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#-----------------------------------#
#   Connor Seemann Seat 23 Lab 5.1   #
#-----------------------------------#

#This program will calculate the average and the total of numbers entered
print("This program will calculate the average and the total of numbers
 entered\n")

num = 1
entered = []

while True: #making this loop true until the break

    num = float( input("Please enter any number, to quit enter 0:\n") ) #
     getting the user input

    if num == 0 and len(entered) != 0: # checking for the quit statement
        break

    elif num == 0 and len(entered) == 0: # catches if the user has only
     entered 0 and resets the list
        print("You didn't enter any numbers...\n please try again\n")
        entered = []

    elif num != 0: # Continues normally and appends num to the entered list
        entered.append(num)

    else: # catches fall throughs for variables I didn't account for
        print("Please make sure you entered an integer...")

total = 0

for i in entered: # this loop will add the numbers together
    total += i

# output statements
print("You entered {} numbers.".format(len(entered)) )
print("The total is", total)
print("The average is", total/len(entered) )

#-----------------------------------#
#   Connor Seemann Seat 23 Lab 5.2   #
#-----------------------------------#

# This program will tell people when they will be a millionaire from the
 amount they deposit with an intrest reate of 5.5%
print("This program will tell people when they will be a millionaire from the
 amount they deposit with an intrest reate of 5.5%\n\n")

a = 0       # a is the amount after t(1 + (r/n)) ** (nt) years
t = 0       # t is time in years
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r = 0.055   # the rate is 5.5%
n = 1       # amount of times intrest is celcualted (

deposit = float( input("Enter your initial deposit: ") )
r       = float( input("Please enter the rate as a percentage (ex: 5.5): ") )
r       = r/100
n       = float( input("Please enter the amount of times compounding per year:
 ") )

while a <= 1000000:
    a = deposit*(1 + (r/n))**(n * t)
    t += .00001 # Making the output more exact number of years

print ("\nfrom an initial deposit of {} with a rate of {} and compounding {}
 time(s) per year,".format(deposit, r, n) )
print ("You will be a millionair in {:.4f} years!".format(t))

#-----------------------------------#
#   Connor Seemann Seat 23 Lab 5.3   #
#-----------------------------------#

# This program will display a staircase of numbers
print("This program will display a staircase of numbers")

for i in range(1, 7 + 1):
    for j in range(1, i):
        print(j, end='')
    print()
```