CSD 1134 – 2023S

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Assignment # 6

Pseudocode:

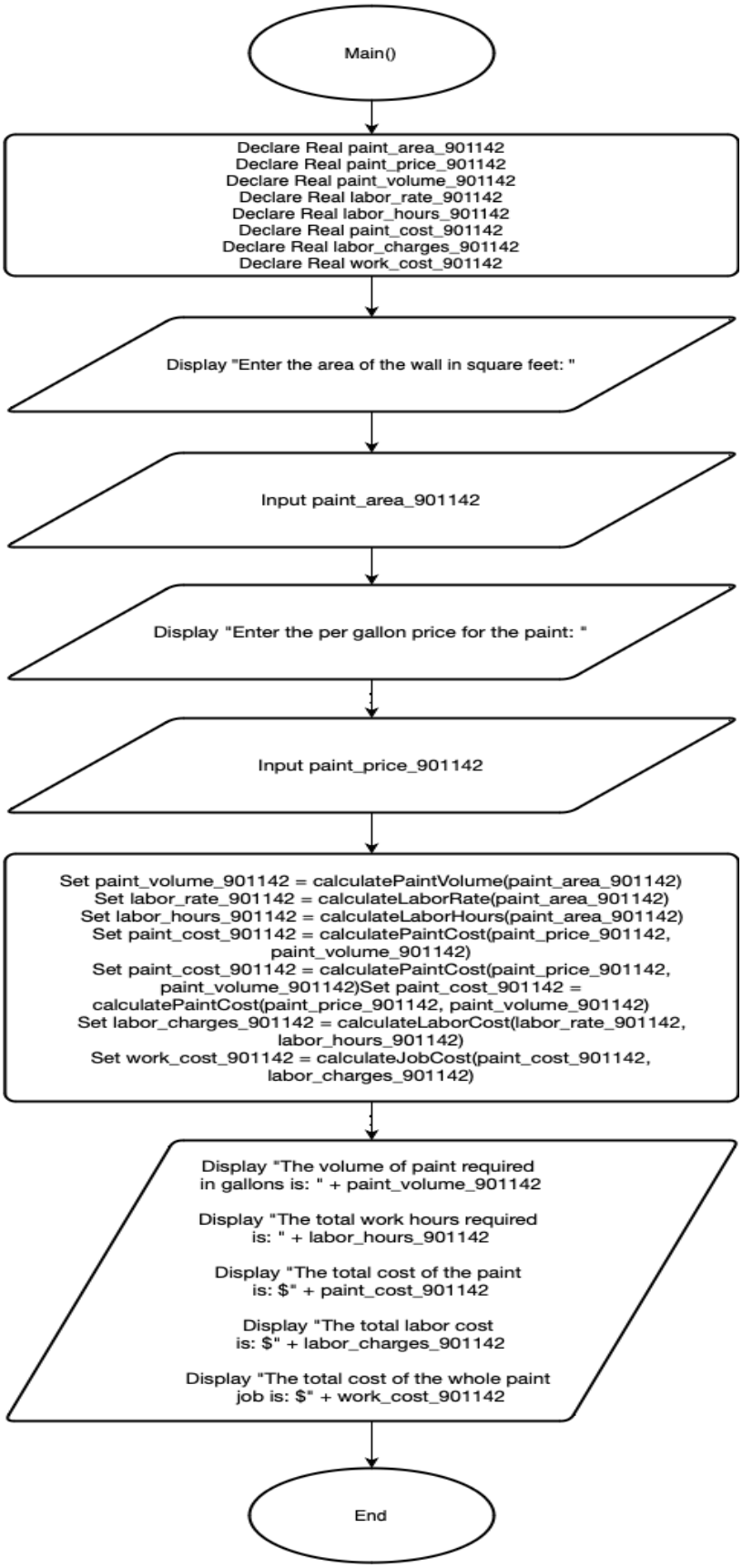
```
// Main module, entry point for the program
Module Main()
    // Declare variables to store user input along with calculated
    // values for paint area, paint price, required paint volume
    // required labor hours, total paint cost, total labor hour and total cost for whole job
    Declare Real 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
```

Flow Chart:

Roshan Shrestha (901142)



