

# CS 1301 Pair Homework 2 – Conversions

**Due: Monday February 1<sup>st</sup>, before 11:55 PM**

**Out of 100 points**

**Files to submit: HW2.py**

## **THIS IS A PAIR PROGRAMMING ASSIGNMENT!!**

You are welcome to work with a partner *from your recitation*, but you may also work alone if you wish. Your pair may collaborate with other students in this class. Collaboration means talking through problems, assisting with debugging, explaining a concept, etc. You should not exchange code or write code for other pairs.

Collaboration at a reasonable level will not result in substantially similar code. For pair programming assignments, you and your partner should turn in identical assignments with both your names at the top.

***NOTE: EACH partner is responsible for turning in their own assignment! If you fail to turn in your assignment, you will receive a zero, regardless of if your partner turned in their assignment or not.***

For Help:

- TA Helpdesk – Schedule posted on class website.
- Email TA's or use T-Square Forums

Notes:

- Don't forget to include the required comments and collaboration statement (as outlined on the course syllabus).
- Do not wait until the last minute to do this assignment in case you run into problems.

## **Conversions / Calculations (100 points)**

You will write a few python functions for practice with calculations. In your HW2.py file, include a comment at the top with your name, section, GTID/Email, and your collaboration statement. Here is an example of an appropriate collaboration statement (the # character in Python is for comments that are not part of the code):

```
#George P. Burdell 902112358
```

```
#gburdell3@gatech.edu
```

```
#My partner, Name, and I worked on this assignment alone, using only this semester's course materials.
```

```
***ALWAYS REMEMBER THE COLLABORATION STATEMENT***
```

Also include each of the following functions:

- **cocaCola**
- **parksAndRec**
- **iLoveFrozen**
- **oscars**
- **breakfastPlatters**
- **springBreakCalc**

## 1. Function Name:

**cocaCola**

Parameters:

**None**

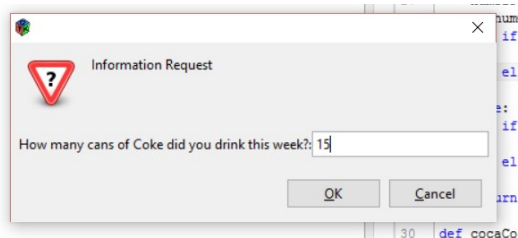
Return Value:

**totalAmount**

Description:

Write a function that calculates how much money a person has wasted a week buying Coke. Ask the user how many cans of coke they bought that week, and assuming each can is \$0.99, calculate how much money they spent. Be sure to use a descriptive prompt so the user knows what to type in. **Return** the amount spent.

Test Case:



14.85

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## 2. Function Name:

**parksAndRec**

Parameters:

**None**

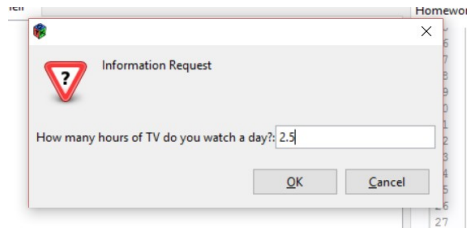
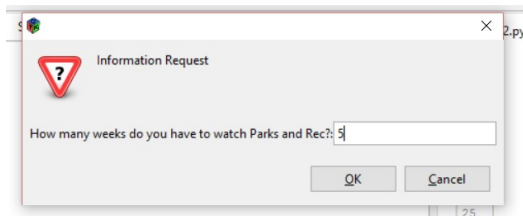
Return Value:

**numOfEpisodes**

Description:

Every season of Parks and Recreation are now on Netflix!!! Write a function to calculate how many episodes you can watch within a given time frame. Ask the user how many **weeks** they have to watch (as an integer) as well as how many **hours** of TV they watch a day (as a float). Assuming that each episode is 21 minutes long, how many episodes can the user watch? **Return** the number of episodes as an integer.

Test Case:



250

### 3. Function Name:

**iLoveFrozen**

Parameters:

**dollars**

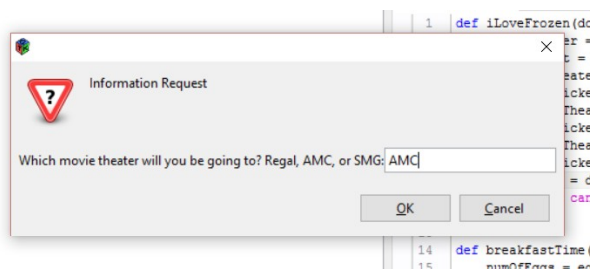
Return Value:

**None**

Description:

Good news! Frozen is back out in theaters and you want to see Elsa's beautiful face on the big screen as many times as you can before it stops showing. Write a function that takes the parameter **dollars** which represents the amount of money you have. Ask the user which movie theater they would like to go to: Regal, AMC, or SMG. Regal costs \$12 a ticket, AMC costs \$15 a ticket, and SMG costs \$9 a ticket. Depending on their response, calculate the number of times they can see Frozen as an integer. **Print** out this value as a descriptive sentence to the user.

