Douglas Rosenfield
CIS122 - W1
02/22/19
Lesson 7 Assignment

```
# Program:      Lesson 7 Calorie Counter
# Programmer:   Douglas Rosenfield
# Date:         02/22/19
# Purpose:      The purpose of this program is to count the calories of food items based on user input.

# banner
print ("welcome to my calorie counter program")

# define variables
cont = ""           # sentinel
item_cnt = int(0)   # item count
tot_cals = int(0)   # total calories

# define functions

def calc_cals(g_type, grams):
    if g_type == "f":
        return grams * 9
    else:
         return grams * 4

while cont.lower() != "y" and cont.lower() != "n":
    cont = input("Would you like to track a meal? (y/n)> ")

while cont.lower() == "y":
    valid_data = False  #bool flag

    # capture input
    while not valid_data:
        item_name = input("Please enter the item> ")
        if len(item_name) > 20:
            print("Not a valid food name")
        elif len(item_name) == 0:
            print("You must enter a name")
        else:
            valid_data = True

    valid_data = False
    while not valid_data:
        try:
            g_carbs = int(input("Enter grams of carbs> "))
            valid_data = True
        except Exception as detail:
            print("carbs error: ", detail)
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```
    valid_data = False
    while not valid_data:
        try:
            g_fats = int(input("Enter grams of fats> "))
            valid_data = True
        except Exception as detail:
            print("fats error: ", detail)

    valid_data = False
    while not valid_data:
        try:
            g_prot = int(input("Enter grams of proteins> "))
            valid_data = True
        except Exception as detail:
            print("protein error: ", detail)

    # math below
    cals = calc_cals("c", g_carbs) + calc_cals("f", g_fats) + calc_cals("p", g_prot)
    # confirmation of add to meal block here
    valid_data = False  # bool flag
    while not valid_data:
        incl = input("Add {} to your meal? (y/n)> ".format(item_name))
        print()
        if incl.lower() == "y":
            tot_cals = tot_cals + cals
            item_cnt += 1
            print("{} has been added to your meal!\n".format(item_name))
            valid_data = True
        elif incl.lower() == "n":
            print("{} was not added to your meal.\n".format(item_name))
            valid_data = True
        else:
            print("Your input was not valid. Please input either 'y' or 'n'.")

    # output
    print ("Total calories for {} are {}".format(item_name, cals))
    cont = input("Would you like to track another item? (y/n)> ")

print("Your meal has {} items and contains {} calories.".format(item_cnt, tot_cals))
print("Thank you, have a nice day!")
```

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```
douglas@Douglas-Y700 ~/assignments/CIS122/week_07  ‹master*›
$ python3 calories.py
welcome to my calorie counter program
Would you like to track a meal? (y/n)> y
Please enter the item> apple
Enter grams of carbs> 2
Enter grams of fats> 4
Enter grams of proteins> 6
Add apple to your meal? (y/n)> y

apple has been added to your meal!

Total calories for apple are 68
Would you like to track another item? (y/n)> n
Your meal has 1 items and contains 68 calories.
Thank you, have a nice day!
```

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```
# Program:      Lesson 7 Girl Scout Cookies Order Form
# Programmer:   Douglas Rosenfield
# Date:         02/22/2019
# Purpose:      To create an order form using try to validate data in user inputs

#variables
import locale
locale.setlocale( locale.LC_ALL, '')

item_cnt = 0              # count of items ordered
order_total = 0.0          # accumulated total dolars
price = 3.5               # all cookies are #3.50 per box

# define functions
def disp_items():
    #display cookie list
    #This is a simple function that displays available
    #cookie flavors.
    print("Please choose one of our flavors. Enter the item number to choose.")
    print("num\tflavor")
    print("1. \tSavannahs")
    print("2. \tThin Mints")
    print("3. \tTag-A-Longs")
    print()

def calc_tot(qty):
    # function accepts a passed quantity
    # multiplies it by price, returns total
    return qty * 3.5

def print_order():
    # displays order totals
    fmt_total = locale.currency(order_total, grouping = True)
    print("\nYou ordered {} item(s) for a total price of {}".format(item_cnt,fmt_total))

# Banner
print("BUY COOKIES. IT IS MANDATORY.")
user = input("Please enter your name> ")

# Validate data entry
cont = "" # set cont to neither "y" nor "n"
while cont.lower() != "y" and cont.lower() != "n":
    cont = input("Would you like to place an order? (y/n) > ")
```

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```
while cont.lower() == "y":
    print()
    valid_data = False #bool flag

    #input and data validation

    while not valid_data:
        # display cookie list
        disp_items()
        item = input("enter item number> ")

        if item == "1" or item == "2" or item == "3":
            valid_data = True
        else:
            print ("\nThat was not a valid choice, please try again.")

    valid_data = False      #reset bool flag
    while not valid_data:
        try:
            while not valid_data:
                qty = int(input("enter quantity> "))
                if 1 <= qty <= 10:
                    valid_data = True
                else:
                    print("Please enter a number between 1 and 10")
        except Exception as detail:
            print("quantity error: ", detail)
            print("Are you sure you entered a number?")

    # determine totals
    item_total = calc_tot(qty)
    fmt_total = locale.currency(item_total, grouping=True)

    # determine cookie name for output display
    if item == "1":
        name = "Savannah"
    elif item == "2":
        name = "Thin Mints"
    else:
        name = "Tag-a-longs"

    print("\n{}  {}  {}  {}".format(name, qty, price, fmt_total))
    print()
```

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```
    # verify inclusion of this item
    valid_data = False

    while not valid_data:
        incl = input("Would you like to add this to your order? (y/n)> ")
        print()
        if incl.lower() == "y":
            order_total = order_total + item_total #can += item_total work here?
            item_cnt += 1
            valid_data = True
            print("{} was added to your order".format(name))
        elif incl.lower() == "n":
            print ("{} was not added to your order".format(name))
            valid_data = True
        else:
            print("That was not a valid response. Please input either y or n." )

    # add another item?
    cont = input("\nWould you like to add another item? (y/n)> ")

print_order()
print("Thank you for your order, {}!".format(user))
```

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```
douglas@Douglas-Y700 ~/assignments/CIS122/week_07  ‹master*›
$ python3 cookies.py
BUY COOKIES. IT IS MANDATORY.
Please enter your name> Doug
Would you like to place an order? (y/n) > y

Please choose one of our flavors. Enter the item number to choose.
num     flavor
1.      Savannahs
2.      Thin Mints
3.      Tag-A-Longs

enter item number> 2
enter quantity> 8

Thin Mints  8  3.5  $28.00

Would you like to add this to your order? (y/n)> y

Thin Mints was added to your order

Would you like to add another item? (y/n)> n

You ordered 1 item(s) for a total price of $28.00
Thank you for your order, Doug!
douglas@Douglas-Y700 ~/assignments/CIS122/week_07  ‹master*›
$
```