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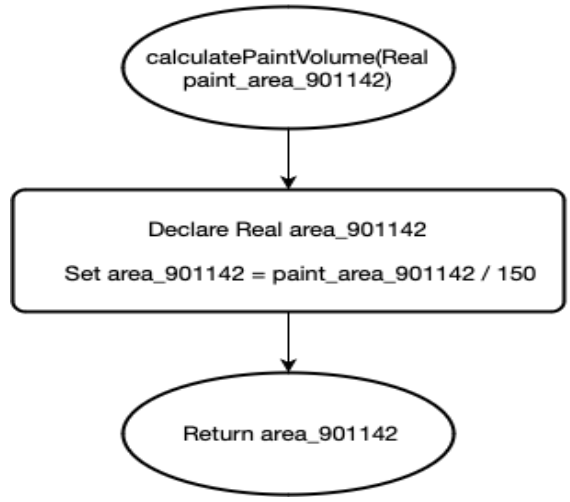

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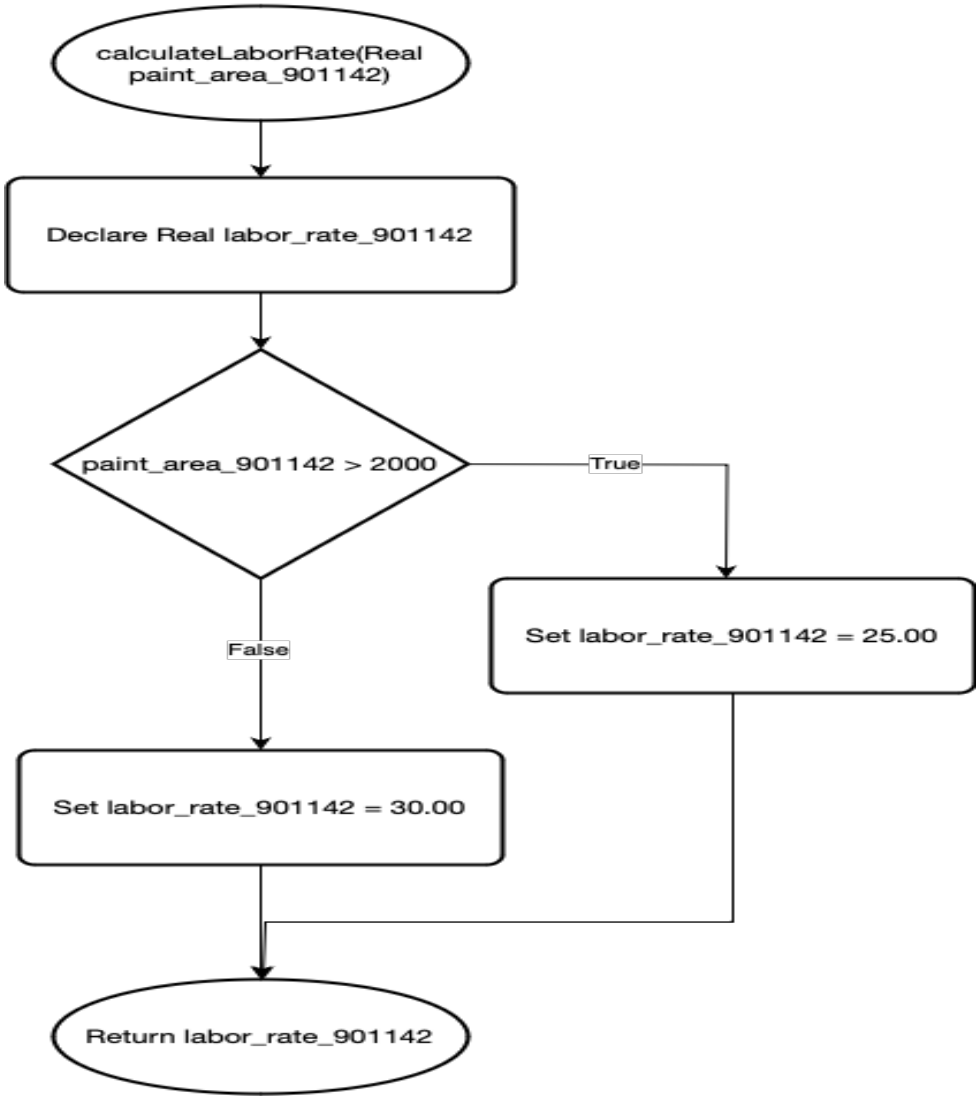