Test Case:



```
python>>> iLoveFrozen(56)
You can watch Frozen 3 times.
Ok
```

### 4. Function Name:

**oscars**

Parameters:

**winners**

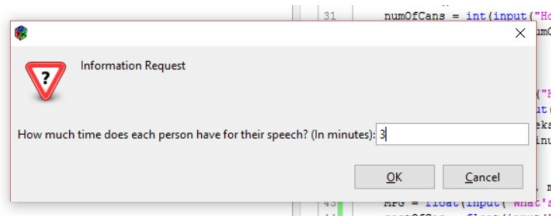
Return Value:

**None**

Description:

Oscar season is here and you want to know what time the ceremony is going to end. Write a function that takes in the parameter **winners** to represent the number of winners this year. Ask the user how long they think each speech will take (in minutes). If the Oscars start exactly at 8:00, what time will it end after all of the speeches? **Print** out the time in a descriptive sentence using the correct time format. You may assume that the TV network won't let the Oscar's go past 11:59pm.

Test Case:



```
python>>> oscar(32)
The Oscars will end at 9:36.
Ok
```

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## 5. Function Name:

**springBreakCalc**

Parameters:

**people, miles, costOfHotel**

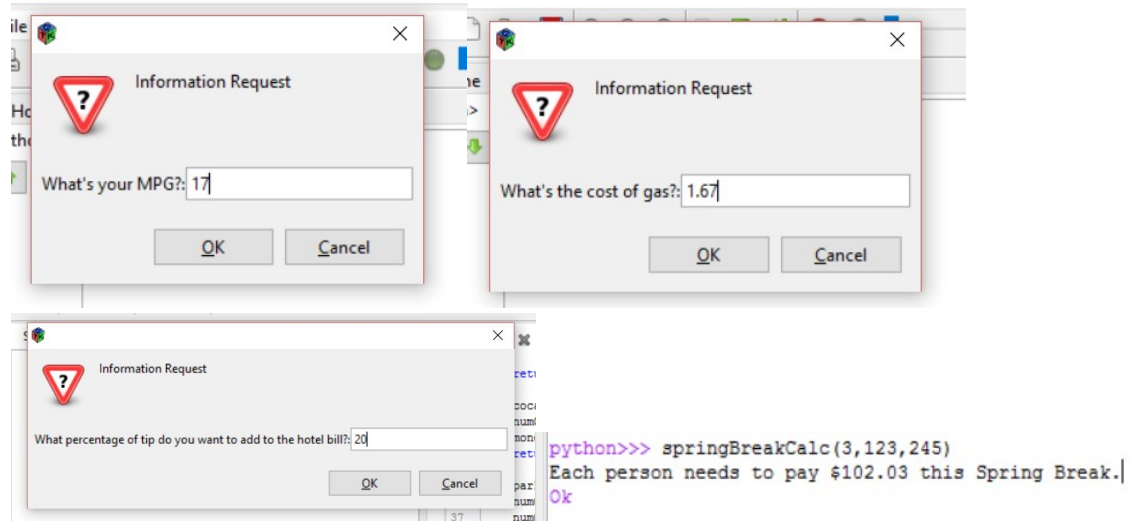
Return Value:

**None**

Description:

It's finally Spring Break and your squad wants to take a trip to Disney World!!! Write a function that calculates how much each person will have to pay. The function will take in 3 parameters: **people** (number of people going on the trip), **miles** (number of miles driven), and **costOfHotel** (how much the hotel will cost). Get the MPG (miles per gallon), cost of gas, and percentage of tip (for the hotel) from the user. With all of this, calculate how much the trip will be and then split the cost amongst the number of people. **Print** a descriptive sentence with the amount, **rounded to 2 decimals**.

Test Case:



## 6. Function Name:

Parameters:

**eggs, bacon, grits**

Return Value:

**numOfPlatters**

Description:

You're working at West Egg Café and you are making your signature breakfast platters which include 2 eggs, 3 strips of bacon, and 1 bowl of grits. Write a function that takes in the number of eggs, strips of bacon, and bowls of grits you currently have. How many breakfast platters can be made given the current inventory? **Return** the number of platters.

```
python>>> breakfastPlatters(34, 67, 87)
17
Ok
```

## RUBRIC

### ● cocaCola | 5 Points

- Function named correctly (1 Point)
- Correctly Inputs Data (2 Points)
- Returns correct result (2 points)

### ● parksAndRec | 15 Points

- Function named correctly (2 Point)
- Correctly Inputs Data (5 Points)
- Correct Calculations (6 Points)

- Returns correct result **(2 Points)**

● **iLoveFrozen | 15 Points**

- Function named correctly **(2.5 Points)**
- Correctly Inputs Data **(2 Points)**
- Calculates correctly based on theater **(8 Points)**
- Prints correct result **(2.5 Points)**

● **oscars | 20 Points**

- Function named correctly **(2 Points)**
- Correctly Inputs Data **(2 Points)**
- Calculates Correct Time **(10 Points)**
- Prints correct result & time formatted correctly **(6 Points)**

● **springBreakCalc | 25 Points**

- Function named correctly **(3 Points)**
- Inputs Correct Data **(3 Points)**
- Calculates Tip Correctly **(5 Points)**
- Calculates Gas Correctly **(5 Points)**
- Calculates Amount Per Person Correctly **(5 Points)**
- Prints correct result rounded to 2 decimals **(4 Points)**

● **breakfastPlatters | 20 Points**

- Function named correctly **(3 Points)**
- Calculates Correct Platter Amounts **(15 Points)**
- Returns correct result **(2 Points)**