Pseudo Code

1. **Initialize**

**PaintObject**

**numBaseCoat:Number,**

**numFinishCoat:Number**

**areaCovered:[ ]**

**areaNotCovered:[ ]**

**totalAreaCoveredM2:Number**

**totalCost:Number**

**CONST BASE\_PRICE:40.75**

**CONST FINISH\_PRICE:47.75**

**CONST BASE\_COVERAGE = 12**

**CONST FINISH\_COVERAGE = 1**

1. **Function** GetPaint - *Function to get the number of coats for base and finish.*
2. **Function** GetInput - *Function to get the walls to be painted and areas that won't be painted such as windows and doors.*
3. **Function** CalculateM2 - *Function calculates the area of all inputs and subtracts all areas not to be painted to calculate total area to be painted*
4. **Function** CalculatePaintCost - *Function to determine the total cost of paint based on area to be painted and number of cans used for base and finish*
5. **Function** DisplayOutput - *Function that displays the output: Cost, Area To Be Painted.*

Get Paint

1. **Function** GetBase - *Function to get the amount of base the user wants to use either one coat or two*
2. **Function** GetFinish - *Function to get the amount of finish the user wants to use either one coat or two*

Get Base

1. Declare numOfBaseCoats
2. Display Msg:

Lets get the number of BASE coats you want.

How many BASE coats do you want?

1. Get user input and assign to numOfBaseCoats
2. Validate user input to be a number
   1. Yes: Continue
   2. No Get input again
3. If numOfCoats <= 1
   1. Yes: Display warning message: “Base coat paints have less coverage as they are designed to soak into the wall/surface material and seal the pores so a smooth and consistent final coat can be applied for a better professional look.

Typically, two (2) coats are applied for best results, but this ultimately is up to the customer if it is even used at all

* + 1. Ask them if they want to change the number of base coats:
    2. Yes: Go back
    3. No: Continue
  1. No: Continue

1. Add number to PaintObject.base

Get Finish

1. Declare numOfFinishCoats
2. Display Msg:

We can calculate the number of coats you will need based on the number of base coats you have chosen

1. If PaintObject.base = 0
   1. numOfFinishCoats = 3
2. If PaintObject.Base = 1
   1. numOfFinishCoats = 2
3. If PaintObject.Base = 2
   1. numOfFinishCoats = 1
4. Display “The number of Finish Coat you will need based on {PaintObject.Base} base coats is { numOfFinishCoats}
5. Can you confirm this is what you want
   1. Yes Continue
   2. No: Display: Please enter the number of Finish coats you want:
   3. Validate input
   4. Assign a value to numOfFinishCoats
6. Add number to PaintObject.base

CalculatePaintAreaM2

1. **Function:** Get Wall/Ceiling Area
2. **Function:** Get the area not to be painted
3. **Function:** Calculate total Area

GetWallArea

1. Declare NumOfWalls
2. Ask the user how many walls they are painting
3. Validate value
4. Assign the value to numOfWalls
5. For each numOfWalls:
   1. Get length
   2. Get Width
   3. Calculate the total wall area
   4. Add total wall area to PaintObject.Area\_Covered
6. Exit

GetAreaNotToBePainted

1. Declare num
2. Display Msg: This is to get all areas you don't want to pain,t like windows and doors
3. Ask the user: how many windows or doors?
4. Validate input
5. Assign input to num
6. For each num:
   1. Get length
   2. Get Width
   3. Calculate the total wall area
   4. Add total wall area to PaintObject.Area\_Not\_Covered
7. Exit

Calculate Total Area To Be Painted

1. Declare totalArea : Number
2. totalArea = Sum all PaintObject.Area\_Covered - Sum of all PaintObject.Area\_Not\_Covered
3. Assign totalArea to PaintObject.Total\_Area\_Covered

Calculate Paint Costs

1. Declare BasePaintPrice. FinishPaintPrice
2. BasePaintPrice = RoundUP(PaintObject.Total\_Area\_Covered \* PaintObject.Base /Coverage) \* PaintObject.BasePrice
3. FinishPaintPrice = RoundUp(PaintObject.Total\_Area\_Covered \* PaintObject.Finish /Coverage)\* PaintObject.FinishPrice
4. PaintObject.TotalCost = (BasePaintPrice + FinishPaintPrice ) \* 1.13

Display:

Total Costs: $XXX,XXX.XX

Total Cans of Base Needed: XX

Total Cans of Finish Needed:XX

Total Area Covered: XX m