

Exercise 7 - For Loop

1. Create a loop that outputs the series of integers from 5 - 1000 counting by 5s. Save your program as counting.py.
2. Write a loop that will calculate and print out the multiplication table specified by the user. In the example below the user specified the table for the number 9. Save your program as multiplication.py.

```
<terminated> /Users/aaronkilpatri
1 x 9 = 9
2 x 9 = 18
3 x 9 = 27
4 x 9 = 36
5 x 9 = 45
6 x 9 = 54
7 x 9 = 63
8 x 9 = 72
9 x 9 = 81
10 x 9 = 90
```

3. Write a loop that will print out all the powers of a number entered by the user. Save your program as powers.py.

```
>>>
Please enter a number to use as the exponential base6
6 ^ 0 = 1
6 ^ 1 = 6
6 ^ 2 = 36
6 ^ 3 = 216
6 ^ 4 = 1296
6 ^ 5 = 7776
6 ^ 6 = 46656
6 ^ 7 = 279936
6 ^ 8 = 1679616
6 ^ 9 = 10077696
...

```

4. Write a loop that will count a series of numbers entered by the user. First the program should ask the user how many numbers they'll enter, then it should proceed to ask them for each number separately adding them up as it goes along. When the user has finished print out the total. Save your program as total.py.
5. Modify the answer from question 4 to also calculate and print out the average of the numbers entered. Save your program as average.py.
6. Write a for loop that will sum the integers from 1 to 100. Output the sum. Save your program as sum.py.
7. Ask the user to input two numbers representing the low end and high end of a range. Compute and output the sum of all the numbers in the range. Save your program as sumRange.py.

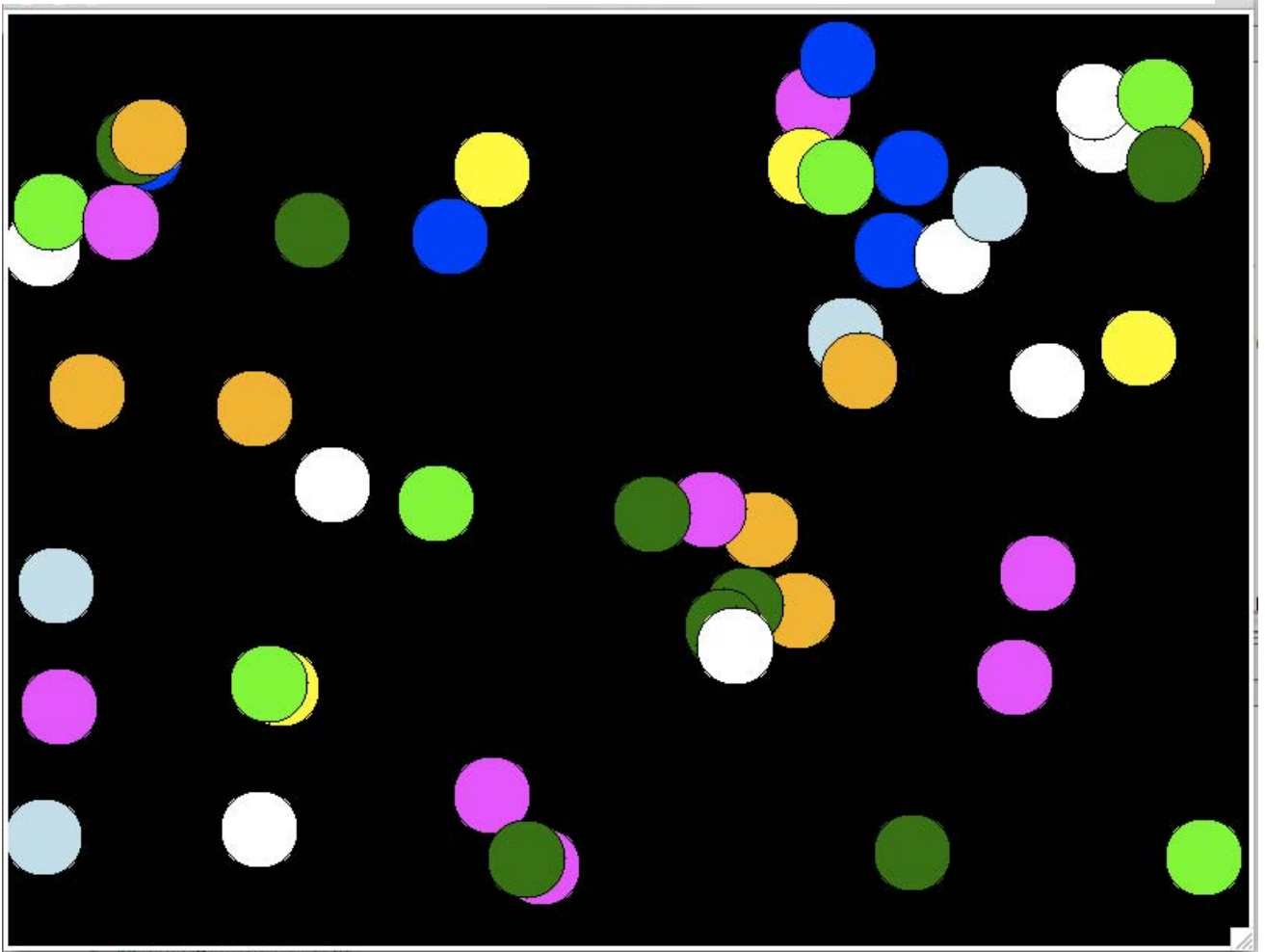
- Write a program that will display a count down from 10. Incorporate a time delay into the program so that the user sees the following with a time delay of 0.5 seconds between each line appearing.

