Using Python to Create a Program for Calculating the Amount of Paint Cans Needed to Paint Rooms

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Introduction:
• Our research project was researching dry wall absorption and Python
• We hope this will bring to light new ideas in industry and to add to the Fourth Industrial Revolution
• This could help to provide an analysis database for painters

Method:
• Learned how to use Python
• Created program but then learned more about Python and realized the program can be written neater
• Studied paint usage, dry wall absorption, and human error

Future Directions:
• Analyze the absorption rate of more paints
• Determine if color is a factor of the absorption rate in a paint
• Determine humidity ratios for paint absorption
• Learn how to write the program more efficiently with more variables

```
if rooms == 1:
    r1 = float(input("For the first room, what is the square feet of one of the walls?\n"))
    r2 = float(input("for the same room, what is the square feet of the adjacent wall?\n"))
    sqft = (r1 + r2 + r2 + r1)
    doors = float(input("How many doorways are there?\n"))
    if doors == 1:
        d1 = float(input("What is the square feet of the doorway?\n"))
        sqft = sqft - d1
        trim = float(input("What is the total length of trim in feet?\n"))
        wtrm = float(input("What is the width of the trim in feet? Express as a decimal.\n"))
        sqft = ((trim + wtrm) * wtrm) + d1
    if windows == 1:
        w1 = float(input("What is the square feet of window?\n"))
        sqft = sqft - w1
        trim = float(input("What is the width of the trim around the window in feet?\n"))
        wtrm = float(input("What is the total length of the trim in feet?\n"))
        sqft = ((trim + wtrm) * wtrm) + w1
    if doors == 2:
        d1 = float(input("What is the square feet of the first doorway?\n"))
        d2 = float(input("What is the square feet of the second doorway?\n"))
        sqft = d1 + d2
        trim = float(input("What is the total length of trim in feet?\n"))
        wtrm = float(input("What is the width of the trim in feet?\n"))
        sqft = ((trim + wtrm) * wtrm) + d1 + d2
    if doors == 3:
        d1 = float(input("What is the square feet of the first doorway?\n"))
        d2 = float(input("What is the square feet of the second doorway?\n"))
        d3 = float(input("What is the square feet of the third doorway?\n"))
        sqft = d1 + d2 + d3
        trim = float(input("What is the total length of trim in feet?\n"))
        wtrm = float(input("What is the width of the trim in feet?\n"))
        sqft = ((trim + wtrm) * wtrm) + d1 + d2 + d3

stater = 1
while stater <= rooms:
    print("\nRoom", stater)
    area = int(input("What is the total square feet of YMO walls in the room?\n"))
    "These should be adjacent walls.\n")
    roomArea = extend(area)
    doors = int(input("What is the total square feet of the doors in the room?\n"))
    doorsPerRoom = extend[doors]
    dtrim = int(input("What is the total square feet of the door trim in the room?\n"))
    doorTrimPerRoom = extend[dtrim]
    windows = int(input("What is the total square feet of the windows in the room?\n"))
    windowPerRoom = extend[windows]
    wtrim = int(input("What is the total square feet of the window trim in the room?\n"))
    windowTrimPerRoom = extend[wtrim]
    stater = stater + 1
```

Different paints to gauge absorption rate

First attempt at program

Final attempt at program