#This program will calculate the area needed, including waste, and rate

#necessary to install a laminate floor

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class LaminateFloor:

def \_\_init\_\_(self, NewLength, NewWidth, NewPrice):

self.\_\_length = NewLength

self.\_\_width = NewWidth

self.\_\_price = NewPrice

self.\_\_area = float()

self.\_\_waste = float()

self.\_\_rate = float()

self.\_\_totalsqfoot = float()

self.\_\_materialcost = float()

self.\_\_totalcost = float()

#Calling the methods

self.determineArea()

self.determineWaste()

self.determineTotal()

self.determineRate()

self.determineMaterialCost()

self.determineTotalCost()

def determineArea(self):

self.\_\_area = self.\_\_length \* self.\_\_width

#end determineArea

def determineWaste(self):

self.\_\_waste = self.\_\_area \* 0.15

#end determineWaste

def determineTotal(self):

self.\_\_totalsqfoot = self.\_\_area + self.\_\_waste

#end determineTotal

def determineMaterialCost(self):

self.\_\_materialcost = self.\_\_totalsqfoot \* self.\_\_price

#end determineMaterialCost

def determineRate(self):

if self.\_\_totalsqfoot >= 150:

self.\_\_rate = 200

elif self.\_\_totalsqfoot >= 100:

self.\_\_rate = 100

else:

self.\_\_rate = 50

#end if

#end determineRate

def determineTotalCost(self):

self.\_\_totalcost = self.\_\_rate + self.\_\_materialcost

#Define Access Methods

def returnTotalsqfoot(self):

return self.\_\_totalsqfoot

#end returnTotalsqfoot

def returnArea(self):

return self.\_\_area

#end returnArea

def returnWaste(self):

return self.\_\_waste

#end returnWaste

def returnRate(self):

return self.\_\_rate

#end returnRate

def returnMaterialCost(self):

return self.\_\_materialcost

#end returnMaterialCost

def returnTotalCost(self):

return self.\_\_totalcost

#end returnTotalCost

def main():

#declare variables

UserWidth = float()

UserLength = float()

UserPrice = float()

materialcost = float()

totalcost = float()

#Ask user for the length and the width

UserLength = float(input("Enter the room's length:\t"))

UserWidth = float(input("Enter the room's width:\t\t"))

#Ask user for the price per square foot of material

UserPrice = float(input("Enter the price per square foot of material:\t"))

#Create the new class

MyRoom = LaminateFloor(UserLength, UserWidth, UserPrice)

#Print out totals

print("~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~")

print("Total Area:\t\t", MyRoom.returnArea())

print("Waste:\t\t\t", MyRoom.returnWaste())

print("Total Square Feet:\t", MyRoom.returnTotalsqfoot())

print("Rate:\t\t\t", MyRoom.returnRate())

print("Total Materials Cost:\t", MyRoom.returnMaterialCost())

print("Total Cost of Project:\t", MyRoom.returnTotalCost())

main()