**CSD 1134 – 2023S**

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**Assignment # 6**

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**Pseudocode:**

// Main module, entry point for the program

Module Main()

// Declare variables to store user input along with calculated

// values for paint area, paint price, required paint volume

// required labor hours, total paint cost, total labor hour and total cost for whole job

Declare Real paint\_area\_901142

Declare Real paint\_price\_901142

Declare Real paint\_volume\_901142

Declare Real labor\_rate\_901142

Declare Real labor\_hours\_901142

Declare Real paint\_cost\_901142

Declare Real labor\_charges\_901142

Declare Real work\_cost\_901142

// Ask user input for painting area of wall and

//store the value in local variable paint\_area\_901142

Display "Enter the area of the wall in square feet: "

Input paint\_area\_901142

// Ask user input for paint price per gallons and

//store the value in local variable paint\_price\_901142

Display "Enter the per gallon price for the paint: "

Input paint\_price\_901142

// Call respective function and store the returned value in respective local variables

Set paint\_volume\_901142 = calculatePaintVolume(paint\_area\_901142)

Set labor\_rate\_901142 = calculateLaborRate(paint\_area\_901142)

Set labor\_hours\_901142 = calculateLaborHours(paint\_area\_901142)

Set paint\_cost\_901142 = calculatePaintCost(paint\_price\_901142, paint\_volume\_901142)

Set labor\_charges\_901142 = calculateLaborCost(labor\_rate\_901142, labor\_hours\_901142)

Set work\_cost\_901142 = calculateJobCost(paint\_cost\_901142, labor\_charges\_901142)

Display "The volume of paint required in gallons is: " + paint\_volume\_901142

Display "The total work hours required is: " + labor\_hours\_901142

Display "The total cost of the paint is: $" + paint\_cost\_901142

Display "The total labor cost is: $" + labor\_charges\_901142

Display "The total cost of the whole paint job is: $" + work\_cost\_901142

End Module

// Function to calculate volume of paint required

Function calculatePaintVolume(Real paint\_area\_901142)

Declare Real area\_901142

Set area\_901142 = paint\_area\_901142 / 150

Return area\_901142

End Function

// Function to calculate hourly rate for labor

Function calculateLaborRate(Real paint\_area\_901142)

Declare Real labor\_rate\_901142

If paint\_area\_901142 > 2000 Then

Set labor\_rate\_901142 = 25.00

Else

Set labor\_rate\_901142 = 30.00

End If

Return labor\_rate\_901142

End Function

// Function to calculate total labor hours

Function calculateLaborHours(Real paint\_area\_901142)

Declare Real hours\_901142

Set hours\_901142 = paint\_area\_901142 / 150 \* 9

Return hours\_901142

End Function

// Function to calculate total cost for paint

Function calculatePaintCost(Real paint\_price\_901142, Real total\_gallons\_paint\_901142)

Declare Real paint\_cost\_901142

Set paint\_cost\_901142 = total\_gallons\_paint\_901142 \* paint\_price\_901142

Return paint\_cost\_901142

End Function

// Function to calculate total cost for labor

Function calculateLaborCost(Real labor\_rate\_901142, Real total\_labor\_hours\_901142)

Declare Real labor\_cost\_901142

Set labor\_cost\_901142 = total\_labor\_hours\_901142 \* labor\_rate\_901142

Return labor\_cost\_901142

End Function

// Function to calculate the total cost for the whole job

Function calculateJobCost(Real paint\_cost\_901142, Real total\_labor\_cost\_901142)

Declare Real total\_cost\_901142

Set total\_cost\_901142 = paint\_cost\_901142 + total\_labor\_cost\_901142

Return total\_cost\_901142

End Function

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