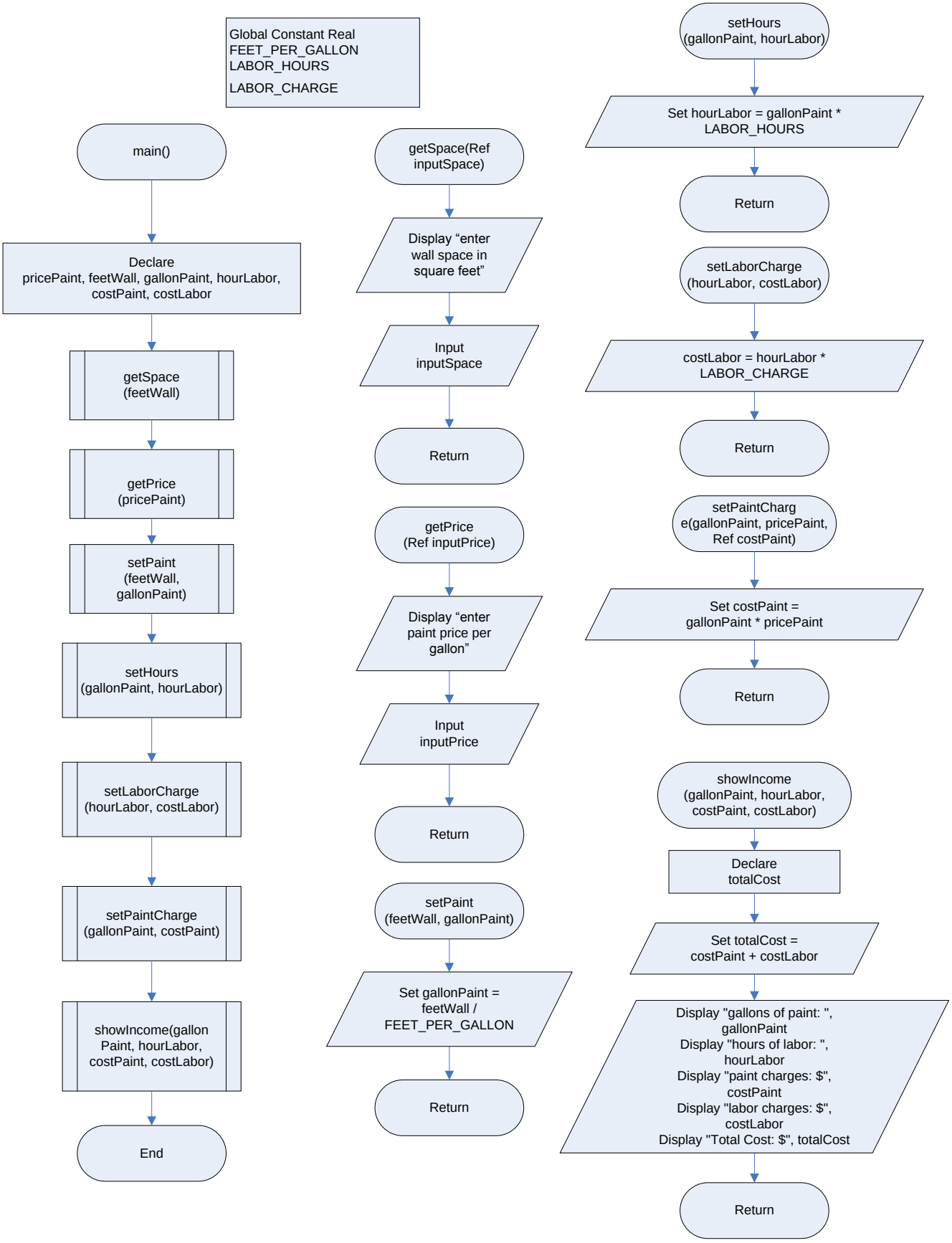
Programming Exercise 3-9

```
# Global constants for paint job estimator
FEET_PER_GALLON = 115
LABOR_HOURS = 8
LABOR_CHARGE = 20

# main module
def main():
    # Local variables
    pricePaint = 0.0
    feetWall = 0.0
    gallonPaint = 0
    hourLabor = 0
    costPaint = 0.0
    costLabor = 0.0

    # Get wall space
    feetWall = float(input("Enter wall space in square feet: "))

    # Get paint price
    pricePaint = float(input("Enter paint price per gallon: "))

    # Calculate gallons of paint
    gallonPaint = int(feetWall / FEET_PER_GALLON) + 1

    # Calculate labor hours
    hourLabor = gallonPaint * LABOR_HOURS

    # Calculate labor charge
    costLabor = hourLabor * LABOR_CHARGE

    # Calculate paint cost
    costPaint = gallonPaint * pricePaint

    # print cost estimate
    showCostEstimate(gallonPaint, hourLabor, costPaint, costLabor)


# The showCostEstimate function accepts gallonPaint, hourLabor, costPaint,
# costLabor as arguments and displays the corresponding data
def showCostEstimate(gallonPaint, hourLabor, costPaint, costLabor):
    #Local variable
    totalCost = 0.0

    #calculate total cost
    totalCost = costPaint + costLabor

    #display results
    print ("Gallons of paint: ", gallonPaint)
    print ("Hours of labor: ", hourLabor)
    print ("Paint charges: $" , format(costPaint, '.2f'))
    print ("Labor charges: $" , format(costLabor, '.2f'))
    print ("Total cost: $" , format(totalCost, '.2f'))
```


Global Constant Real
FEET_PER_GALLON
LABOR_HOURS
LABOR_CHARGE
main()
Declare
pricePaint, feetWall, gallonPaint, hourLabor,
costPaint, costLabor
getSpace
(feetWall)
getPrice
(pricePaint)
setPaint
(feetWall,
gallonPaint)
setHours
(gallonPaint, hourLabor)
setLaborCharge
(hourLabor, costLabor)
setPaintCharge
(gallonPaint, costPaint)
showIncome(gallon
Paint, hourLabor,
costPaint, costLabor)
End
getSpace(Ref
inputSpace)
Display “enter
wall space in
square feet”
Input
inputSpace
Return
getPrice
(Ref inputPrice)
Display “enter
paint price per
gallon”
Input
inputPrice
Return
setPaint
(feetWall, gallonPaint)
Set gallonPaint =
feetWall /
FEET_PER_GALLON
Return
setHours
(gallonPaint, hourLabor)
Set hourLabor = gallonPaint *
LABOR_HOURS
Return
setLaborCharge
(hourLabor, costLabor)
costLabor = hourLabor *
LABOR_CHARGE
Return
setPaintCharg
e(gallonPaint, pricePaint,
Ref costPaint)
Set costPaint =
gallonPaint * pricePaint
Return
showIncome
(gallonPaint, hourLabor,
costPaint, costLabor)
Declare
totalCost
Set totalCost =
costPaint + costLabor
Display "gallons of paint: ",
gallonPaint
Display "hours of labor: ",
hourLabor
Display "paint charges: $",
costPaint
Display "labor charges: $",
costLabor
Display "Total Cost: $", totalCost
Return