## Chapter 04 Worksheet

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Reminder: Please use full sentences, capital letters, and proper grammar where appropriate.

Don't create a loop that only loops once. That doesn't make sense. Python runs the code once by default anyway. Avoid loops like this:

- 1. Write a Python program that will use a **for** loop to print your name 10 times, and then the word ``Done'' at the end.
- 2. Write a Python program that will use a **for** loop to print ``Red" and then ``Gold" 20 times. (Red Gold Red Gold Red Gold... all on separate lines. Don't use \n.)
- 3. Write a Python program that will use a **for** loop to print the even numbers from 2 to 100, inclusive.
- 4. Write a Python program that will use a **while** loop to count from 10 down to, and including, 0. Then print the words ``Blast off!'' Remember, use a WHILE loop, don't use a FOR loop.
- 5. There are three things wrong with this program. List each. (3 pts)

```
print("This program takes three numbers and returns the sum.")
total = 0

for i in range(3):
    x = input("Enter a number: ")
    total = total + i
    print("The total is:", x)
```

- 6. Write a program that prints a random integer from 1 to 10 (inclusive).
- 7. Write a program that prints a random floating point number somewhere between 1 and 10 (inclusive). Do not make the mistake of generating a random number from 0 to 10 instead of 1 to 10.
- 8. Write a Python program that will: (3 pts)
  - Ask the user for seven numbers
  - Print the total sum of the numbers
  - Print the count of the positive entries, the number entries equal to zero, and the number of negative entries. Use an if, elif, else chain, not just three if statements.
- 9. Coin flip tosser: (4 pts)
  - Create a program that will print a random 0 or 1.

- Instead of 0 or 1, print heads or tails. Do this using **if** statements. Don't select from a list, as shown in the chapter.
- Add a loop so that the program does this 50 times.
- Create a running total for the number of heads flipped, and the number of tails.
- 10. Write a program that plays rock, paper, scissors: (4 pts)
  - Create a program that randomly prints 0, 1, or 2.
  - Expand the program so it randomly prints rock, paper, or scissors using **if** statements. Don't select from a list, as shown in the chapter.
  - Add to the program so it first asks the user their choice.
  - (It will be easier if you have them enter 1, 2, or 3.)
  - Add conditional statement to figure out who wins.

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