

Chapter 3: Mathematical Functions, Strings, and Objects

Problem Set #1: Accumulating Variables

Essential Problems:

1. Ask the user to input a starting number, then add together the five consecutive numbers starting with the enter. For example, if the user enters 5, return $5 + 6 + 7 + 8 + 9 = 35$.

```
What number do you want to start with? 5
The total is 35
```

2. When you add together two string, it just puts them together. For example the following will print: Cheever.

```
first = "Che"
```

```
last = "ever"
```

```
print(first + last)
```

Write a program that asks the user to enter 3 letters, then print out the three letter word.

```
What is the first letter? c
What is the second letter? a
What is the third letter? t
cat
```

3. A store gives their employees a 2% raise every year. Write a program that asks the user how much they currently make per hour, and then determines how much they will make in 5 years. Make sure to round to the nearest cent. (Hint: To find a 2% raise, multiply the current hourly wage by 1.02) THIS IS THE SAME AS THE DO NOW FROM CLASS!

```
How much do you currently make per hour? 15.25
You will make 16.84 dollars per hour in 5 years.
```

4. Jonathan is saving money to put a downpayment on a car. He puts \$1000 into the bank at the start of every month, and the bank gives him 3% interest. How much money does he have after 3 months of saving? THIS IS SLIGHTLY DIFFERENT FROM THE DO NOW, YOU NEED TO ADD 1000 EACH MONTH, THEN MULTIPLY

```
Jonathan has saved 3183.63 after 3 months.
```

HONORS PROBLEMS

5. Write a program that asks the user to enter an integer, then adds up all the numbers up to that integer. The output must start the final number as well as the sum. (You will need to use a for loop to do this. Look at problem 3 on problem set 2.3 if you are stuck.)

```
Enter an integer: 10
The sum of all the numbers from 1 to 10 is 55
```

(Optional) 6. A useful method for formatting strings is shown below.

```
name = input("What is your name?")
quest = input("What is your quest?")
color = input("What is your favorite color?")

print("Ah, so your name is %s, your quest is %s,\
and your favorite color is %s." % (name, quest, color))
```

Use this formatting method to create your own MAD LIB. If you have no idea what a MAD LIB is, go to the following website:

<http://www.madtakes.com/libs/188.html>

Requirements:

At least 5 inputs

At least 3 sentences

Proper grammar, and it actually makes sense