

Handong Honor Code

- You are responsible for understanding and complying with Handong Honor Code.
- If you copy someone else's coding or homework assignments, or use someone else's creative work without any indication, you will be given a F grade. Anyone who share the code with you would also be given a F grade.

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Assignment 01

Make sure you read the *General Guidelines for Assignments* document first before you proceed!

1

The following program will print on the screen a certain chapter and verse number from the Bible. Find the verse from the Bible (use the ESV version) and print it on the screen to complete the program. Explain what each line of code does.

```
In [1]: book = "Romans"
        chapter = 2
        chapter **= 3
        verse = -1
        verse = verse + 3

        print(book + " " + str(chapter) + ":" + str(verse))
        ### YOUR CODE STARTS HERE

        ### YOUR CODE ENDS HERE

        """
        ### YOUR EXPLANATION STARTS HERE

        ### YOUR EXPLANATION ENDS HERE
        """
```

2

Take two numbers from a user (use `input`) and store them into the variable `x` and `y` . Swap two numbers and then print the results. Assume that users always enter integers.

For example, if the first number is 3, the second number is 16, then the final output should look like:

```
x = 16
y = 3
```

Make sure to include the explanation for how you swap two numbers.

```
In [3]: x = input("x = ")
        y = input("y = ")
        ### YOUR CODE STARTS HERE

        ### YOUR CODE ENDS HERE
        print("## Swapped")
        print("x =", x)
        print("y =", y)

        """
        ### YOUR EXPLANATION STARTS HERE

        ### YOUR EXPLANATION ENDS HERE
        """
```

3

Write a program that asks a user to enter a radius of a circle (which can be a real number such as `3.16`), then calculates and prints the area of the circle. You must round the area to three decimals. The final screen must look EXACTLY like below, meaning unnecessary whitespaces displayed will be penalized, missing necessary whitespaces will also be penalized.

```
Radius? 316
Area=313706.811
```

Assume $\pi = 3.141592$.

4

Write a program that displays a triangle as shown below:

```
  *
 ***
*****
*****
*****
```

- You must not use the iterative statements such as `for`, `while`, ...
- You must not use any string longer than 1 character. For example, having `***` in any part of your code is illegal for this problem.
- Obviously, you must not use a docstring because this would violate the second rule.
- Hint: Use string concatenation (addition and multiplication)

5

Ask a user to enter two numbers `x` and `y` (use `input`). If `x` is equal to `y`, print `True`, otherwise `False`.

For this problem, you must not use the conditional statements such as `if` ...

Assume that users always enter integers.