Hint: Use the command `time.sleep(0.5)`

```
10 ...  
9 ...  
8 ...  
etc
```

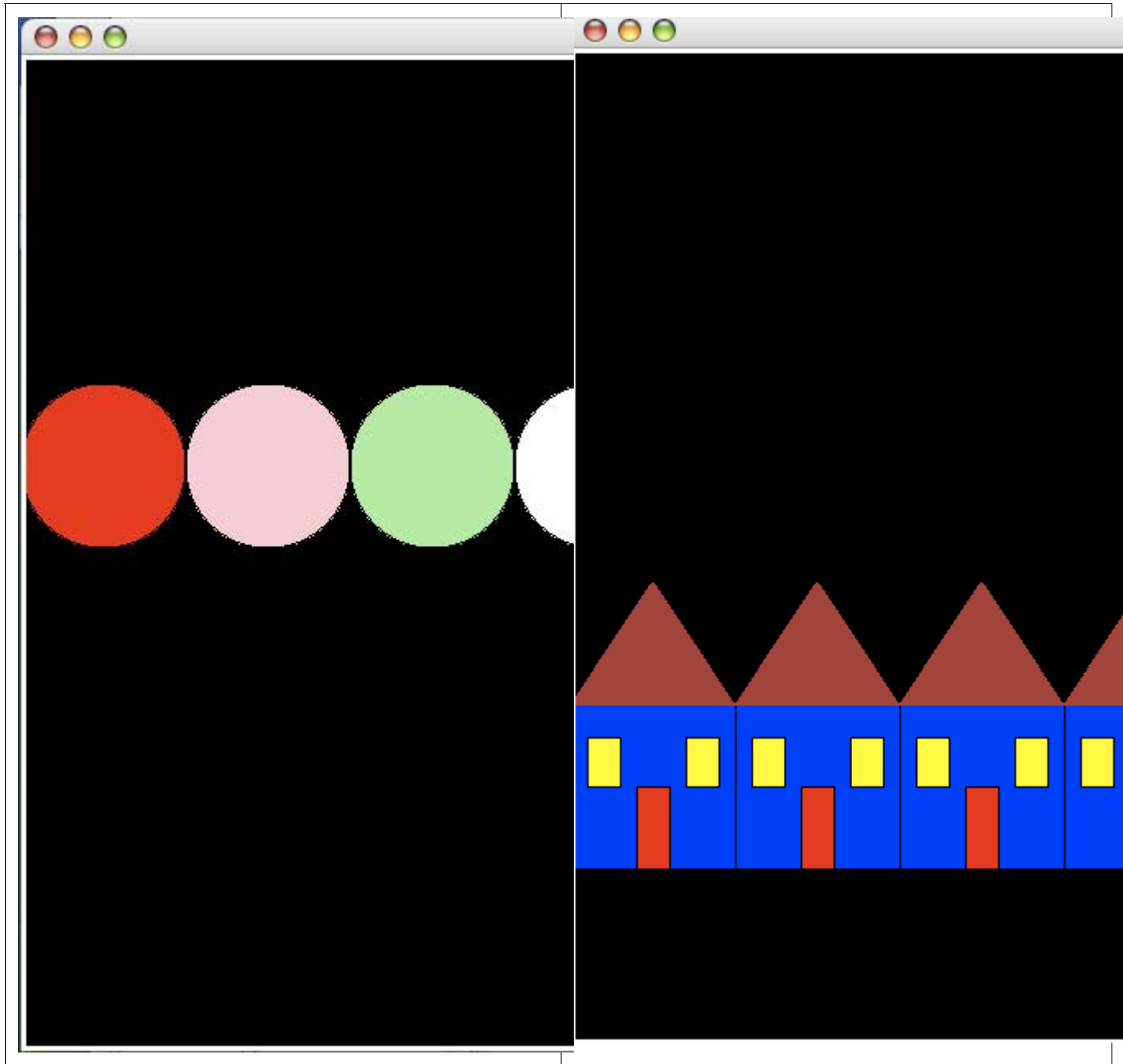
Save your program as `countingDown.py`.

- Write a loop that will print out a user-specified number of circles on the screen in random locations. In the example below the user asked for 50 circles. ALSO ... notice that no circle goes outside the edge of the canvas.



Save your program as `circles.py`.

10. Write a loop to print out a row of circles. Your for loop will not count by 1s, it will likely count by a number based on the diameter of your circles. Then, can you do it for a row of houses? What will you have to count by?



Save your program as circlesHouses.py.

11. Write a loop that will print out the following pyramid of stars.
Hint, the loop prints out a line with 1 star, 3 stars, 5 stars ... 49 stars. Think about where your loop should start, end and count by.

I also used the "someString".center(someIntegerWidth) to get the stars centered on the screen. Save your program as pyramidOfStars.py.

