calculate labour cost
hours = total_area / 50 * 5
labour_cost = hours * labour_price

print("Labour cost is":, labour_cost)

# Calculate total cost
total_cost = paint_cost + labour_cost

print("Total cost is":, total_cost)