// Program: PaintPricer.java  
// Author: M.Tween   
// Date: 5/21/19   
// Prices a paint job based on user input

// Global Constants  
Constant Integer SQ\_FT\_PER\_GALLON = 115  
Constant Integer HOURS\_PER\_GALLON = 8  
Constant Real LABOR\_COST\_PER\_HOUR = 20

// Main Module  
Module main()  
 // Declaring local variables  
 Declare Integer sqFeet = 0  
 Declare Real costPerGallon = 0

// Prompt for the square footage and read user input  
 Display “Please enter the number of square feet to be painted: “  
 Input sqFeet

// Prompt for the cost per gallon and read user input  
 Display “Please enter the paint cost per gallon: “  
 Input costPerGallon

// This calculates and displays the gallons of paint required and cost of paint  
 Call showPaintGallonsAndCost(sqFeet, costPerGallon)

// This calculates and displays the labour hours required and charges  
 Call showLaborHoursAndCost(sqFeet)

// This calculates and displays the total cost  
 Call showTotalCost(sqFeet, costPerGallon)

// The showPaintGallonsAndCost module takes user input to   
 // calculate the number of gallons needed and cost of paint  
 Module showPaintGallonsAndCost(Int sqFeet, Real costPerGallon)

// Local variables for this calculation  
 Real numGallons = 0  
 Real paintCost = 0

// Calculating the number of gallons divided by square feet per gallon  
 numGallons = sqFeet / SQ\_FT\_PER\_GALLON

// Calculating the paint cost (number of gallons \* cost per gallon)  
 paintCost = numGallons \* costPerGallon

// Now displaying the results!  
 Display “Number of gallons of paint required: “, numGallons  
 Display “Paint cost is $”, paintCost

// end this module and return to call point  
 End Module

// This module calculates and displays the labour hours required   
// and labour charges  
Module showLaborHoursAndCost(Real sqFeet)

// Declare local variables  
 Real numGallons = 0  
 Real numHours = 0  
 Real laborCost = 0

// Calculate number of hours: number of gallons required \* hours per gallon  
 numGallons = sqFeet / SQ\_FT\_PER\_GALLON  
 numHours = numGallons \* HOURS\_PER\_GALLON

// calculate labour cost: number of hours \* labour cost per hour  
 laborCost = numHours \* LABOR\_COST\_PER\_HOUR

// Display the results to the user  
 Display “Labor hours required: “, numHours  
 Display “Labor cost is $”, laborCost

// End the module and return to the call point  
 End Module

// This module calculates and displays the total cost  
 Module showTotalCost(Real sqFeet, Real costPerGallon)

// Declare local variables  
 Real numGallons = 0  
 Real paintCost = 0  
 Real numHours = 0  
 Real laborCost = 0

// calculate the number of gallons: square footage / square feet  
 numGallons = sqFeet / SQ\_FT\_PER\_GALLON

// calculate paint cost: number of gallons \* cost per gallon  
 paintCost = numGallons \* costPerGallon

// calculate number of hours: number of gallons required \*  
 // hours per gallon  
 numHours = numGallons \* HOURS\_PER\_GALLON

// calculate the labour cost: number of hours \* labour cost per hour  
 laborCost = numHours \* LABOR\_COST\_PER\_HOUR

// display the results  
 Display “Total cost is $”, (paintCost + laborCost)

// end module and return to call point  
 End Module

// end the program  
End Module