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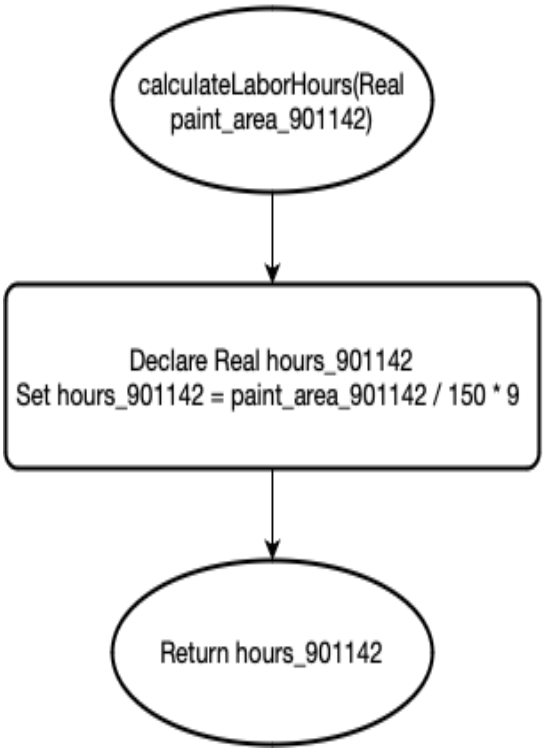

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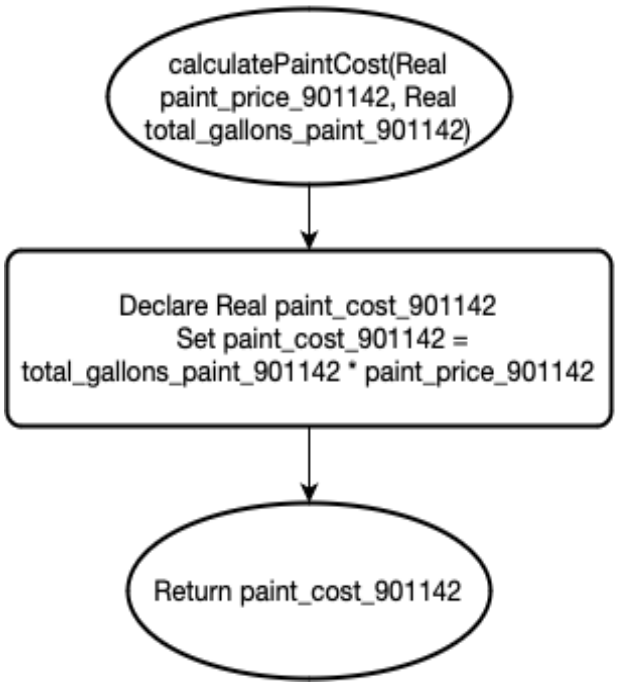

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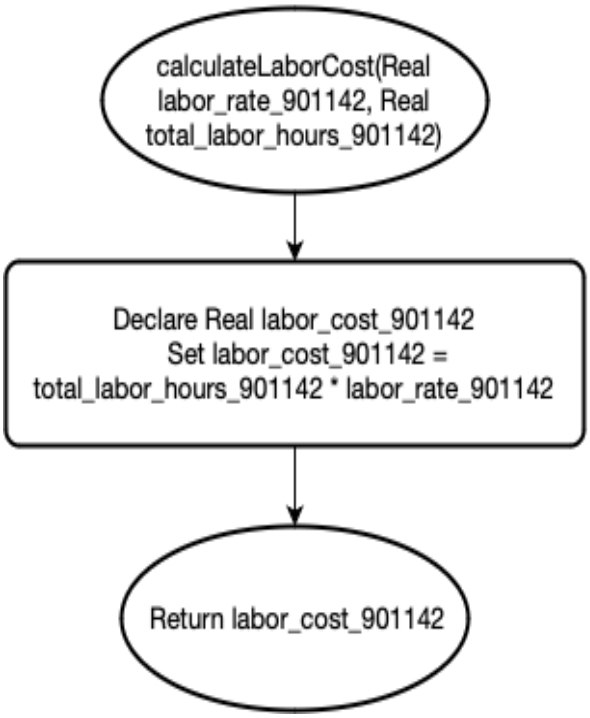

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